Appendix G

Transportation Reports

9600 Wilshire Boulevard Specific Plan

Transportation Impact Report

Prepared for:
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LA22-3436

FEHR PEERS

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1. Study Overview

This transportation impact report presents the results of the analysis conducted by Fehr & Peers for the proposed 9600 Wilshire Boulevard Specific Plan Project (herein referred to as "Specific Plan" or "Project") in the City of Beverly Hills. The purpose of this study is to provide the transportation impact analysis required for the Environmental Impact Report being prepared for the Project. Transportation conditions in the Project vicinity with the development of the proposed land uses are compared to existing and forecasted future conditions in consideration of other planned projects in the study area. This chapter outlines the purpose of the study, the geographic scope, and the study scenarios.

1.1 Study Purpose

The purpose of this study is to analyze the potential for significant transportation impacts to occur with the development of the 9600 Wilshire Boulevard Specific Plan. The City of Beverly Hills has adopted transportation impact thresholds and guidelines that adhere to the California Environmental Quality Act (CEQA) requirements pertaining to Senate Bill 743 (SB 743). The primary purpose of SB 743 was eliminating level of service (LOS) as a measure of vehicular capacity and traffic congestion as a basis for determining significant transportation impacts under CEQA. Additionally, SB 743 required lead agencies to shift the focus from evaluating traffic impacts based on metrics that only consider vehicle travel time and delay (i.e., impacts to drivers) to metrics that capture the state's goals of improved air quality, reduced greenhouse gas emissions, and improved public health (i.e., impacts of driving).

In response to SB 743, the Governor's Office of Planning and Research (OPR) selected vehicle miles of travel (VMT) as the new transportation impact metric for which lead agencies are required to define methodologies, thresholds, and mitigation consistent with their respective General Plan goals. It should be noted that while LOS no longer constitutes a CEQA impact, it can still be used to inform decision makers on the overall effects of a project. The deadline for agencies to implement SB 743 was July 1, 2020.

Given the new CEQA requirements, a separate traffic operations analysis has been completed and documented in the *9600 Wilshire Boulevard Specific Plan Local Transportation Assessment* (Fehr & Peers, November 2023). The traffic operations report analyzes changes to intersection LOS with development of the Project and compares traffic operations with the Project to both baseline and future year conditions.

1.2 Project Study Area

The proposed 9600 Wilshire Boulevard Specific Plan would apply to an approximately four-acre site located south of Wilshire Boulevard, between Bedford Drive to the west and Camden Drive to the east, in the southwestern portion of the City of Beverly Hills. As shown in **Figure 1**, the Specific Plan Area generally consists of two rectangular blocks bisected by South Peck Drive. Local access to the Specific Plan is provided by Wilshire Boulevard, South Bedford Drive, South Peck Drive, and South Camden Drive. The Specific Plan Area is served by a variety of public transit options, with several Los Angeles County Metropolitan Transit Authority (Metro) transit bus stops along Wilshire Boulevard in the vicinity of the Project site.

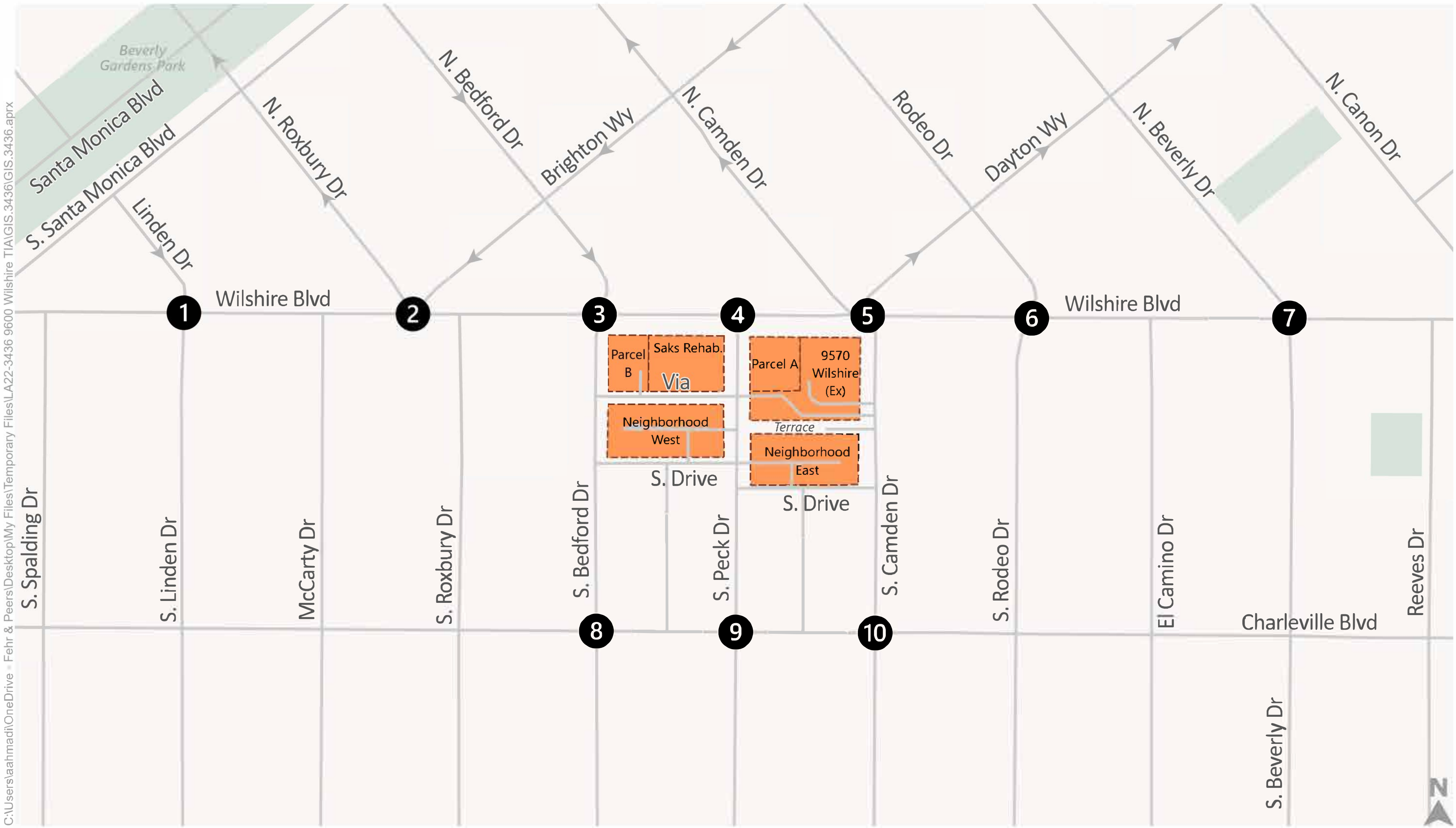


Figure 1

Project Location and Study Intersections

1.3 Project Development Scenarios

The Specific Plan provides for maximum development limits within the Project site and would also allow a portion of the commercial space to be converted to residential uses. In addition, a Conceptual Plan has also been proposed to implement a specific development scenario within the development maximums authorized by the Specific Plan. Therefore, this transportation impact study analyzes construction and operation of the Conceptual Plan at the Project level and also analyzes build-out of the Specific Plan at a programmatic level. The following scenarios analyze the range of foreseeable Specific Plan build-out scenarios in order to provide a conservative (worst-case) analysis for purposes of the EIR:

- **Scenario 1 Conceptual Plan Buildout:** Under this scenario, 261,722 sf of commercial uses would be developed within the Wilshire Boulevard District (excluding the 9570 Wilshire Building which is not part of the Conceptual Plan). A total of 68 residential units and 10,581 sf of ground floor small shop/boutique retail would be developed in the Neighborhood District. In total, 272,303 sf of commercial uses would be developed across the Conceptual Plan site. The existing 107,000 sf of commercial space at 9570 Wilshire would remain in place and would not be altered. While the 9570 Wilshire Building is not part of the Conceptual Plan, the occupancy of the retail space is reflected in the impact analysis.
- **Scenario 2 Maximum Buildout of the Specific Plan with No Residential Conversion:** Under this scenario, 400,000 sf of commercial floor area would be included within the Wilshire Boulevard District, of which 166,000 sf would be net new floor area. Also, 70 residential units and 15,000 sf of ground floor small shop/boutique retail would be developed in the Neighborhood District. A total of 415,000 sf of commercial uses and 70 residential units would be developed across the site.
- **Scenario 3 Maximum Buildout of the Specific Plan with Residential Conversion:** Under this scenario, 250,000 sf of commercial floor area would be included in the Wilshire Boulevard District, of which 16,000 sf would be net new floor area. As contemplated in the Specific Plan, 75 residential units consisting of 150,000 sf of floor area located above the ground floor would be developed across the Saks Rehabilitation and Parcel B subareas. In addition, 70 residential units and 15,000 sf of ground floor small shop/boutique retail would be developed in the Neighborhood District. This scenario assumes that no residential units would be developed on the 9570 Wilshire subarea, because while permissible in concept pursuant to the proposed Specific Plan, express findings under a conditional use permit, which the applicant is not seeking at this time, and additional environmental review and clearance would be required in order to authorize any such conversion to be made. Also, a total of 265,000 sf of commercial uses and 145 residential units would be developed across the site.

1.4 Analysis Scenarios

The following scenarios are considered in the analysis of transportation impacts:

- **Existing (2022) Conditions:** The analysis of existing traffic conditions is based on transportation conditions at the time data was collected in Fall 2022.
- **Future Conditions**: Future transportation conditions reflect the year 2028. The objective of this analysis is to consider future traffic volume forecasts that could be expected to result from regional growth and related projects in the vicinity of the Project by the anticipated opening year of 2028.
- **Plus Project Conditions:** The plus Project conditions analysis accounts for both the land use and site access proposed with the Project in comparison to existing and future conditions, including the relocation of the Saks Fifth Avenue store to 9570 Wilshire Boulevard.
- **Plus Conditions with Via Closed**: This scenario is the same as plus Project conditions except that the eastern portion of the Via is assumed to be temporarily closed for a special event which means that no vehicle access is provided on the Via at South Peck Drive and all vehicles would access the Via on the western end at South Bedford Drive.

2. Existing & Planned Transportation Conditions

This chapter discusses the existing plans and policies related to transportation in the City of Beverly Hills and the transportation conditions in the Project study area. The discussion addresses the existing and planned roadway network, the transit network, and the bicycle and pedestrian facilities in the study area including those improvements identified in the City's adopted Complete Streets Plan.

2.1 Existing Plans & Policies

This section summarizes state, regional, and local regulatory frameworks that serve as the foundation for evaluating transportation impacts under CEQA.

2.1.1 California Environmental Quality Act

CEQA generally requires state and local government agencies to inform decision makers and the public about the potential environmental impacts of proposed projects, and to reduce those environmental impacts to the extent feasible. CEQA Section 15064.3 describes specific considerations for determining a project's transportation impacts. Generally, vehicle miles traveled (VMT) is the most appropriate measure of transportation impacts. For the purposes of this section, "vehicle miles traveled" refers to the amount and distance of automobile travel attributable to a project. Other relevant considerations may include the effects of the project on transit and non-motorized travel (CEQA 2019).

2.1.2 California Senate Bill 743

Senate Bill 743 (SB 743) directed the Office of Planning and Research (OPR) to develop revisions to the CEQA Guidelines to establish new criteria for determining the significance of transportation impacts and define alternative metrics for traffic analysis. On September 27, 2013, California Governor Jerry Brown signed SB 743 into law and started a process that changed transportation impact analysis as part of CEQA compliance. These changes include elimination of auto delay, level of service (LOS), and other similar measures of vehicular capacity or traffic congestion as a basis for determining significant impacts for land use and transportation projects in California.

In 2016, OPR released the Revised Proposal on Updates to the CEQA Guidelines on Evaluating Transportation Impacts in CEQA. Of particular relevance was the updated text of the new Section 15064.3 that relates to the new transportation impact metric of VMT and describes the determination of the significance of transportations impacts and mitigation measures. To help lead agencies with SB 743 implementation, the Governor's Office of Planning and Research (OPR) produced a *Technical Advisory.*[1]

[1] Governor's Office of Planning and Research, *Technical Advisory on Evaluating Transportation Impacts in CEQA*, 2018.

More information on the determination of the significance of impacts is included in Chapter 3, Vehicle Miles Traveled.

2.1.3 California Assembly Bill 32 and Senate Bill 375

Assembly Bill 32 (AB 32), also known as the California Global Warming Solutions Act of 2006, is California's major initiative for reducing greenhouse gas (GHG) emissions. AB 32 requires California to reduce its GHG emissions to 1990 levels by 2020, a reduction of approximately 15% below emissions expected under a "business as usual" scenario.

As stated in AB 32, the California Air Resources Board (CARB) must adopt regulations to achieve the maximum technologically feasible and cost-effective GHG emission reductions. The full implementation of AB 32 will help mitigate risks associated with climate change, while improving energy efficiency, expanding the use of renewable energy resources, cleaner transportation, and reducing waste (CARB 2018).

Signed in 2008, Senate Bill 375 (SB 375) directs CARB to develop regional GHG emission reduction targets to be achieved by passenger vehicles by 2020 and 2035. SB 375 also directs each of California's major metropolitan planning organizations (MPOs) to prepare a sustainable communities strategy (SCS) that identifies a growth strategy to meet emissions targets, to be included in each MPOs regional transportation plan (RTP).

In 2010, CARB adopted regional targets for reducing GHG emissions by 2020 and 2035, using 2005 as a base year. The Southern California Association of Governments (SCAG) was assigned targets of an 8% reduction in GHGs from transportation sources by 2020 and a 13% reduction in GHGs from transportation sources by 2035.

On March 22, 2018, CARB adopted updated regional targets for reducing GHG emissions from 2005 levels by 2020 and 2035. SCAG was assigned targets of an 8 percent reduction in per capita GHG emissions from passenger vehicles by 2020 and a 19 percent reduction in per capita GHG emissions from passenger vehicles by 2035. In the SCAG region, SB 375 also provides the option for the coordinated development of subregional plans by the subregional councils of governments and the county transportation commissions to meet SB 375 requirements. On September 3, 2020, the SCAG's Regional Council formally adopted the 2020-2045 RTP/SCS titled Connect SoCal, which meets the requirements of SB 375.

2.1.4 Southern California Association of Governments (SCAG) 2020-2045 Regional Transportation Plan and Sustainable Communities Strategy (RTP/SCS)

The 2020-2045 RTP/SCS builds upon the progress made through implementation of the 2016-2040 RTP/SCS and includes 10 goals focused on promoting economic prosperity, improving mobility, protecting the environment, and supporting healthy/complete communities. The SCS implementation strategies include focusing growth near destinations and mobility options, promoting diverse housing choices, leveraging technology innovations, and supporting implementation of sustainability policies. The SCS establishes a land use vision of center focused placemaking, concentrating growth in and near

Priority Growth Areas, transferring of development rights, urban greening, creating greenbelts and community separators, and implementing regional advance mitigation (SCAG 2020).

2.1.5 LA Metro First Last Mile Strategic Plan

The *LA Metro First Last Mile Strategic Plan* (Metro, SCAG 2014) outlines an approach for identifying barriers and planning for/implementing improvements for connecting transit services to nearby trip origins (e.g., an individuals' home) and destinations (e.g., an individuals' place of employment). Examples of first/last mile improvements include but are not limited to: pedestrian and bicycle infrastructure, signage and wayfinding, and shared use services (e.g., car share). The First Last Mile Plan developed what is known as "The Pathway," a proposed countywide transit access network designed to enhance transit accessibility. The Pathway is a series of active transportation improvements that connect to and from Metro Rail and BRT stations.

Within the study area, the City of Beverly Hills worked with Metro to develop the *Wilshire/Rodeo Station Pathway Plan* for the Wilshire/Rodeo Station. The Pathway Plan notes that Wilshire Boulevard would benefit from numerous first/last mile improvements, including bus stop enhancements, high-visibility crosswalks, street furniture, and street trees where needed. The Pathway Plan also identifies a series of bicycle improvements that will help facilitate station access, such as intersection treatments to create a bicycle-friendly environment.

2.1.6 City of Beverly Hills General Plan - Circulation Element

The *City of Beverly Hills General Plan Circulation Element* (City of Beverly Hills, 2010) has two overarching objectives: that the neighborhoods of Beverly Hills should be preserved and enhanced, including limiting negative effects caused by vehicles; and that vehicles should move into, out of, or through Beverly Hills as expeditiously as possible. The Circulation Element identifies the following goals that are relevant to this study:

- **CIR 1 Circulation System**: Provide a safe and efficient roadway circulation system within the City.
- **CIR 2 Transit**: Development of a safe, comprehensive, and integrated transit system that serves as an essential component of a multi-modal mobility system within the City.
- **CIR 3 Neighborhood Traffic Management**: An improved community character and quality of life in City neighborhoods through the implementation of traffic management techniques.
- **CIR 6 Transportation Demand Management (TDM)**: A reduction in single-occupant motor vehicle travel in the City through Transportation Demand Management (TDM) that ensures efficiency of the existing transportation network and promotes the movement of people instead of personal automobiles.
- **CIR 7 Pedestrians**: A safe and comfortable pedestrian environment that results in walking as a desirable travel choice, particularly for short trips, within the City.
- **CIR 8 Bikeways**: An integrated, complete, and safe bicycle system to encourage bicycling within the City.

2.1.7 Complete Streets Planning in Beverly Hills

In April 2021, the City of Beverly Hills adopted a citywide Complete Streets Plan. The *City of Beverly Hills Complete Streets Plan* (City of Beverly Hills, 2021) creates a blueprint for transportation improvements that balance the needs of all road users: bicyclists, pedestrians, transit riders, and motorists. The goal of the Complete Streets Plan is to provide more options for people to choose the mode that best works for their trip type, and a network of streets where individual modes will be prioritized.

The Complete Streets Plan identifies the following goals that are relevant to this study:

- Goal B1: Provide a Safe and Efficient Bicycle Circulation System Within the City
- Goal B2: Provide a Holistic and Connected Bicycle Network
- Goal B3: Expand Bike Parking
- Goal B4: Support and Encourage Bicycle Transportation
- Goal P1: Improve Pedestrian Safety
- Goal P2: Make Walking a Desirable Travel Choice
- Goal P3: Enhance Sidewalks as Public Spaces
- Goal T1: Provide First/Last Mile Connections
- Goal T2: Improve the Rider Experience
- Goal T3: Increase Transit Ridership
- Goal V1: Reduce Traffic Congestion
- Goal V2: Harness the Power of Data and Technology
- Goal V3: Support Safe, Complete, Livable, Sustainable, and Quality Neighborhoods

The Complete Streets Plan identifies a series of bicycle improvements that will help facilitate access to the future Wilshire/Rodeo Metro Station. The Complete Streets Plan also identifies pedestrian corridors to enhance the overall pedestrian experience. Potential improvements could include new and upgraded sidewalks, tightened curb radii to slow vehicle speeds, and mid-block crossings, among others.

The Complete Streets Plan identifies Wilshire Boulevard, Olympic Boulevard, North Santa Monica Boulevard, Burton Way, and Beverly Drive as the City's proposed Transit Enhanced Network. Bus stop enhancements, such as shelter, seating, lighting, trash/recycling bins, poles/signs with route information and schedules, a system map (or link to one), a paved boarding area, and ADA-compliant pedestrian connections, are identified along these corridors. In addition to the Complete Streets Plan, the City recently published the *Beverly Hills Complete Streets Plan Action Plan* (City of Beverly Hills, May 2023) to track progress since the adoption of the Complete Streets Plan and prioritize project implementation.

2.2 Transportation Facilities

A comprehensive data collection effort was undertaken to identify existing transportation conditions in the vicinity of the Specific Plan Area. The assessment of existing conditions relevant to this study includes an inventory of the street system and traffic volumes at the study intersections. Existing and planned public transit service and bicycle and pedestrian facilities are also described.

2.2.1 Existing Street System

The 9600 Wilshire Boulevard Specific Plan is located in the southwestern portion of the City of Beverly Hills. The Project study area is generally bounded by Wilshire Boulevard to the north, Beverly Drive to the east, Linden Drive to the west, and Charleville Boulevard to the south. Major roadways within the study area are shown above in **Figure 1**, and roadways providing access to the Project site and southwest neighborhood are described below.

- ***Wilshire Boulevard*** is an east-west principal arterial that extends from the Pacific Ocean in the City of Santa Monica to downtown Los Angeles. Within the City of Beverly Hills, Wilshire Boulevard provides three travel lanes in each direction. Wilshire Boulevard would provide access to the Project site at the signalized intersections of Bedford Drive and Camden Drive and at the unsignalized intersection at Peck Drive.
- ***Bedford Drive*** serves as a one-way southbound collector roadway from Santa Monica Boulevard to Wilshire Boulevard through the business triangle in Beverly Hills. South of Wilshire Boulevard, South Bedford Drive provides travel in both directions and functions as a two-lane local roadway providing access to the commercial parcels on the south side of Wilshire Boulevard and the residential neighborhood to the south.
- ***Peck Drive*** is a two-lane local roadway that provides access to the commercial parcels on the south side of Wilshire Boulevard and the residential neighborhood to the south. Peck Drive is unsignalized at Wilshire Boulevard and only right-turns to/from Wilshire Boulevard are permitted.
- ***Camden Drive*** serves as a one-way northbound collector roadway from Wilshire Boulevard to Santa Monica Boulevard through the business triangle in Beverly Hills. South of Wilshire Boulevard, South Camden Drive provides travel in both directions and functions as a two-lane local roadway providing access to the commercial parcels on the south side of Wilshire Boulevard and the residential neighborhood to the south. The signalized intersection of Camden Drive & Wilshire Boulevard also provides access to Dayton Way. Due to the multiple legs at this intersection, direct access from South Camden Drive to North Camden Drive is not permitted and northbound vehicles on South Camden Drive must turn right onto Wilshire Boulevard.
- ***Charleville Boulevard*** runs east-west parallel to Wilshire Boulevard in the study area. Charleville Boulevard is a two-lane local roadway providing access in the southwestern portion of the City and is controlled by stop signs at each intersection.

2.2.2 Existing Intersection Volumes and Lane Configurations

Intersection turning movement counts for the intersections near the Project site were collected during a typical weekday morning (7:00 to 10:00 AM) and evening (4:00 to 7:00 PM) in November 2022. Existing lane configurations and signal controls were obtained through field observations. **Figure 2** presents the existing peak hour turning movement volumes, corresponding lane configurations, and traffic control devices.

1 Free right-turn movement to N. Roxbury Drive
2 Left-turn movement to N. Roxbury Drive
3 Right-turn movement to Dayton Way
4 Left-turn movement to N. Camden Drive

Study Intersections

Project Site

AM (PM) Peak Hour Traffic Volumes

Lane Configuration

One-Way Roadway

Figure 2

Peak Hour Traffic Volumes & Lane Configurations
Existing Conditions

2.2.3 Future Traffic Volume Forecasts

Future traffic projections were developed to reflect conditions in the opening year of the Project. Therefore, the year 2028 was used to forecast future conditions when the Project is expected to be in operation. The growth in traffic volumes in the study area reflects future travel demands from regional growth and related projects in the vicinity of the Specific Plan Area. A variety of sources were consulted to develop the future traffic forecasts. These sources include:

- Existing traffic volumes collected in 2022
- Traffic from approved and pending projects in the City of Beverly Hills
- Ambient growth in existing traffic volumes to reflect regional growth (a growth rate of 0.5% per year was applied to the existing traffic volumes to reflect ambient growth)

Traffic volumes for Future (2028) conditions are shown in **Figure 3**.

2.2.4 Existing Transit Service

Several transit lines operate within the study area with service provided by Metro. Every six months, typically in June and December, Metro operations undergo a service change program where bus schedules are adjusted to accommodate ridership demands and improve connections between Metro Bus and Metro Rail. Metro provides service on multiple bus lines with frequent service (at least every 15 minutes during weekday peak hours) in the study area. Beginning in July 2020, Metro implemented temporary service changes in response to the impacts of COVID-19. This caused most bus routes in the study area to operate on a Sunday service schedule with reduced frequencies compared to typical weekday operations. In response to fluctuating ridership demands and bus driver shortages, Metro has continued to periodically adjust service, with recent service changes providing more frequent service along many routes to return operations to pre-pandemic service levels. The transit information used to determine the current frequency of bus service in the City is based on the schedule changes that Metro implemented in December 2022.

In addition to the service frequency changes, Metro adopted the NextGen Bus Plan in 2020, a once-in-a-generation overhaul of bus routes and service design concepts intended to provide faster and more frequent bus service, including during off-peak periods, better reliability and accessibility to key destinations, better connectivity with municipal transit operators, and improved perception of safety onboard buses and at bus stops. Some of the bus routes in Beverly Hills were modified as a result of the NextGen Bus Plan. The NextGen Bus Plan implemented in June 2021 discontinued Line 16 bus service west of San Vicente Boulevard (service is now only provided on Third Street between West Hollywood and downtown Los Angeles). A new line, Line 617, provides service between the Expo Light Rail Station on Venice Boulevard and a new mini-transit hub located at Cedars Sinai Hospital, and then continues west through Beverly Hills along Burton Way and Beverly Drive.

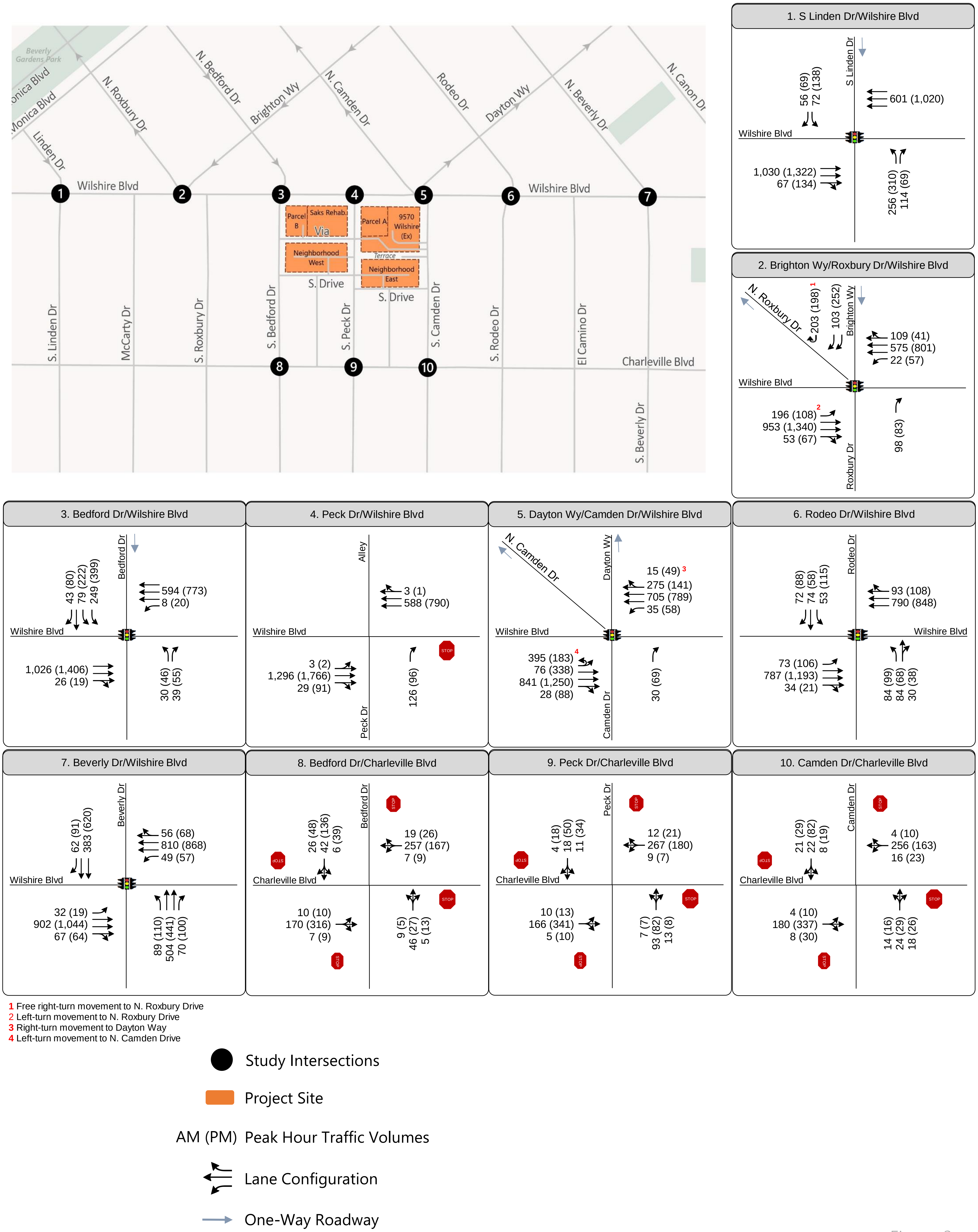
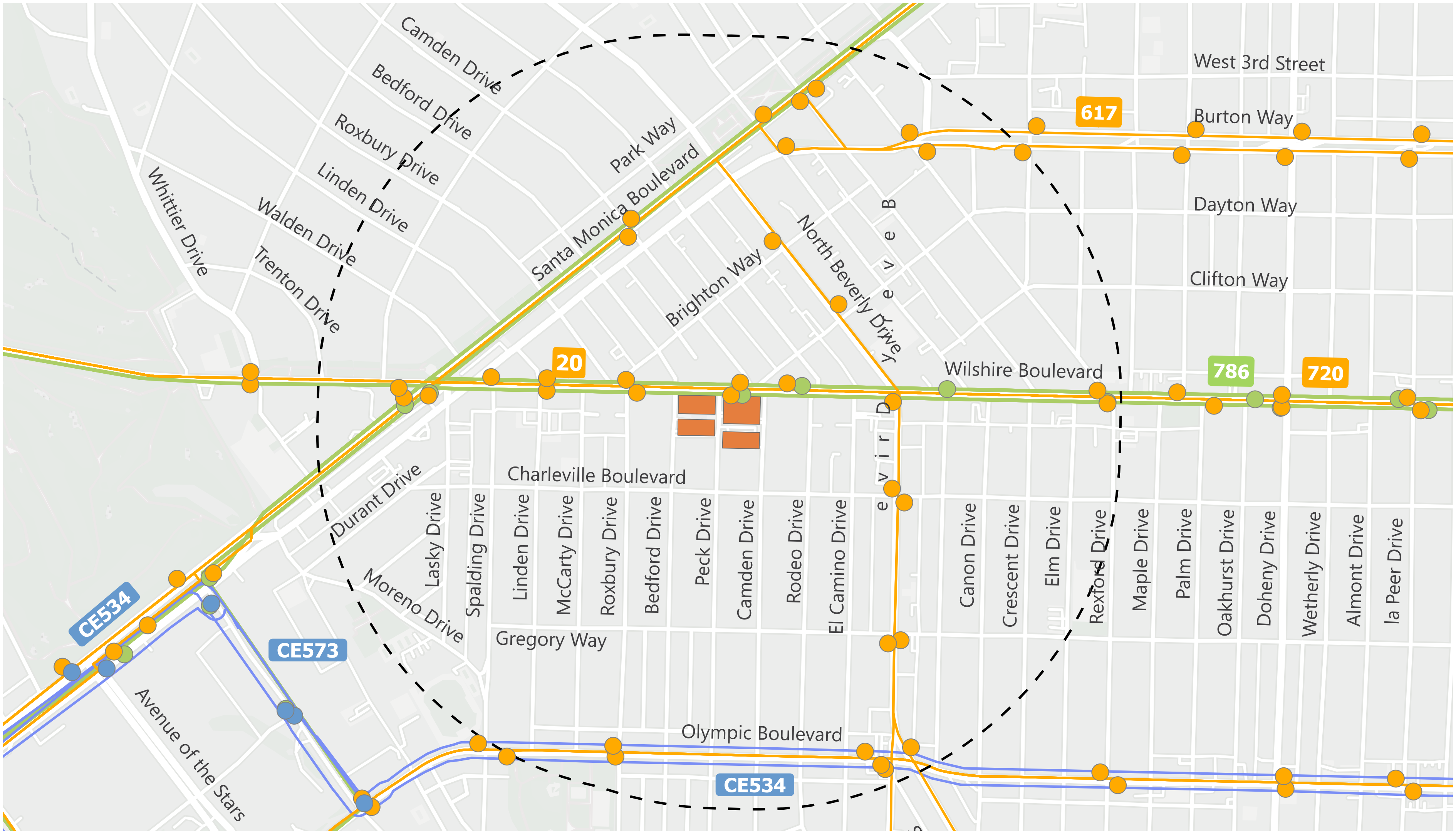


Figure 3

Peak Hour Traffic Volumes & Lane Configurations
Future (2028) Conditions

The service routes and frequencies for transit service in the Specific Plan Area are described below. For lines with stops within one half-mile of the Project, walking distances measured between the transit stop and the center of the Specific Plan Area are noted in the summary. **Figure 4** depicts existing transit service in the Project vicinity and shows transit service provided within approximately a one half-mile radius of the Project site.

- **Metro Line 20** – Line 20 provides service along Wilshire Boulevard, making frequent local stops. It connects the communities of downtown Los Angeles, Korea Town, Beverly Hills, Westwood, and Santa Monica. Weekday service during peak hours is provided approximately every 10 minutes. Weekend service during peak hours is provided approximately every 14 minutes. The closest bus stops to the Project site are at the intersections of Wilshire Boulevard and Peck Drive (immediately adjacent to the Specific Plan Area) and Wilshire Boulevard and Rodeo Drive (0.1 miles). These stops are also shared with Metro Line 720.
- **Metro Line 720** – Metro Line 720 operates along the same route as Line 20, though it makes fewer stops along Wilshire Boulevard. It connects the communities of downtown Los Angeles, Korea Town, Beverly Hills, Westwood, and Santa Monica. Weekday service during peak hours is provided approximately every 5 minutes. Weekend service during peak hours is provided approximately every 9 minutes. Similar to Metro Line 20, the closest bus stops to the Project site are at the intersections of Wilshire Boulevard and Peck Drive (immediately adjacent to the Specific Plan Area) and Wilshire Boulevard and Rodeo Drive (0.1 miles).
- **Metro Line 4** – Line 4 provides service between downtown Los Angeles and the City of Santa Monica with service along Santa Monica Boulevard. It travels along Santa Monica Boulevard connecting the communities of Echo Park, Silver Lake, West Hollywood, Beverly Hills, Century City, West Los Angeles, and Santa Monica. Line 4 is a local service bus and has frequent stops along Santa Monica Boulevard. Most stops are approximately one to two blocks apart. Service is provided approximately every 10 minutes during the peak hours on weekdays. Daytime service on weekends is also provided approximately every 11-12 minutes. The closest bus stops to the Project site are located at the intersection of North Santa Monica Boulevard and Camden Drive (0.3 miles).
- **Metro Line 28** – Line 28 provides service along Olympic Boulevard, making local stops. It connects the communities of downtown Los Angeles, Korea Town, Mid-Wilshire, Beverly Hills, and Century City. Weekday service during peak hours is provided approximately every 11 minutes. Weekend service during peak hours is provided approximately every 28 minutes. The nearest stop to the Project Site is at the intersection of Olympic Boulevard and Roxbury Drive (0.6 miles).
- **Metro Line 617** – Line 617 provides services between Beverly Hills and Culver City. The line travels along Pico Boulevard, North and South Beverly Drive, Santa Monica Boulevard, Burton Way, Third Street, San Vincente, La Cienega and Robertson Boulevard. Line 617 connects the communities of Beverlywood, Beverly Hills, Pico-Robertson, La Cienega Heights, and Downtown Culver City. Weekday service during peak hours is provided approximately every 45 minutes. Weekend service during peak hours is provided approximately every hour. The closest stops to the Project site are located at the intersections of North Beverly Drive and Dayton Way (0.2 miles) and Beverly Drive and Wilshire Boulevard (0.2 miles).



Project Site
Project Site Half Mile Buffer

Transit Bus Stops
LA Metro Stops
DASH Commuter Express Stops
AVTA Stops

Transit Bus Routes
LA Metro Bus
DASH Commuter Express
AVTA Bus

Note: Local Metro routes and Metro Rapid service often utilize the same bus stops.

Figure 4

Existing Transit Services in Project Vicinity

- **Antelope Valley Transit Authority (AVTA) Line 786** – AVTA Line 786 provides commuter bus service from the Antelope Valley (Lancaster / Palmdale) to West Los Angeles and Hollywood along Santa Monica and Wilshire Boulevards. There are four daily round trips on weekdays and no weekend service. Morning trips in Beverly Hills arrive between the hours of 5:55 and 7:35 AM with 25-to-45 minute headways, and evening service to the Antelope Valley departs between 3:20 and 5:40 PM with 30-to-60 minute headways. The closest Line 786 bus stop to the proposed Project is located on Wilshire Boulevard and Camden Drive (immediately adjacent to the project site) and Wilshire Boulevard and Rodeo Drive (0.1 mile).

2.2.5 Planned Transit Service

The Metro D Line Extension will extend the existing D Line (formerly, the Purple Line) subway from its current terminus at the Wilshire/Western Station to a proposed new station in Westwood. Sections 1, 2, and 3 of the D Line Extension are currently under construction. Section 1 is expected to begin operations in 2025 and includes one new station in Beverly Hills at Wilshire/La Cienega and two new stations in Los Angeles (Wilshire/La Brea and Wilshire/Fairfax). Section 2 is also expected to begin operations in 2025 and includes one new station in Beverly Hills approximately 0.2 miles from the Specific Plan Area at Wilshire/Rodeo and one station just west of the City at Century City/Constellation. Section 3 is anticipated to open for operations in 2027 with two new stations (Wilshire/Westwood and Wilshire/VA Hospital).

The Metro D Line station planned for Wilshire/Rodeo is closest to the proposed Project site (0.2 miles). In November 2020, the City approved the construction of the North Portal which would provide an entrance/exit on the west side of North Beverly Drive, within the existing street right-of-way, north of Wilshire Boulevard.

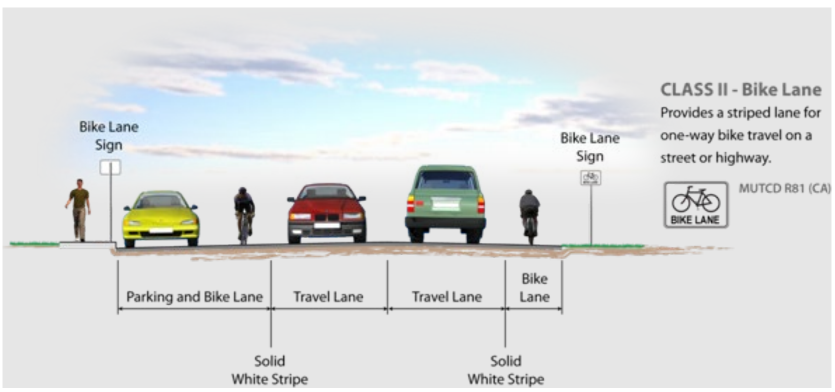
The *City of Beverly Hills Complete Streets Plan* identifies Wilshire Boulevard, North Santa Monica Boulevard, Beverly Drive, and Olympic Boulevard as part of the City's proposed Transit Enhanced Network. Bus stop enhancements, such as shelter, seating, lighting, trash/recycling bins, poles/signs with route information and schedules, a system map (or link to one), a paved boarding area, and ADA-compliant pedestrian connections, are identified along these transit corridors, including the bus stops on Wilshire Boulevard at Peck Drive, Rodeo Drive, and Beverly Drive closest to the Specific Plan Area. Metro's First/Last Mile Plan also identifies bus stop improvements along Wilshire Boulevard in the study area.

2.2.6 Existing Bicycle and Pedestrian Facilities

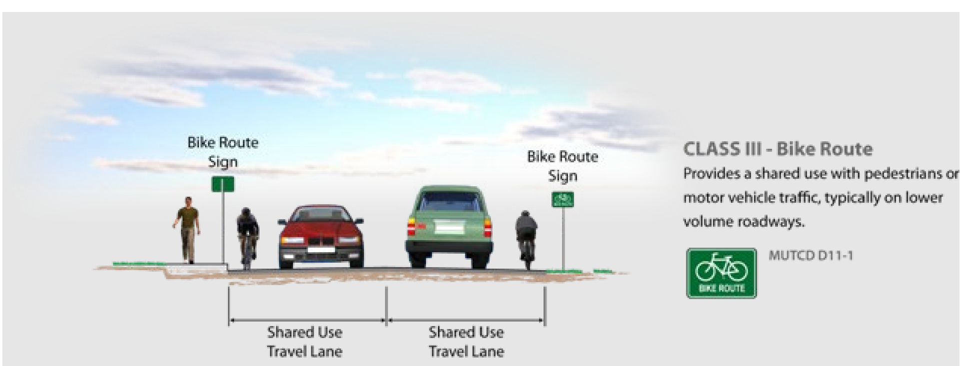
Bicycle facilities generally consist of four types of facilities, which are outlined below:

- *Bike or Shared Use Paths* provide a separate right-of-way and are designated for the exclusive use of bicycles and pedestrians with vehicle and pedestrian crossflow minimized. Generally, the recommended pavement width for a two-directional shared use path is ten feet.

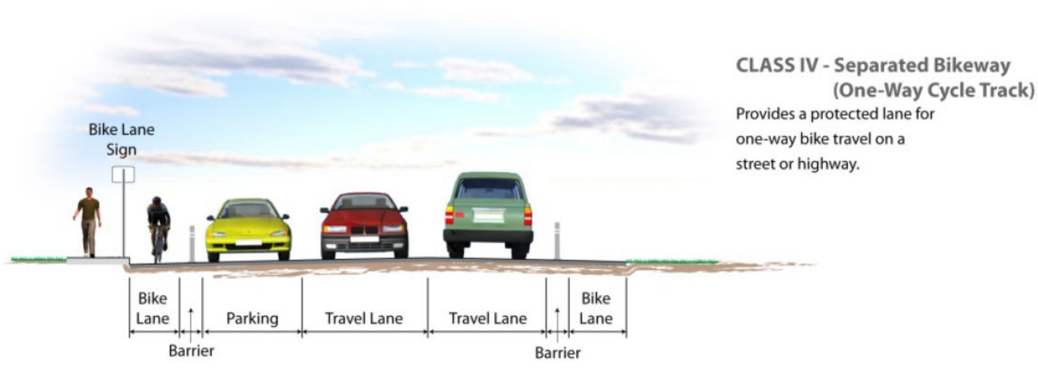
- *Bike Lanes* provide a restricted right-of-way and are designated for the use of bicycles with a striped lane on a street or highway. Adjacent vehicle parking and vehicle/pedestrian crossflow is permitted.



- *Bike Route or Signed Shared Roadways* provide for a right-of-way designated by signs or shared lane pavement markings, or "sharrows," for shared use with pedestrians or motor vehicles.



- *Separated Bikeways or Cycle Tracks* provide on-street bicycle facilities that are separated from vehicle travel by a vertical barrier to provide a protected bicycle lane. At intersections, the barrier is typically removed to allow vehicles to enter the bike lane to make a right-turn.



Within the study area, Charleville Boulevard and Gregory Way have a Class III bike route with sharrows for shared use with vehicles. South Roxbury Drive also has a Class III bike route south of Charleville Boulevard. Further north, North Santa Monica Boulevard has Class II bicycle lanes that are enhanced through green paint in the City of Beverly Hills (city limit to city limit).

A majority of the roadways within the study area have sidewalks with crosswalks striped at the intersections. At the signalized intersections on Wilshire Boulevard, crosswalks are provided on both the north and south sides of the intersections for pedestrians walking along Wilshire Boulevard. For pedestrians crossing Wilshire Boulevard, some intersections have crosswalks on both the east and west sides of the intersection and others only have a crosswalk on one side due to the complex signal operations needed to accommodate multiple roadways into the business triangle area and the transition from one-way to two-way travel flow on either side of Wilshire Boulevard. There are also crosswalks and pedestrian "walk/don't walk" indicators at the signalized intersections in the study area. The majority of intersections south of the Specific Plan Area on Charleville Boulevard do not have striped crosswalks. The signalized crossings for pedestrians as well as crosswalks provided at stop-controlled intersections in the study area are shown in **Figure 5**.

2.2.7 Planned Bicycle and Pedestrian Facilities

In April 2021, the City of Beverly Hills adopted a citywide Complete Streets Plan. The *City of Beverly Hills Complete Streets Plan* contains a vision for transportation improvements that balance the needs of all road users including bicyclists and pedestrians.

The City's Complete Streets Plan Action Plan tracks progress since the adoption of the Complete Streets Plan and prioritizes project implementation. Within the study area, the Complete Street Plan Action Plan identifies implementation of streetscape design standards and installation of streetscape elements as part of the construction of the Metro Wilshire/Rodeo Station within the 2023-2023 fiscal year. The plan also includes on-going coordination with Metro to design and implement projects identified in Metro's First/Last Mile Plan for the Wilshire/Rodeo Station, including bikeways, curbside management, and streetscape improvements.

Within the study area, the City's Complete Street Plan identifies a series of bicycle improvements are planned to improve facilities for bicyclists traveling in the City, including Class IV protected bicycle lanes on North and South Beverly Drive, Charleville Boulevard, and Gregory Way, Class II bicycle lanes on Roxbury Drive, and Class III bicycle boulevards on Brighton Way. Metro's First/Last Mile Plan identifies bicycle friendly intersections at Wilshire Boulevard & Beverly Drive, on Charleville Boulevard at South Roxbury Drive, South Camden Drive, and South Beverly Drive, and at Gregory Way & South Beverly Drive in the project area.

The Complete Streets Plan also identifies pedestrian corridors to enhance the overall pedestrian experience. Pedestrian corridor improvements are envisioned on Wilshire Boulevard and South Beverly Drive and on North Camden Drive, North Bedford Drive, and North Roxbury Drive in the business triangle area. Potential improvements could include new and upgraded sidewalks and crosswalks, tightened curb radii to slow vehicle speeds, pedestrian and bicycle lighting, street furniture, wayfinding signage, and mid-block crossings, among others. Metro's First/Last Mile Plan identifies improved pedestrian crossings at the Wilshire Boulevard & Rodeo Drive and Charleville Boulevard & Rodeo Drive intersections, pedestrian and bicycle lighting and wayfinding signage on Rodeo Drive, and pedestrian crossing improvements, bulbouts, enhanced pedestrian and bicycle lighting, and wayfinding signage on Charleville Boulevard in the project area.

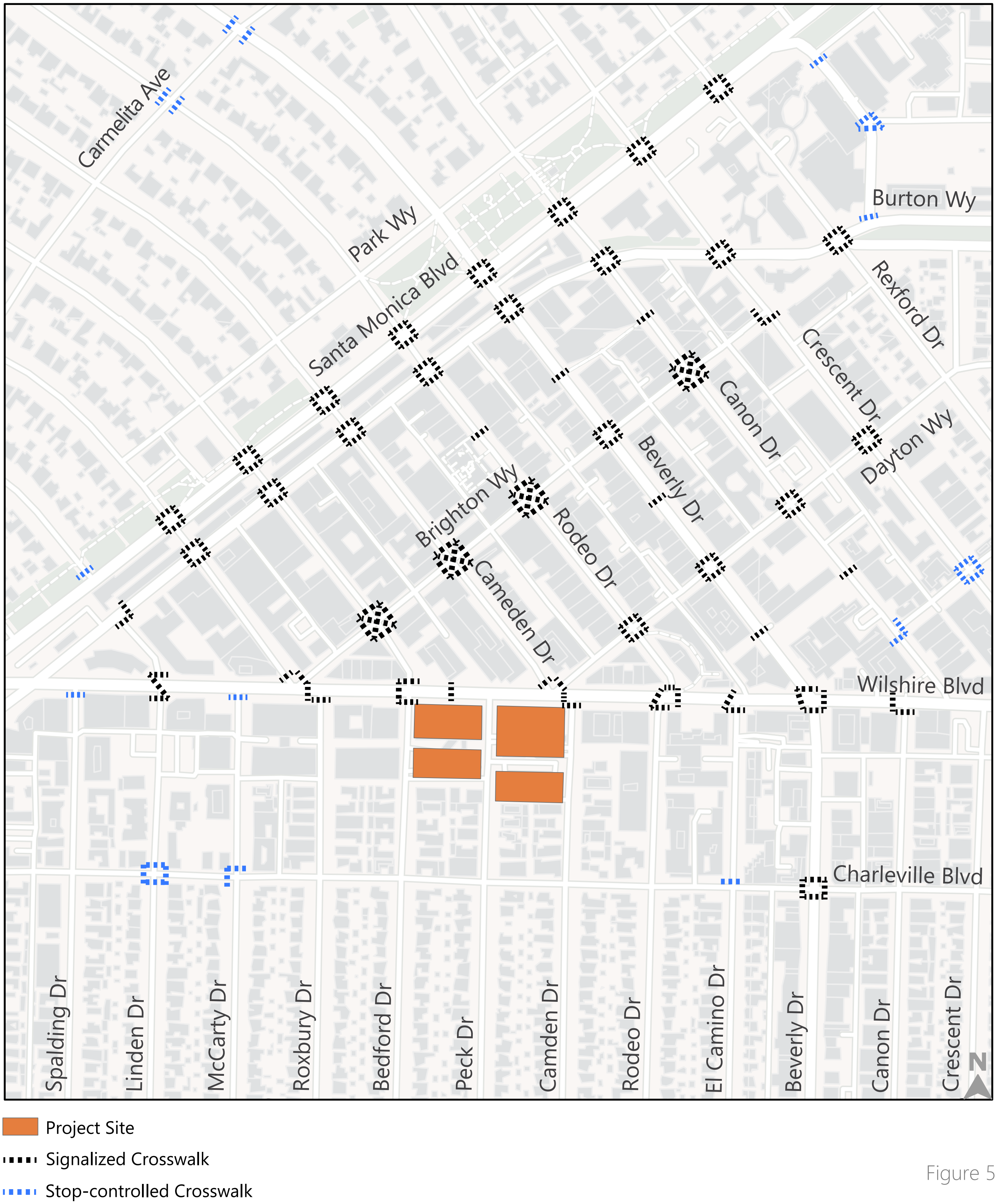


Figure 5

Pedestrian Crossings in Project Vicinity

3. Vehicle Miles Traveled

This section begins with a detailed description of the 9600 Wilshire Boulevard Specific Plan and then documents the vehicle miles traveled (VMT) analysis of the Project. This VMT analysis follows the CEQA guidance for determining transportation impacts in accordance with SB 743 and City of Beverly Hills guidelines.

3.1 Project Overview

The proposed 9600 Wilshire Boulevard Specific Plan ("Specific Plan") would apply to an approximately four-acre site located south of Wilshire Boulevard, between Bedford Drive to the west and Camden Drive to the east, in the southwestern portion of the City of Beverly Hills. The Specific Plan Area generally consists of two rectangular blocks bisected by South Peck Drive. Local access to the Specific Plan Area is provided by Wilshire Boulevard, South Bedford Drive, South Camden Drive, and South Peck Drive. The Specific Plan Area is also served by a variety of public transit options, with several Metro transit bus stops along Wilshire Boulevard in the vicinity of the Specific Plan Area, and is in close proximity to the Metro D Line Wilshire/Rodeo Station currently under construction and included within the RTP.

The Specific Plan Area currently contains three existing commercial structures, an ancillary loading facility, and three surface parking lots. The Specific Plan Area also contains a portion of South Peck Drive; an approximately 27-foot-wide alley that runs along the southwestern boundary of the site between South Bedford Drive and South Peck Drive; and an additional approximately 20-foot-wide alley in the southeastern portion of the site, which connects to South Camden Drive and an existing residential alley to the south of the Specific Plan Area.

The historic building located on the Saks Rehabilitation site (Saks Women's Building) is located in the northwestern portion of the site, at 9600 Wilshire Boulevard, and the 9570 Wilshire Boulevard building (formerly the Barneys New York Building) is located in the northeastern portion of the site. The adjacent Shoe Building is located at 9620 Wilshire Boulevard (Parcel B) and is to be demolished during project construction. To the south of the Saks Women's Building and the Shoe Building is a surface parking lot with approximately 80 spaces, which is accessed from South Bedford Drive and South Peck Drive.

The former Barneys New York Building, at the southwest corner of Wilshire Boulevard and South Camden Drive is approximately 107,000 sf. The building was most recently used as a retail department store, which closed in 2020 and is currently vacant. Independent of this project, the interior of the building is currently being rehabilitated as a retail department store and it is anticipated that Saks will relocate its women's retail operations to the site upon completion of the pending work. This building contains four levels of subterranean parking with 309 vehicle spaces, which are accessed by an alleyway that connects to South Peck Drive and South Camden Drive. In addition, to the south and west of the former Barneys New York Building are two surface parking lots with approximately 119 spaces and 48 spaces, respectively. These parking lots are accessed by South Peck Drive.

For this analysis, the proposed Project is divided into two districts, the Wilshire Boulevard District and the Neighborhood District, and six subareas. The subareas of 9570 Wilshire, Parcel A, Parcel B, and Saks Rehabilitation comprise the Wilshire Boulevard District and the subareas of Neighborhood East and Neighborhood West comprise the Neighborhood District.

3.2 Specific Plan and Conceptual Plan Overview

The Project consists of the 9600 Wilshire Boulevard Specific Plan and an accompanying Conceptual Plan that proposes to establish a new specific plan to facilitate the orderly and efficient development of the Specific Plan Area by, among other things, establishing appropriate size, height, and square footage limits. Any new development within the Specific Plan Area would be implemented through the approval, from time to time. of a conceptual project plan consistent with the proposed Specific Plan. The "Conceptual Plan" refers to the proposed conceptual plan that accompanies the proposed Specific Plan. While the 9600 Wilshire Boulevard Specific Plan would apply to the entire Specific Plan Area, the Conceptual Plan excludes the 9570 Wilshire subarea (though limited work will be done on the associated loading parcel to integrate the site loading and access).

The proposed Conceptual Plan includes development on Parcel A, Parcel B, Saks Rehabilitation, Neighborhood West, and Neighborhood East, as well as rehabilitation of the existing Saks Women's Building. A description of each development area proposed in the Conceptual Plan is provided below.

3.2.1 Saks Rehabilitation and Parcel B

The Saks Rehabilitation and Parcel B development area is located at 9600 Wilshire Boulevard, between South Bedford Drive and South Peck Drive. The development consists of the redevelopment of the existing department store into retail, office, boutique hotel, social club, spa, restaurant, and ancillary space (including the lobby, circulation space, and the porte cochere/valet space). The Saks Rehabilitation and Parcel B development will contain 28,998 sf of retail space, 3,046 sf of restaurant space, 14,965 sf of social club space, 67,108 sf of office space, 17,215 sf of spa space, and a 40-suite boutique hotel with the Conceptual Plan. The Saks Rehabilitation and Parcel B would operate as a single, contiguous building.

3.2.2 Parcel A

Parcel A is located at 9596 Wilshire Boulevard, between South Peck Drive and the former Barney's New York Building at 9570 Wilshire Boulevard. The development consists of the construction of 11,657 sf of restaurant space and 58,796 sf of office space with the Conceptual Plan. The former Barney's New York Building at 9570 Wilshire Boulevard contains 107,000 sf of commercial space and would continue to be an independent retail building with its own self-contained, subterranean parking structure providing approximately 309 spaces. The building is currently vacant, but the Saks Fifth Avenue department store at 9600 Wilshire Boulevard would move into this building and utilize the existing parking structure. While the 9600 Wilshire Boulevard Specific Plan would apply to the entire Specific Plan Area, the Conceptual Plan excludes the 9570 Wilshire subarea.

3.2.3 Neighborhood West

The Neighborhood West residential development is located between South Bedford Drive and South Peck Drive. The development consists of the construction of 38 luxury residential units and 5,540 sf of ground-floor boutique retail with the Conceptual Plan.

3.2.4 Neighborhood East

The Neighborhood East residential development is located between South Peck Drive and South Camden Drive. The development consists of the construction of 30 luxury residential units and 5,041 sf of ground-floor boutique retail with the Conceptual Plan.

3.2.5 Specific Plan Maximum Buildout Scenarios

The land uses that could potentially be constructed with the implementation of the two Specific Plan Maximum Buildout scenarios, Scenario 2 with maximum buildout with no residential conversion and Scenario 3 with maximum buildout and the residential conversion, were developed based on the maximum amount of development that could occur with the Specific Plan. The land uses for each subarea of the Project with Scenario 2 and Scenario 3 in comparison to the Conceptual Plan are summarized below.

- The Saks Rehabilitation and Parcel B development area would continue to develop with retail/restaurant, office, boutique hotel, social club, and spa space under Scenario 2. Given that the trip generation rates for restaurant uses are higher than retail, all of the space designated as restaurant/retail in the Wilshire Boulevard District was assumed to develop as restaurant space (44,000 sf) in order to provide a conservative analysis. The amount of office space would increase from 67,108 sf in the Conceptual Plan to 75,000 sf in Scenario 2 and the hotel would increase from 40 rooms to 50 rooms. The social club and spa space would also increase from 32,108 sf to 39,000 sf. Under Scenario 3, the office, boutique hotel, and social club uses proposed with the Conceptual Plan would not occur, and instead, up to 75 residential conversion units would be constructed in the Wilshire Boulevard District. Scenario 3 assumes the same amount of restaurant space as Scenario 2 and a 19,000 sf spa.
- Parcel A would continue to provide restaurant/retail and office space. Up to 40,000 sf of restaurant space was conservatively assumed to be developed in Scenario 2 and Scenario 3 in comparison to 11,657 sf of restaurant space in the Conceptual Plan. The amount of office space was assumed to decrease from 58,796 in the Conceptual Plan to 40,000 sf in Scenario 2 and Scenario 3.
- The Neighborhood West residential development would provide slightly more residential units and boutique retail in Scenario 2 and Scenario 3. The number of residential units would increase from 38 in the Conceptual Plan to 39 in the Specific Plan Buildout scenarios, and the amount of retail would increase from 5,540 sf of ground-floor boutique retail to 7,500 sf.

- The Neighborhood East residential development would also provide slightly more residential units and boutique retail in Scenario 2 and Scenario 3. The number of residential units would increase from 30 in the Conceptual Plan to 31 in the Specific Plan Buildout scenarios and the amount of retail would increase from 5,041 sf of ground-floor boutique retail to 7,500 sf.

3.2.6 Parking

The Specific Plan Area would be serviced by two subterranean parking structures: (1) the existing approximately 309-space subterranean parking structure on the eastern portion of the Specific Plan Area below 9570 Wilshire, and (2) the newly proposed subterranean parking structure developed under the Specific Plan Area, portions of which may be located under the public rights-of-way within the Specific Plan Area. The Specific Plan would establish automobile parking requirements based on current Beverly Hills Municipal Code (BHMC) regulations, or at the election of an Applicant, through a shared parking analysis, including derived parking rates. Any shared parking analysis would be required to account for the array of potential uses and establish appropriate minimum parking requirements to address the potential of parking spillover onto public streets in the vicinity of the Specific Plan Area. Tandem spaces and other alternative parking arrangements would be allowed to count towards required parking with provision of a valet or tandem parking assistance.

The Conceptual Plan provides for a new, up to four-level subterranean parking structure with up to 937 parking spaces, offering a total of up to 716 parking spaces for commercial uses and up to 221 parking spaces for residential uses. The residential parking spaces would be secured and separate from the commercial parking spaces, with up to 98 secured parking spaces located beneath the Neighborhood East building and up to 123 secured parking spaces beneath the Neighborhood West building.

The Conceptual Plan also proposes relocating and/or repurposing up to 16 existing on-street parking spaces and adding new short-term on-street parking spaces adjacent to the Wilshire Boulevard District. Approximately ten existing surface spaces on South Peck Drive would be removed to allow for the widening of sidewalks; these commercial parking spaces would be relocated below grade. A total of up to four parking meters on South Camden Drive and two parking meters South Bedford Drive would be removed, and this curb space would be repurposed for neighborhood residential parking purposes. Up to six new short-term surface parking spaces would be provided adjacent to the Wilshire Boulevard District, at the north end of South Camden Drive, South Peck Drive, and South Bedford Drive.

Of the 716 total commercial parking spaces, up to 100 stalls would be available to the members of the public residing in the vicinity of the Specific Plan Area for use after hours and on weekends. The applicant, in cooperation with the City, would organize, promote, and offer the aforementioned stalls to Beverly Hills residents in the neighborhood adjacent to the Specific Plan Area in order to promote efficient use of parking resources.

3.3 Overview of VMT

On September 27, 2013, Governor Jerry Brown signed SB 743 into law, which initiated a process to change transportation impact analyses completed in support of CEQA documentation. SB 743 eliminates level of service (LOS) as a basis for determining significant transportation impacts under CEQA and provides a new performance metric, VMT. As a result, the State is shifting from measuring a project's impact to drivers (LOS) to measuring the impact of driving (VMT) as it relates to achieving State goals of reducing greenhouse gas (GHG) emissions, encouraging infill development, and improving public health through active transportation. To help lead agencies with SB 743 implementation, the Governor's Office of Planning and Research (OPR) produced a *Technical Advisory.*[2] This VMT analysis follows OPR guidance and the City's new adopted transportation impact thresholds.[3]

3.4 CEQA Thresholds

SB 743 directed OPR to "prepare, develop, and transmit to the Secretary of the Natural Resources Agency for certification and adoption proposed revisions to the guidelines adopted pursuant to Section 21083 establishing criteria for determining the significance of transportation impacts of projects within transit priority areas … Upon certification of the guidelines by the Secretary of the Natural Resources Agency pursuant to this section, automobile delay, as described solely by LOS or similar measures of vehicular capacity or traffic congestion within a transit priority area, shall not support a finding of significance pursuant to this division … ."

On January 20, 2016, OPR updated the CEQA Guidelines "Revised Proposal on Updates to the CEQA Guidelines on Evaluating Transportation Impacts in CEQA". In this update, the evaluation of VMT was recognized as "generally the most appropriate measure of transportation impacts." On November 2017, OPR proposed a new section, 15064.3, to help determine the significance of transportation impacts. The purpose of this section is to describe specific elements for considering the transportation impacts of a given project given the use of VMT as the primary measurement. This section was updated in July 2018 and finalized in December 2018 with criteria for analyzing transportation impacts.

Per the guidance from OPR, "a lead agency may elect to be governed by the provisions of this section immediately. Beginning on July 1, 2020, the provisions of this section shall apply statewide." The City of Beverly Hills formally adopted the use of VMT for CEQA transportation impacts on October 10, 2019 (Planning Commission Resolution 1901).

In accordance with Appendix G of the CEQA Guidelines, the proposed 9600 Wilshire Boulevard Specific Plan would have a significant impact related to transportation if it would:

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[2] Governor's Office of Planning and Research, *Technical Advisory on Evaluating Transportation Impacts in CEQA*, 2018.
[3] City of Beverly Hills, *Local California Environmental Quality Act Thresholds of Significance for Transportation Impacts and Local Transportation Assessment Guidelines*, 2019, 10.

1. **Conflict with a program, plan, ordinance, or policy** addressing the circulation system, including transit, roadways, bicycle, and pedestrian facilities.
2. **Conflict or be inconsistent with CEQA Guidelines Section 15064.3, Subdivision (b) per the following criteria**:

    a. Land Use projects. Vehicle miles traveled exceeding an applicable threshold of significance may indicate a significant impact. Generally, projects within one-half mile of either an existing major transit stop or a stop along an existing high-quality transit corridor should be presumed to cause a less than significant transportation impact. Projects that decrease vehicle miles traveled in the project area compared to existing conditions should be presumed to have a less than significant transportation impact.
    b. Transportation projects. Transportation projects that reduce, or have no impact on, vehicle miles traveled should be presumed to cause a less than significant transportation impact. For roadway capacity projects, agencies have discretion to determine the appropriate measure of transportation impact consistent with CEQA and other applicable requirements. To the extent that such impacts have already been adequately addressed at a programmatic level, such as in a regional transportation plan EIR, a lead agency may tier from that analysis as provided in Section 15152.
    c. Qualitative Analysis. If existing models or methods are not available to estimate the vehicle miles traveled for the particular project being considered, a lead agency may analyze the project's vehicle miles traveled qualitatively. Such a qualitative analysis would evaluate factors such as the availability of transit, proximity to other destinations, etc. For many projects, a qualitative analysis of construction traffic may be appropriate.
    d. Methodology. A lead agency has discretion to choose the most appropriate methodology to evaluate a project's vehicle miles traveled, including whether to express the change in absolute terms, per capita, per household or in any other measure. A lead agency may use models to estimate a project's vehicle miles traveled and may revise those estimates to reflect professional judgment based on substantial evidence. Any assumptions used to estimate vehicle miles traveled and any revisions to model outputs should be documented and explained in the environmental document prepared for the project. The standard of adequacy in Section 15151 shall apply to the analysis described in this section.

3. **Substantially increase hazards due to a geometric design feature** (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).
4. **Result in inadequate emergency access.**

A summary of potential Project impacts regarding VMT under item 2 above is described below.

3.5 VMT Methodology

The VMT analysis begins with a review of the baseline VMT metrics and VMT impact thresholds developed in conjunction with the City of Beverly Hills and based on OPR guidance and the City's adopted transportation impact thresholds. The Project is then evaluated under four VMT analysis screening options to determine if it may have a VMT impact and require further evaluation. The analysis concludes by assessing if the Project may have an impact under cumulative conditions. For projects that do not meet any screening options, a VMT analysis is required. Each of these steps is described in detail below.

3.5.1 Baseline VMT

The Southern California Association of Governments (SCAG) 2016 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) trip-based model is a travel demand model with socioeconomic and transportation network inputs, such as population, employment, and the regional and local roadway network. The model outputs several travel behavior metrics, such as vehicle trips and trip lengths, which can be used to calculate VMT. The RTP/SCS model forecasts long-term transportation demands and identifies policies, actions, and funding sources to accommodate these demands. The RTP/SCS consists of the construction of new transportation facilities, transportation systems management strategies, transportation demand management and land use strategies. While the latest version of the SCAG RTP/SCS is the 2020-2045 RTP/SCS Connect SoCal plan, the VMT estimates for the City of Beverly Hills continue to rely on the 2016 RTP/SCS trip-based model which was the version of the model that was available at the time the City defined its baseline VMT metrics and screening criteria. Based on the planned growth and transportation improvements envisioned in the latest RTP/SCS, the VMT trends reported from the 2016 RTP/SCS model will be similar to those in the new 2020 model; and therefore, applying the 2016 RTP/SCS model in the VMT analysis is considered a proper methodology for analyzing VMT impacts for the proposed Project.

The SCAG RTP/SCS trip-based model was used to estimate the regional baseline VMT and the baseline VMT for the City. The 2016 SCAG model has 2012 as the base year and 2040 as the forecast year and can be used to estimate VMT in the interim years. This baseline VMT methodology includes vehicle trips within the SCAG model to generate the following metrics:

1. Home-Based VMT per Capita: Home-based vehicle trips are traced back to the residence of the trip-maker (non-home-based trips are excluded) and then divided by the residential population within the geographic area. This metric is used to estimate VMT for residential land uses.
2. Home-Based Work VMT per Employee: Vehicle trips between home and work are counted, and then divided by the number of employees within the geographic area. This metric is used to estimate VMT for office and other commercial land uses.

The City's baseline VMT for each metric is shown in **Table 1**. These metrics estimate current VMT trends for residential and employment uses in the City of Beverly Hills. The City's baseline VMT reflects year 2022.

Table 1: Baseline VMT for City of Beverly Hills

VMT Metrics		City Average Baseline VMT
Home-Based VMT	Baseline Home-Based VMT per Capita	6.6
Home-Based Work VMT	Baseline Home-Based Work VMT per Employee	15.3

3.5.2 VMT Impact Thresholds

The City of Beverly Hills adopted a VMT impact threshold for land use projects on October 10, 2019, which states that a significant impact would occur if a project generates VMT higher than 15% below the regional average.[4] The City's VMT impact thresholds based on the regional average are summarized in **Table 2**. The regional average reflects that average amount of VMT generated within the SCAG region whereas the VMT data presented in the prior table reflects the average VMT generated within the City of Beverly Hills. As shown, the average Home-Based VMT per capita in the City is less than half of the average VMT per capita generated in the SCAG region and the Home-based Work VMT per employee in the City is approximately 10% lower than the SCAG average.

Table 2: City of Beverly Hills VMT Impact Thresholds

VMT Metrics		Regional Baseline VMT	VMT Impact Threshold*
Home-Based VMT	Baseline Home-Based VMT per Capita	14.2	12.1
Home-Based Work VMT	Baseline Home-Based Work VMT per Employee	16.8	14.3

* The VMT Impact Threshold for each VMT metric is 15% below the respective Regional Baseline VMT.

3.6 VMT Screening

The first step of a VMT analysis is to determine what type of analysis, if any, is needed. Based on the OPR *Technical Advisory*, the City of Beverly Hills adopted screening criteria (Planning Commission Resolution 1901, Exhibit A, Table 2) that the City may use to identify if a proposed project is expected to cause a less-than-significant impact without conducting a detailed study: project size, locally serving retail, project location in a low VMT area, and project accessibility to transit. The four screening criteria are detailed below and applied to all or, as applicable, each individual component of the Project to determine if the Project as a whole, or a particular component, has the potential to result in a VMT impact. Once the Project as a whole, or a Project component, qualifies under one of the screening criteria, the Project or the applicable component is screened out from further consideration. However, this evaluation considers all screening criteria that are applicable to the Project, or a Project component, even if the Project or Project

[4] City of Beverly Hills, *Local California Environmental Quality Act Thresholds of Significance for Transportation Impacts and Local Transportation Assessment Guidelines*, 2019, 10.

component already meets other screening criteria. If the Project as a whole, or a Project component, does not meet any screening criteria, then further VMT analysis is required.

The VMT screening criteria were applied to the Conceptual Plan and two Specific Plan Buildout scenarios to determine if the Project would potentially have a VMT impact. Given that the screening criteria focus on project size, the types of land uses being proposed, and the location of the development, all three potential development scenarios are expected to have similar screening criteria outcomes, and therefore, the screening criteria applicable to the Project are described below and differences between the development scenarios that affect the screening outcomes are provided.

3.6.1 Screening Criteria 1: Project Size

Land uses that generate less than 110 daily trips are presumed to have less than significant VMT impacts absent substantial evidence to the contrary. Therefore, these uses are screened out from completing a VMT analysis based on project size. The Conceptual Plan and Specific Plan Buildout scenarios would generate more than 110 daily trips (see the following chapter for detailed trip generation estimates for each land use scenario). Since the daily trip generation exceeds the number of daily trips (up to 110 trips) that is applicable for project size screening, the proposed Project does not meet this screening criteria.

3.6.2 Screening Criteria 2: Locally Serving Retail

The retail portion of commercial or mixed-use projects with locally serving retail uses—defined as retail uses less than 50,000 sf—are presumed to have less than significant VMT impacts, absent substantial evidence to the contrary. The Conceptual Plan proposes up to 39,600 sf of retail space and would meet the screening criteria for locally serving retail uses. This means that the retail component of the proposed Project is presumed to have a less than significant VMT impact and can be screened out from further VMT analysis.

With the Specific Plan Buildout scenarios, the amount of retail space could potentially be greater than 50,000 sf. Therefore, this screening criteria would not apply to either Specific Plan build-out scenario and the additional screening criteria discussed below would need to be considered.

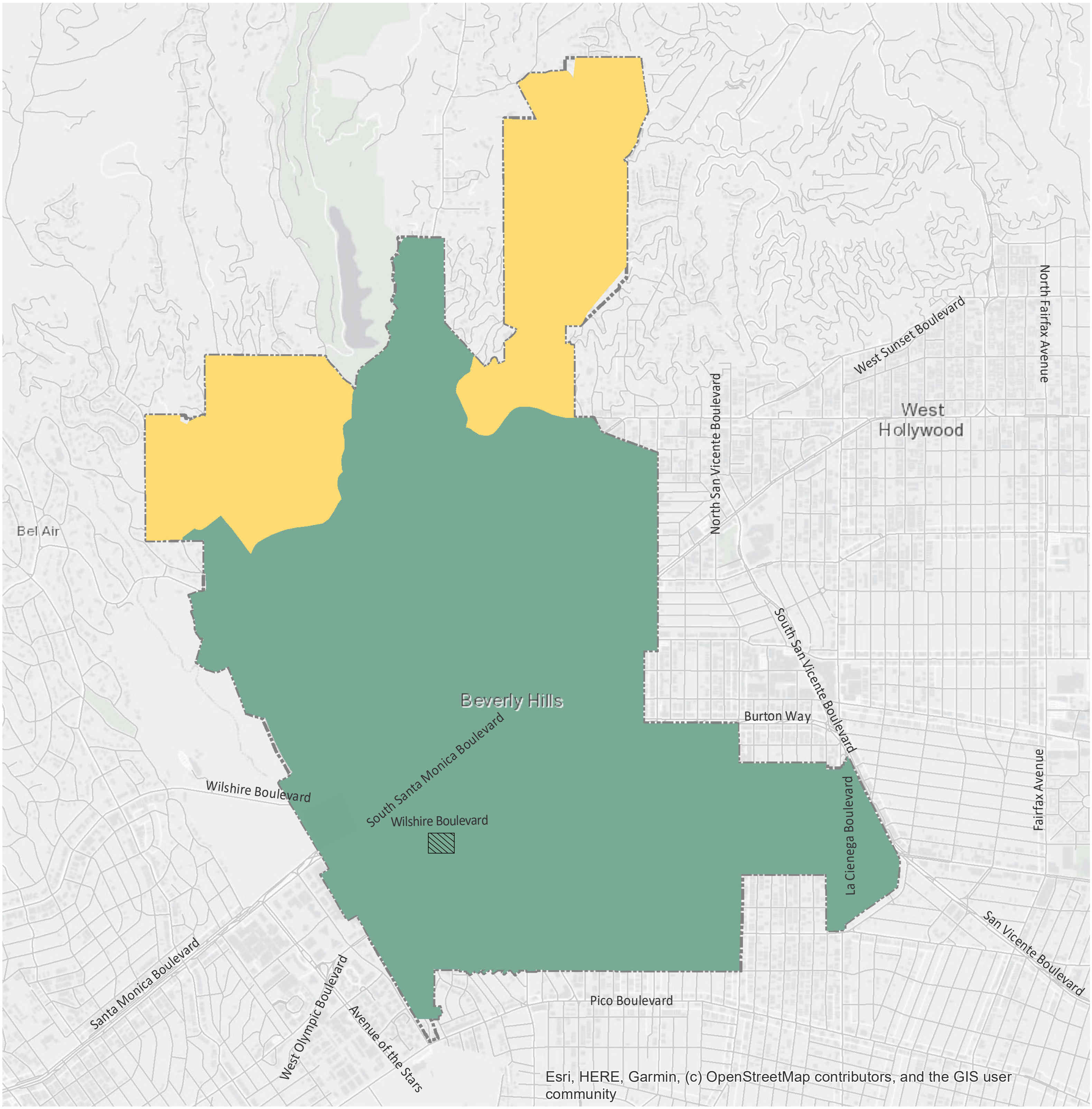
3.6.3 Screening Criteria 3: Low VMT Area Screening

OPR guidance states that residential and office projects located within a low VMT generating area may be presumed to have a less than significant impact absent substantial evidence to the contrary. A low VMT generating area generally has higher density, a mix of land uses, and provides opportunities for people to walk to nearby uses instead of always driving.

Low VMT areas are defined as areas that are currently generating VMT below the City's VMT threshold. For office uses, the City does not allow low VMT screening. At the time the City was preparing its VMT guidelines, the Home-Based Work VMT per Employee for the City of Beverly Hills was compared to the SCAG regional average VMT. The results showed that the City's average Home-based Work VMT was approximately 10% lower than the regional average. However, since the City's VMT threshold states that project VMT should be at least 15% below the regional average to avoid a significant VMT impact, the City decided to not allow this screening criteria for office projects. Therefore, the office uses proposed as part of the Project do not meet this screening criteria.

For residential uses, the City does allow low VMT screening. The Home-based VMT per capita for the City of Beverly Hills is less than half of the SCAG regional average VMT per capita (as shown in **Table 1** and **Table 2** above). Therefore, the City allows screening for residential projects if they are located in a low VMT generating traffic analysis zone (TAZ), defined as VMT that is at least 15% lower than the baseline level for the region. In the City of Beverly Hills, a low VMT area for residential projects generates no more than 12.1 VMT per capita as shown above in **Table 2**. The TAZs contained in the SCAG model can be used to identify the low VMT areas.

The low VMT areas for residential uses in the City are shown in **Figure 6**. The Specific Plan Area is divided between two TAZs in the SCAG model, one TAZ for the land uses east of South Peck Drive and the other for the land uses west of South Peck Drive. Both of these TAZs generate Home-based VMT per capita that is lower than the City average (5.6 Home-based VMT per capita and 3.9 Home-based VMT per capita). In comparison to the regional average VMT per capita for residential uses, these TAZs are 54% and 68% below the regional baseline VMT which satisfies the requirement that the TAZs are at least 15% below the regional baseline VMT. Therefore, the Specific Plan Area is in a location with low residential VMT, which means the residential component of the Conceptual Plan and Specific Plan Buildout scenarios is presumed to have a less than significant VMT impact and can be screened out from further VMT analysis.



<-15% below SCAG Regional Average
0 to -15% below SCAG Regional Average
Higher than SCAG Regional Average
City Limits
Proposed Project Site

SCAG Regional Average calculated using SCAG model

Figure 6

City of Beverly Hills
Low VMT Screening for Residential

3.6.4 Screening Criteria 4: Transit Priority Areas (TPA) Screening

Projects located in parcels designated with commercial zoning by the City that are in a Transit Priority Area (TPA) may also be screened out from conducting a VMT analysis because they are presumed to have a less than significant impact absent substantial evidence to the contrary. TPAs are defined in the OPR *Technical Advisory* as a ½ mile radius around an existing or planned major transit stop or an existing stop along a high-quality transit corridor (HQTC). A HQTC is defined as a corridor with fixed route bus service frequency of 15 minutes (or less) during peak commute hours.

The City of Beverly Hills adopted VMT thresholds to allow screening for TPAs that are located within ½ mile of a Metro Rapid bus stop for parcels zoned for commercial use. This means that the land uses in commercial zones throughout the Specific Plan area are potentially eligible for TPA screening. Metro Rapid service was used to define TPAs in the City because these routes had at least 15-minute frequencies during the morning and afternoon commute period. In addition, the presence of Metro Rapid Routes on Wilshire Boulevard, North Santa Monica Boulevard, and Olympic Boulevard resulted in all commercially zoned parcels being screened from future VMT analysis. Therefore, adding other local Metro bus service to the City's definition for TPA screening would not have changed the outcome.

Two major changes to transit service have been implemented by Metro since the City's TPAs were defined for VMT screening. The first change was due to COVID-19 which caused Metro to implement temporary service changes in response to the travel impacts caused by the pandemic. However, Metro has restored most transit service in the area and is providing more frequent service to return operations to pre-pandemic service levels. The transit information used to determine the current frequency of bus service in the City is based on the schedule changes that Metro implemented in December 2022.

In addition to the service frequency changes, Metro adopted the NextGen Bus Plan in 2020, a once-in-a-generation overhaul of bus routes and service design concepts intended to provide faster and more frequent bus service, including during off-peak periods, better reliability and accessibility to key destinations, better connectivity with municipal transit operators, and improved perception of safety onboard buses and at bus stops. The main change in Metro's NextGen Bus Plan that impacted the City's TPA is the elimination of most Metro Rapid Lines as summarized below.

- Metro's former Rapid Line 704 providing service on North Santa Monica Boulevard was discontinued as part of the NextGen Bus Plan. Service frequencies were increased on Line 4 which has the same route as the former Rapid Line with more stop locations on North Santa Monica Boulevard.
- Metro's former Rapid Line 728 providing service on Olympic Boulevard was discontinued as part of the NextGen Bus Plan. Service frequencies were increased on Line 28 which has the same route as the former Rapid Line with more stop locations on Olympic Boulevard.
- The local bus service that replaced the former rapid service on Olympic and North Santa Monica Boulevards operates at least every 15 minutes during the morning and afternoon peak hours. Therefore, these bus routes meet OPR's definition of a HQTC and qualify for TPA screening.

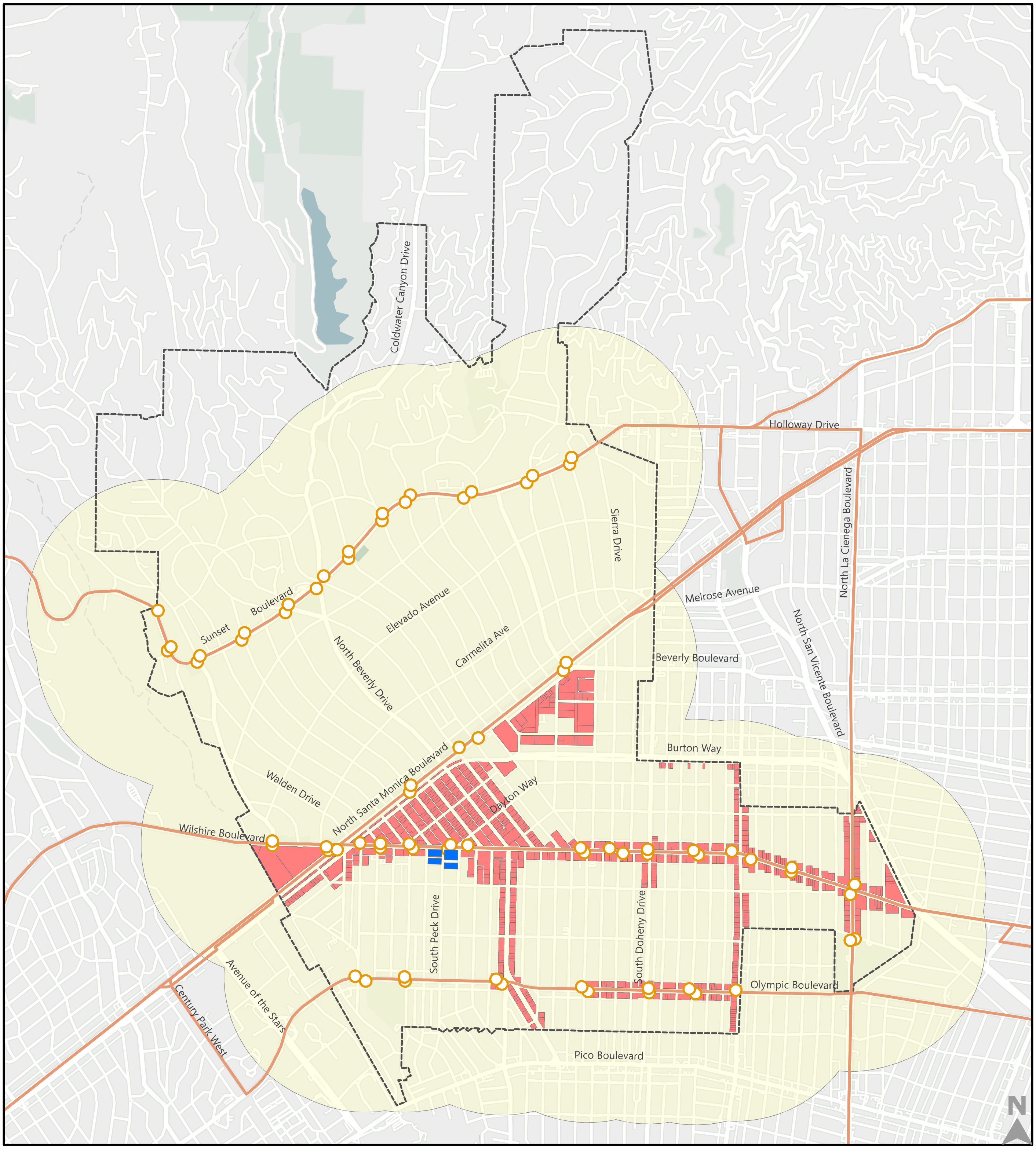
Metro's Rapid Line 720 on Wilshire Boulevard continues to operate as rapid bus service. In addition, Metro continues to operate local bus service on Line 20 along the Wilshire Boulevard corridor with more stop locations than the parallel rapid service.

The TPAs in the City of Beverly Hills are shown in **Figure 7** along with the Metro bus routes and stop locations that operate with a minimum frequency of 15 minutes during the morning and afternoon peak travel hours (generally defined as 8:00 – 9:00 AM and 5:00 – 6:00 PM). As described in **Section 2.2** and illustrated in this figure, multiple existing bus routes provide service frequencies of 15 minutes of less within a ½ mile of the Specific Plan Area. In addition, the Metro D Line extension currently under construction is 0.2 miles from the Project site. Therefore, the portion of the Specific Plan Area located in the Wilshire Boulevard District is eligible for TPA screening as long as it satisfies the additional criteria described below.

The presumption that a commercial use being proposed as part of a project in a TPA will have a less than significant impact absent substantial evidence to the contrary may not be appropriate if the project:

1. Has a Floor Area Ratio (FAR) of less than 0.75;
2. Includes more parking required by City, unless additional parking is being provided for design feasibility, such as completing the floor of a subterranean or structured parking facility, or if additional parking is located within the project site to serve adjacent uses; or
3. Is inconsistent with the applicable Sustainable Communities Strategy (as determined by the City).

The average FAR over the entire Specific Plan Area with maximum buildout would be 3.7 and the FAR for the Conceptual Plan would be 3.52, which both satisfy the minimum 0.75 FAR requirement to be eligible for TPA screening. The Specific Plan would establish automobile parking requirements based on current BHMC regulations, or at the election of an Applicant, through a shared parking analysis, including derived parking rates which results in the Project not providing more parking than required by the City as required to be eligible for TPA screening. The project site is designated as Mixed Residential and Commercial in the SCAG RTP/SCS, so the proposed land uses are consistent with the RTP/SCS. In addition, VMT on a 'per capita' and 'per employee' basis is expected to decrease over time in the Project TAZs based on increased development densities and planned transit improvements (see **Table 3** below). Based on this information, the commercially zoned portions of the Conceptual Plan and Specific Plan Buildout scenarios are presumed to have a less than significant VMT impact and can be screened out from further VMT analysis.



Project Site

Commercial Zones

Transit Priority Area (TPA)

City Limits

Metro Bus Headways

<15-minute Frequencies

Transit Stops

Figure 7

City of Beverly Hills

Transit Priority Area Screening for Commercial Zones

3.7 Cumulative VMT Analysis

The City of Beverly Hills adopted the following cumulative threshold for VMT impacts:

1. A significant impact would occur if the project causes VMT within the City to be higher than the no project alternative under cumulative conditions.
2. A significant impact would occur if the project is determined to be inconsistent with the RTP/SCS.

For cumulative conditions, OPR states that a project that is below the VMT impact thresholds and does not have a VMT impact under baseline conditions would also not have a cumulative impact as long as it is aligned with long-term State environmental goals, such as reducing GHG emissions, and relevant plans, such as the SCAG RTP/SCS.[5] Based on the City's adopted screening criteria, the Project is presumed to have a less than significant VMT impact and is screened out from further VMT analysis under both baseline and cumulative conditions. Therefore, additional VMT analysis regarding City VMT with and without the project under cumulative conditions is not required.

Table 3 shows a comparison of socio-economic characteristics and VMT metrics of the TAZs that encompass the Project site under baseline and future year conditions based on SCAG model data. The TAZ areas consist of the Specific Plan Area and the adjacent mixed-use commercial, multi-family residential, and single-family residential uses. As shown, the SCAG model already reflects the growth of approximately 91 people and 817 employees in the project TAZ.

Table 3: SCAG Growth Assumptions for Specific Plan Area TAZs

SCAG RTP/SCS	Existing Conditions	Cumulative 2040 Conditions	Land Use Growth & % Change in VMT
Total Population	1,697	1,788	**91**
Total Employment	7,192	8,009	**817**
Average Home-Based VMT per Capita	4.7	3.17	-33%
Average Home-Based Work VMT per Employee	17.5	13.98	**-20%**

Source: 2016 SCAG RTP Travel Demand Model. SCAG Model Tier 2 TAZs 20863300 and 20863100 include the Specific Plan Area.

As shown in **Table 3**, population and employment are expected to increase in the Specific Plan Area under cumulative (2040) conditions, while the Home-based VMT per capita is expected to decrease by 33% and the Home-based Work VMT per Employee is expected to decrease by 20% based on additional land use densities, increased transit service, and trip reduction strategies envisioned by SCAG in the RTP/SCS. Therefore, the Project is consistent with the RTP/SCS and will result in a less than significant impact on VMT under cumulative conditions.

[5] Governor's Office of Planning and Research, *Technical Advisory on Evaluating Transportation Impacts in CEQA*, 2018, 12.

3.8 VMT Summary and Conclusions

Each component of the Project meets at least one screening criteria for VMT. **Table 4** summarizes the City's eligible screening criteria and the outcome for each project component in the Conceptual Plan and Specific Plan Buildout scenarios.

Table 4: VMT Screening Summary for Conceptual Plan and Specific Plan Buildout Scenarios

Screening Criteria	Conceptual Plan				Specific Plan Buildout (Scenarios 2 and 3)			
	Wilshire Blvd District		Neighborhood District		Wilshire Blvd District		Neighborhood District	
	Com. Uses	Res. Uses	Com. Uses	Res. Uses	Com. Uses	Res. Uses	Com. Uses	Res. Uses
Screening Criteria 1: Project Size	No	No	No	No	No	No	No	No
Screening Criteria 2: Locally Serving Retail	**YES**	No	**YES**	No	No[1]	No	**YES**	No
Screening Criteria 3: Low VMT Area	No	**YES**	No	**YES**	No	**YES**	No	**YES**
Screening Criteria 4: Transit Priority Area	**YES**	**YES**	No	No	**YES**	**YES**	No	No
Project Component Meets VMT Screening?	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**

Notes: Com. = Commercial; Res. = Residential.

1. For the purposes of estimating retail land uses under the Specific Plan Buildout Scenario, the amount of retail qualifies as locally serving retail. However, if more than 50,000 sf of retail is constructed, this screening criteria would not apply; and therefore, locally serving retail screening is not assumed to be met for the Wilshire District in Scenarios 2 and 3. All land uses proposed in the Wilshire District would meet the TPA screening criteria regardless of the amount of retail space.

As shown in the above table, the development proposed in the Wilshire Boulevard District meets the screening criteria for low VMT for residential uses and TPA for all land uses in the commercial zone under both the Conceptual Plan and Specific Plan Buildout scenarios. The additional screening criteria for locally serving retail uses would only apply to the Conceptual Plan because the amount of retail space could potentially be greater than 50,000 sf with the Specific Plan Buildout scenarios in the Wilshire District. In the Neighborhood District, the proposed development meets the screening criteria for locally serving retail and low VMT for residential. Based on the City's adopted screening criteria, the Project is presumed to have a less than significant VMT impact and is screened out from further VMT analysis.

4. Site Access & Circulation

This chapter presents an overview of site access and on-site circulation for the 9600 Wilshire Boulevard Specific Plan. In addition, an estimate of the vehicle trip generation of the Project is provided.

4.1 Overview

Wilshire Boulevard would function as the main access corridor to and from the Specific Plan Area. Vehicular ingress and egress to the project site would be provided by new driveways located on South Bedford Drive, South Peck Drive, and South Camden Drive. South Drive, a new roadway on the south side of the Specific Plan Area, would provide local access between South Bedford Drive, South Peck Drive, and South Camden Drive. **Figure 8** illustrates the proposed circulation plan for the Conceptual Plan submitted with the Specific Plan. This figure is intended to show site circulation for the proposed Conceptual Plan; the building locations and other features depicted in that figure are based on the proposed Conceptual Plan and are included for reference purposes only.

The proposed Conceptual Plan would locate pedestrian entrances on South Bedford Drive, South Peck Drive, Camden Drive, Wilshire Boulevard, and the publicly accessible Via and Terrace situated to the immediate south of the commercial buildings. Each ground floor commercial tenant space situated along Wilshire Boulevard would be individually accessible to enhance pedestrian activity along the street. An additional pedestrian access point could be provided along South Bedford Drive to access the ground floor restaurant use proposed on Parcel B. Pedestrian access to the Neighborhood East and West buildings would be provided on South Peck Drive and pedestrian entrances for the ground floor retail uses would be provided by the Via and Terrace. New street furniture and enhanced pavement, landscaping, and lighting would also be provided within the public rights-of-way to create a pleasant pedestrian environment.

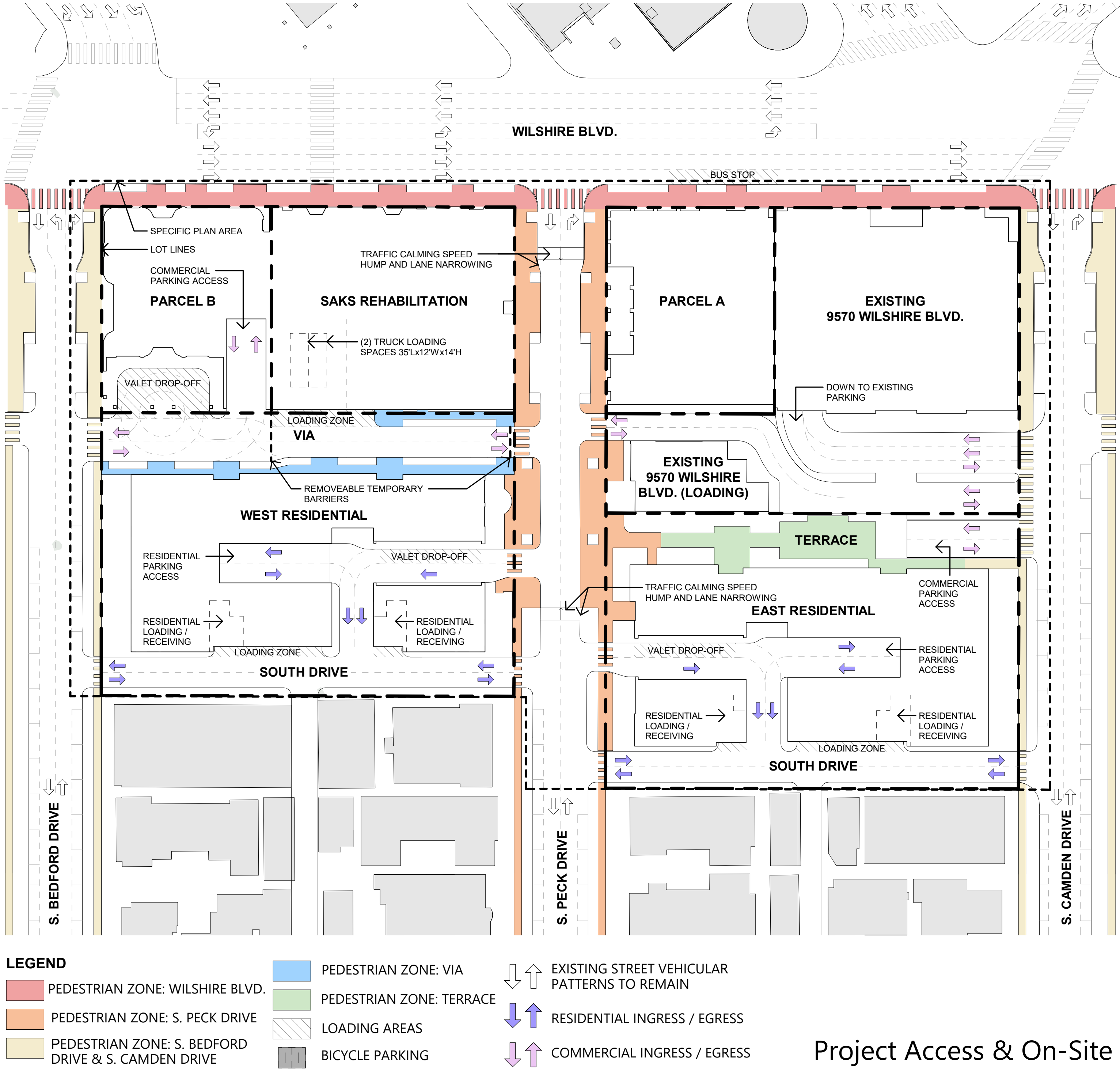


Figure 8

Project Access & On-Site Circulation

4.2 Project Trip Generation Estimates

Trip generation for the Project land uses was based on the most recent edition of the Institute of Transportation Engineers (ITE) *Trip Generation Manual* (11th Edition). **Table 5** provides the trip generation rates applied to the Proposed Project.

Table 5: Trip Generation Rates

Land Use	Trip Rates		
	Daily	AM Peak Hour	PM Peak Hour
Retail[1]	37.01	0.84	3.40
Quality Restaurant[2]	92.39	8.25	7.80
Office[3]	10.84	1.52	1.44
Boutique Hotel[4]	7.99	0.46	0.59
Residential[5]	4.54	0.37	0.39

Notes: Trip generation rates based on Trip Generation, 11th Edition, Institute of Transportation Engineers (ITE), 2021.
(1) Retail trip rates based on Shopping Center (>150ksf) (ITE Code 820).
(2) Restaurant trip rates based on Quality Restaurant (ITE Code 931) with adjustments to the daily and AM peak hour trip generation rate to reflect potential breakfast service using trip generation rates for High-Turnover Sit-Down Restaurant (ITE Code 932).
(3) Office trip rates based on General Office (ITE Code 710).
(4) Boutique Hotel trip rates based on Hotel (ITE Code 310).
(5) Residential trip rates based on Multifamily Housing (Mid-Rise) (ITE Code 221).

The project consists of some land uses that are not documented in the ITE *Trip Generation, 11th Edition.* These uses include the social club and spa. The social club and spa trip generation was taken directly from the *Traffic Sensitivity Analysis for the 9600 Wilshire Boulevard Project Beverly Hills, California Memorandum* dated October 23, 2022 from Gibson Transportation Consulting, Inc. (*Traffic Sensitivity Analysis*). The trip generation estimates for these uses were based on anticipated attendance levels by social club members and their guests and occupancy of the spa on a typical weekday as projected by the project applicant. The social club and spa uses are expected to generate approximately 500 daily trips with 15 trips occurring during the AM peak hour and 60 trips occurring during the PM peak hour.

The Mixed-Use (MXD) Trip Generation Model was utilized to estimate the internalization of Project trips and the portion of trips expected to walk, bike, or take transit based on the Project location and mix of land uses upon buildout of the Conceptual Plan. The MXD Model was developed by Fehr & Peers and the Environmental Protection Agency (EPA), and it accounts for the site context, site location, and other factors to estimate potential internalization and multimodal trip reductions. Land uses surrounding the Specific Plan Area include a mix of residential, retail, recreational, school, and service uses. Parcels to the north of the Specific Plan Area across Wilshire Boulevard are zoned C-3 and are improved with high-rise commercial buildings, such as the eight-story (112-foot) high rise containing a mix of uses, including upper-level office and a ground-floor gym (Equinox) and restaurant (Ocean Prime) at the northwestern corner of Wilshire Boulevard and South Camden Drive and the ten-story (156-foot) high rise containing office and financial institution uses at the northeastern corner of Wilshire Boulevard and South Bedford

Drive. Parcels to the south of the Specific Plan Area are multi-family residential buildings ranging between one- and three-stories in height. Given the mixed-use development being proposed with the Project and the mix of land uses already in the Project area, the MXD Model was found to be the appropriate tool to estimate vehicle trip reduction estimates for the Project site.

The MXD model estimated a total vehicle trip reduction of approximately 26% on a daily basis and 32% to 33% during the AM and PM peak hours for the Conceptual Plan. A large portion of the estimated vehicle trip reduction was due to trips made by modes other than driving (transit, biking, and walking). To provide a more conservative (higher) estimate of vehicle trips generated by the Project, the number of trips made by these modes was reduced by 50%. The resulting trip reduction estimate was approximately 14% for the daily trips, 20% for the AM peak hour trips, and 21% for the PM peak hour trips. The MXD model was also utilized to estimate the internalization of project trips and the portion of trips expected to walk, bike, or take transit based on the project location and mix of land uses for both Specific Plan Buildout scenarios. The *9600 Wilshire Boulevard Specific Plan Local Transportation Assessment* (Fehr & Peers, November 2023) contains the detailed trip generation and MXD Model calculations.

Table 6 summarizes the total number of Project trips generated under the Conceptual Plan and two Specific Plan Buildout scenarios. As shown, Scenario 2 Specific Plan Maximum Buildout would generate the highest number of vehicle trips followed by Scenario 3 Specific Plan Maximum Buildout with Residential Conversion that accounts for the reduction in commercial space and increase in residential units in the Wilshire Boulevard District. In both Scenario 2 and Scenario 3, the high number of vehicle trips is primarily due to the large amount of restaurant space that is assumed to potentially occur with maximum buildout of the Specific Plan (up to 84,000 sf of restaurant space under both the Specific Plan scenarios in comparison to 14,700 sf in the Conceptual Plan).

Table 6: Land Use and Trip Generation Summary for Conceptual Plan and Specific Plan Buildout Scenarios

Land Use	Conceptual Plan				Scenario 2 Specific Plan				Scenario 3 Specific Plan with Residential			
	Quantity	Trip Estimates			Quantity	Trip Estimates			Quantity	Trip Estimates		
		Daily	AM	PM		Daily	AM	PM		Daily	AM	PM
Retail	39.6 KSF	1,465	33	135	15 KSF	556	12	52	15 KSF	556	12	52
Restaurant	14.7 KSF	1,358	121	115	84 KSF	7,761	693	655	84 KSF	7,761	693	655
Office	125.9 KSF	1,364	191	182	115 KSF	1,247	175	166	40 KSF	434	61	58
Social Club/Spa	32.18 KSF	500	15	60	39 KSF	606	18	73	19 KSF	295	9	35
Hotel	40 Rooms	320	18	24	50 Rooms	400	23	30	-	-	-	-
Residential	68 Units	309	25	27	70 Units	318	25	27	145 Units	659	53	56
Total Project Trips		**5,316**	**403**	**543**	**--**	**10,888**	**946**	**1,003**	**--**	**9,705**	**828**	**856**
MXD+ Model Reduction %		14%	20%	21%	--	14%	19%	18%	--	17%	20%	20%
MXD+ Model Trip Reduction		(758)	(82)	(115)	--	(1,562)	(175)	(185)	--	(1,599)	(167)	(174)
TOTAL VEHICLE TRIPS		**4,558**	**321**	**428**	**--**	**9,326**	**771**	**818**	**--**	**8,106**	**661**	**682**

4.3 Vehicle Circulation

The majority of vehicle trips are expected to utilize Wilshire Boulevard to access the Specific Plan Area. Approximately 35% of Project trips are expected to travel to/from the east on Wilshire Boulevard and approximately 30% are expected to travel to/from the west on Wilshire Boulevard. A portion of vehicles traveling to the Project site will also utilize Wilshire Boulevard to access the roadways serving the business triangle to the north and neighborhoods further north and east, such as North Roxbury Drive, North Bedford Drive, Dayton Way, Brighton Way, and Rodeo Drive (approximately 5% each). To the south of the Specific Plan Area, approximately 15% of vehicles are expected to travel on Charleville Boulevard and approximately 5% are expected to travel on either South Bedford Drive, South Peck Drive, or South Camden Drive south of Charleville Boulevard to access Olympic Boulevard. Below is a summary of the local travel patterns for vehicles entering the site given the permitted turning movements at the primary access points on Wilshire Boulevard:

- Bedford Drive is controlled by a traffic signal at Wilshire Boulevard. All turning movements between Wilshire Boulevard and South Bedford Drive are permitted. North of Wilshire Boulevard, North Bedford Drive has one-way southbound operations. Therefore, vehicles exiting the Project site by traveling on northbound South Bedford Drive must make a left or right-turn onto Wilshire Boulevard.

- South Peck Drive is stop-controlled at Wilshire Boulevard. Only right-turns are allowed from South Peck Drive onto eastbound Wilshire Boulevard and no left-turns from Wilshire Boulevard are allowed onto South Peck Drive. Therefore, vehicles can only enter the project site on South Peck Drive by making a right-turn from eastbound Wilshire Boulevard. Vehicles traveling westbound on Wilshire Boulevard would enter the Project site at the signalized intersections at Bedford Drive or Camden Drive.
- Camden Drive is controlled by a traffic signal at Wilshire Boulevard. North of Wilshire Boulevard, North Camden Drive operates as one-way northbound. Dayton Way also connects to this intersection and provides access one-way north/eastbound. Only right-turns are allowed from South Camden Drive onto eastbound Wilshire Boulevard with no access to North Camden Drive or Dayton Way. Therefore, vehicles exiting the Project site and desiring access to either Camden Drive or Dayton Way would need to access Wilshire Boulevard at South Bedford Drive or South Peck Drive. Both left and right-turns are allowed from Wilshire Boulevard onto South Camden Drive.

Given the turning movement restrictions at the primary intersections on Wilshire Boulevard providing access to the Specific Plan Area, South Drive can be utilized by residents, employees, and visitors of the Specific Plan to travel between South Bedford Drive, South Peck Drive, and Camden Drive. The construction of South Drive eliminates the need for vehicles to circulate the entire block and minimizes traffic volume increases on the local roadways providing access to the Project site and on Charleville Boulevard.

4.4 Project Access

Vehicle access to each of the Project subareas is described in more detail below.

4.4.1 Parcel A, Parcel B & Saks Rehabilitation

Vehicular ingress and egress for commercial parking would be provided in two locations. The first is through the proposed Via, with a second vehicular ingress and egress point at South Camden Drive. The Via would be located just south of Parcel B and the Saks Rehabilitation parcels and provide access at South Bedford Drive on the west and South Peck Drive on the east. The Via would provide direct access to the subterranean parking structure at the porte-cochere/valet area serving the hotel and other commercial uses within the Specific Plan area. While the Via would be designed to provide both vehicular and pedestrian access and circulation between South Bedford Drive and South Peck Drive, the eastern portion of the Via would be designed to be closed to vehicles during designated periods (such as for farmer’s markets or other events). During times that require the eastern portion of the Via to be closed, vehicles would access the Via on South Bedford Drive or alternatively utilize the proposed driveway on South Camden Drive.

The second vehicular ingress and egress point for commercial parking would be provided from South Camden Drive through a proposed two-way driveway adjacent to the Terrace. This access point would connect to the commercial parking (described above) and allow automobiles to circulate throughout the entire subterranean garage through a connection below South Peck Drive.

4.4.2 9570 Wilshire Building

The existing two-way driveway on South Camden serving 9570 Wilshire would continue to provide access to the existing parking garage at 9570 Wilshire serving that use.

4.4.3 Neighborhood West

Vehicular ingress to the secured parking for the Neighborhood West building would be provided by a one-way driveway on South Peck Drive, with egress provided on South Drive. South Drive would be an approximately 20-foot-wide two-way roadway with an enhanced landscape buffer located along the southern boundary of the Specific Plan Area. The western portion of South Drive would provide access between South Bedford Drive and South Peck Drive.

4.4.4 Neighborhood East

Similar to the Neighborhood West building, vehicular ingress to the secured parking for the Neighborhood East Building would be provided by a one-way driveway located on South Peck Drive. Egress from the parking area would be provided on South Drive. The eastern portion of South Drive would provide access between South Peck Drive and South Camden Drive.

4.5 Project Circulation Enhancements

The Project is proposing several modifications to the existing roadways in the Specific Plan Area to improve access and circulation for vehicles, pedestrians, and bicyclists. These improvements are illustrated above in **Figure 8** and summarized below.

- **Wilshire Boulevard**: Improvements on Wilshire Boulevard would be constructed within the current right-of-way and would not modify the existing configuration. A continental crosswalk would be added at the south leg of the intersection of Wilshire Boulevard and South Peck Drive consistent with the City's Complete Streets design guidelines.
- **South Bedford Drive**: Within the existing right-of-way, a portion of the eastern half of South Bedford Drive would be upgraded and reconfigured to allow for one new, on-street parking stall adjacent to Parcel B. The two existing parking spaces along the eastern sidewalk of South Bedford Drive would remain, but the existing parking meters associated with those spaces would be removed and the spaces would be designated for residential use, creating new on-street residential parking for the neighborhood.
- **South Peck Drive**: This roadway would be reconfigured as a "shared street" within the existing right-of-way. Between the northern boundary of the western segment of South Drive to approximately 50 feet south of Wilshire Boulevard, existing metered parking spaces would be removed (and replaced by below grade parking) to allow for the widening of sidewalks and parkway to enhance the pedestrian environment. Two new, on-street parking spaces would be

provided, one adjacent to Parcel A and one adjacent to the Saks Rehabilitation parcel. Portions of the roadway segment would be raised, eliminating curbs and gutters, and allowing for priority movement of pedestrians. Truncated domes or another mechanism that is consistent with the Americans with Disabilities Act would signal grade changes and distinguish pedestrian-only versus shared pedestrian and vehicular zones within the right-of-way. Bollards would identify changes in usage across the right-of-way.

- **South Camden Drive**: Within the existing right-of-way, a portion of the western half of South Camden Drive would be reconfigured to allow for the creation of two new, on-street parking spaces adjacent to 9570 Wilshire. The four existing parking spaces along the western sidewalk of South Camden Drive would remain, but the existing parking meters associated with those spaces would be removed and the spaces would be designated for residential use, creating new on-street residential parking for the neighborhood.

At all four roadways discussed above, parkway areas would be paved with specialty pavement, such as stone, brick, and decorative concrete. Depending on the use of a particular parkway segment, the parkway would be either fully paved or enhanced with a combination of parkway and paver design. In addition, new landscaping would be added along the parkway and street lighting, bicycle racks, and street furniture would be permitted within the sidewalk.

While South Drive would provide internal vehicle circulation within the Specific Plan Area, two additional access points would focus on enhancing pedestrian connectivity as summarized below.

- **Via**: The Via would be a privately owned, east-west accessway with public access. The Via would be constructed within the western portion of the Specific Plan Area providing east-west pedestrian access between South Peck Drive and South Bedford Drive, as well as vehicular access to the subterranean parking and loading areas within the Wilshire Boulevard District. The eastern portion of the Via would be designed to be closed to vehicles during designated periods, such as for farmer’s markets or other events. Architectural treatments, structures, and/or landscape sheltering pedestrian walkways would be included in and around the Via.
- **Terrace**: The Terrace would be a pedestrian-only parkette, designed to provide pedestrian connectivity and an activated open space appropriate for the Terrace’s adjacency to both residential and commercial uses. Vehicular traffic would not be permitted on the Terrace, except for use by emergency service providers. The Terrace would be privately owned and maintained but would provide public access.

5. Active Transportation System

This chapter discusses the operational characteristics of the 9600 Wilshire Boulevard Specific Plan in relation to the surrounding active transportation system.

5.1 Overview

The transit, bicycle, and pedestrian impacts of the Project were compared to the existing and planned conditions in the Specific Plan Area. Given that site access and proposed circulation facilities for vehicles, pedestrians, and bicyclists would be the same for the Conceptual Plan and Specific Plan scenarios, the potential impacts discussed in this section apply to all three potential land use scenarios and referred to as the Project. The active transportation system was considered to be impacted if the Project conflicted with existing facilities or adopted policies, plans, or programs supporting active transportation.

5.2 Transit

The Project site is served by multiple Metro bus routes and stop locations that operate with a minimum frequency of 15 minutes during the morning and afternoon peak travel hours within a ½ mile of the Specific Plan Area. In addition, the Metro D Line extension currently under construction is 0.2 miles from the Project site. Potential disruptions to existing and planned transit service as a result of the Project are described below.

5.2.1 Disruptions to Existing Transit Service

Transit service is provided along the frontage of the Specific Plan Area on Wilshire Boulevard. However, no vehicle access is provided directly from Wilshire Boulevard to the commercial parcels located in the Wilshire Boulevard District. In addition, the Project would provide pedestrian enhancements, such as new landscaping, street lighting, bicycle racks, and street furniture which would improve conditions for those walking to the nearby bus stops on Wilshire Boulevard. Therefore, the land use and site access changes with the Project would not result in a disruption to existing transit service.

5.2.2 Interference with Planned Transit Service

The *City of Beverly Hills Complete Streets Plan* identifies Wilshire Boulevard as part of the City's proposed Transit Enhanced Network. Bus stop enhancements, such as shelter, seating, lighting, trash/recycling bins, poles/signs with route information and schedules, a system map (or link to one), a paved boarding area, and ADA-compliant pedestrian connections, are identified along Wilshire Boulevard, including the bus stops at Wilshire Boulevard and Peck Drive. The Project would not interfere with the planned Metro D Line extension beneath the Wilshire Boulevard corridor and would be located 0.2 miles from the subway station to provide convenient access for residents, employees, and visitors. Therefore, the land use and site access changes with the Project would not result in a disruption to planned transit service.

5.3 Bicycle Facilities

Within the study area, Charleville Boulevard is a Class III bike route with sharrows for shared use with vehicles. Further north, North Santa Monica Boulevard has Class II bicycle lanes that are enhanced through green paint in the City of Beverly Hills (city limit to city limit). Within the study area, the Complete Streets Plan identifies a series of bicycle improvements that will improve facilities for bicyclists traveling in the City. Potential disruptions to existing and planned bicycle facilities as a result of the Project are described below.

5.3.1 Disruptions to Existing Bicycle Facilities

There are no existing bicycle facilities along Wilshire Boulevard, South Bedford Drive, South Peck Drive, or South Camden Drive where roadway enhancements are proposed as part of the Project. The closest bicycle facility to the Project site on Charleville Boulevard would not be disrupted by the Project. Therefore, the Project would not result in a disruption to existing bicycle facilities.

5.3.2 Interference with Planned Bicycle Facilities

The Complete Streets Plan identifies a series of bicycle improvements that will improve facilities for bicyclists traveling in the City, including Class IV protected bicycle lanes on North and South Beverly Drive, Charleville Boulevard, and Gregory Way, Class II bicycle lanes on Roxbury Drive, and Class III bicycle boulevards on Brighton Way in the study area. The Project would provide bicycle parking and would also permit bicycle racks within the sidewalks of the roadways being improved as part of the Specific Plan (the portions of Wilshire Boulevard, South Bedford Drive, South Peck Drive, and Camden Drive immediately adjacent to the Specific Plan Area). Since the Project does not prevent the implementation of the City's planned bicycle improvements, the Project would not result in a disruption to planned bicycle facilities.

5.4 Pedestrian Facilities

A majority of the roadways within the study area have sidewalks with crosswalks striped at the intersections. At the signalized intersections on Wilshire Boulevard, crosswalks are provided on both the north and south sides of the intersections for pedestrians walking along Wilshire Boulevard. For pedestrians crossing Wilshire Boulevard, some intersections have crosswalks on both the east and west sides of the intersection and others only have a crosswalk on one side due to the complex signal operations needed to accommodate multiple roadways into the business triangle area, and the transition from one-way to two-way travel flow on either side of Wilshire Boulevard. There are also crosswalks and pedestrian "walk/don't walk" indicators at the signalized intersections in the study area. Most intersections south of the Specific Plan Area on Charleville Boulevard do not have striped crosswalks. The Complete Streets Plan also identifies pedestrian corridors to enhance the overall pedestrian experience throughout the City. Potential disruptions to existing and planned pedestrian facilities as a result of the Project are described below.

5.4.1 Disruptions to Existing Pedestrian Facilities

The Project is proposing several enhancements to pedestrian facilities adjacent to the Specific Plan Area. A continental crosswalk would be added at the south leg of the intersection of Wilshire Boulevard and South Peck Drive consistent with the City's Complete Streets design guidelines. The parkway areas adjacent to the Specific Plan Area on Wilshire Boulevard, South Bedford Drive, South Peck Drive, and South Camden Drive would be paved with specialty pavement, such as stone, brick, and decorative concrete. Depending on the use of a particular parkway segment, the parkway would be either fully paved or enhanced with a combination of parkway and paver design. In addition, new landscaping would be added along the parkway and street lighting, bicycle racks, and street furniture would be permitted within the sidewalk to enhance the pedestrian environment.

The Via would be constructed within the western portion of the Specific Plan Area providing east-west pedestrian access between South Peck Drive and South Bedford Drive and would include architectural treatments, structures, and/or landscape sheltering on pedestrian walkways to enhance the pedestrian environment. In addition, the Terrace would be a pedestrian-only parkette, designed to provide the local community with pedestrian connectivity and an activated open space adjacent to the residential and commercial uses in the Wilshire Boulevard District and Neighborhood District. Since these improvements would not remove any existing pedestrian facilities and would enhance the pedestrian environment in the Specific Plan Area, the Project would not result in a disruption to existing pedestrian facilities.

5.4.2 Interference with Planned Pedestrian Facilities

The Complete Streets Plan identifies pedestrian corridors to enhance the overall pedestrian experience. Pedestrian corridor improvements are envisioned on Wilshire Boulevard and South Beverly Drive and on North Camden Drive, North Bedford Drive, and North Roxbury Drive in the business triangle area. Potential improvements could include new and upgraded sidewalks, tightened curb radii to slow vehicle speeds, and mid-block crossings, among others. The Project would provide pedestrian enhancements in the immediate vicinity of the Specific Plan Area and would not prevent other planned improvements from occurring. Therefore, the Project would not result in a disruption to planned pedestrian facilities.

6. Construction Conditions

This chapter presents the potential construction impacts of the proposed 9600 Wilshire Boulevard Specific Plan. The construction evaluation for the proposed Project considered the temporary impacts due to lane closures, need for temporary traffic control, emergency vehicle access, the potential for truck traffic on roadways not designated as truck routes, and other similar impediments to circulation.

6.1 Overview

Construction of the development anticipated by the Conceptual Plan and Specific Plan scenarios would follow the same timeline. Construction would commence in 2024 and occur in up to nine phases, which could overlap in their duration. The overall duration of construction is estimated to be approximately 50 months with 14 months of utility relocation and 36 months of construction. In addition to demolition, the following nine phases of construction have been identified:

(1) relocate utilities within the Specific Plan Area and the public right-of-way (14-month duration)
(2) construct new building on Parcel A (17-month duration)
(3) seismic retrofit and construct new levels on the existing Saks Rehabilitation Building (16-month duration)
(4) construct eastern portion of underground parking structure (16-month duration)
(5) construct western portion of underground parking structure (16-month duration)
(6) construct new Parcel B building core and shell (10-month duration)
(7) construct East Neighborhood building (15-month duration)
(8) construct West Neighborhood building (15-month duration)
(9) site and finish work, including final paving, sidewalks, and landscaping (3-month duration)

Construction staging would occur within the Specific Plan area and construction activities would comply with a Construction Management Plan that would be approved by the City, including construction hours, construction staging areas, worker parking, haul routes, and lane and roadway closure procedures. Construction would primarily occur between the hours of 8:00 a.m. and 6:00 p.m. Certain work, such as continuous foundation pours to ensure structural integrity would occur between the hours of 6:00 p.m. and 8:00 a.m. on a weekday, or at any time on a Saturday, Sunday, or holiday, and would require an after-hours construction permit or other comparable authorization from the City. Nighttime construction is anticipated to be required for a total of 27 days.

The Project is proposing to close South Peck Drive within the boundaries of the Specific Plan Area for the entirety of construction. This closure would result in local access only north of Charleville Boulevard for residents living in the properties along South Peck Drive between the Specific Plan Area and Charleville Boulevard, and no through vehicles would be allowed on South Peck Drive north of Charleville Boulevard.

Once the alleys above the parking garages are constructed, vehicles could travel on South Peck Drive and utilize the alley to access either South Camden Drive or South Bedford Drive.

There are four main construction traffic impacts associated with the Project:

- Trucks traveling to and from the Project site to remove debris, fill, and other items (haul trucks)
- Equipment and material delivery/staging
- Worker traffic
- Worker parking

6.1.1 Haul Truck Traffic

The Project is proposing that trucks would access the site by traveling from I-405 to Wilshire Boulevard. South Bedford Drive and South Camden Drive would provide access from Wilshire Boulevard to the Project site for inbound trucks during construction. For outbound vehicles exiting the site at South Beford Drive, the signalized intersection at Wilshire Boulevard would be used for trucks to make a northbound left-turn onto westbound Wilshire Boulevard and travel towards I-405. At the Camden Drive & Wilshire Boulevard intersection, only right-turn movements are allowed from South Camden Drive onto Wilshire Boulevard. Therefore, construction vehicles exiting the site at South Camden Drive would make a right-turn onto Wilshire Boulevard and would then have two potential routes to access I-405. In the first option, trucks would travel east on Wilshire Boulevard, make a right-turn onto South Beverly Drive, and then a right-turn onto Olympic Boulevard to continue west to access I-405. The second option for trucks exiting the site at South Camden Drive would be to travel east on Wilshire Boulevard, make a left-turn onto North Beverly Drive, and then a left-turn onto Santa Monica Boulevard to travel west to I- 405. The outbound route from South Camden Drive would be determined based on real-time traffic conditions on a case-by-case basis.

The Project would be required to prepare a Construction Management Plan that provides for truck staging and designates appropriate travel routes to access the site. However, trucks could impact the adjacent roadway network as follows:

- The roadways designated as the truck routes for the Project are already some of the most heavily traveled in the City of Beverly Hills.
- There is no guarantee that truck traffic would not deviate from the designated routes and travel on other roadways when traveling to and from the site.
- The highest number of daily haul trips is expected to be up to 240 one-way truck trips (120 trucks entering and then exiting the site) based on a haul truck capacity of 14 cubic yards when exporting soil material to construct the subterranean parking garage for all scenarios. This phase of construction is expected to occur over a six-month period.
- The highest number of vendor trips for the Project would consist of up to 560 one-way trips per day for the Conceptual Plan, up to 570 one-way trips per day for Scenario 2, and up to 515 one-way trips per day for Scenario 3 during building construction.

6.1.2 Delivery and Staging of Material and Equipment

Another source of construction traffic would derive from the transportation of materials and equipment to the Project site. One example would be concrete, which would be required for the parking garage and the buildings on the site. Other materials could include plumbing supplies, electrical fixtures, building furnishings, and landscaping materials. These materials would have to be delivered to the Project site and stored on-site as well. These deliveries would occur through variously sized vehicles including small delivery trucks to cement mixer trucks, and possible 18-wheel trucks.

The influx of this material and equipment could create impacts on the adjacent roadway network based on the following considerations:

- There may be intermittent periods when large numbers of material deliveries are required.
- Some of the materials and equipment could require the use of large trucks (18-wheelers).
- Delivery vehicles may need to park temporarily on adjacent roadways such as South Bedford Drive and South Camden Drive as they deliver their items.

A City-approved construction traffic control plan and haul route would be implemented.

6.1.3 Worker Traffic

The maximum number of workers on the Project site during construction would be 350 workers. The number of vehicles associated with these workers could be estimated by applying the following process:

- Each worker would drive to and from the site daily (two daily person trips per worker).
- While a small percentage of the workers may carpool or travel together, each worker was assumed to drive alone resulting in two daily vehicle trips.
- Workers would travel to/from the site in the morning (7:00 to 9:00 AM) and afternoon peak hours (4:00 to 6:00 PM). They are not all likely to arrive at the construction site within the same hour nor would they leave the site at the same time. Therefore, the estimate assumes that half of the drivers would arrive during a single peak hour either in the morning or afternoon. Many construction workers are likely to access the site outside of the peak hours, arriving prior to 7:00 AM and leaving before 4:00 PM. Therefore, our estimates of peak hour traffic are likely to be conservative.

Using the highest range of the number of workers for the Project site (350), the highest number of worker trips would be as follows:

- 700 daily trips
- 175 Peak Hour trips (one hour in the morning and afternoon peak period)

6.1.4 Worker Parking

During the initial stages of construction, the Project is proposing that construction workers would park in local public and private parking garages. The workers would be transported to and from the Project site using a shuttle service. Once parking becomes available in the underground parking structures being constructed as part of the Project, workers would park on-site, and off-site parking would continue to be used if additional parking supply is required.

The need to park workers off-site could result in a specific traffic related impact because it could lead to worker parking spilling over into the adjacent southwest neighborhood. Workers may park in these areas because they find the off-site parking arrangement cumbersome and want to park at a location closer to the site.

6.2 Construction Summary & Mitigations

Several potential traffic-related impacts could result from construction of the proposed 9600 Wilshire Boulevard Specific Plan:

- The roadways designated as the truck routes for the Project are already some of the most heavily traveled in the City of Beverly Hills.
- The material and equipment delivery process could require vehicles to temporarily stop and unload on the adjacent streets. This loading/unloading process could involve temporary lane closures on the adjacent streets.
- Workers needing to park off-site while the parking garage is being constructed could forgo parking in designated off-site locations and instead park in the adjacent neighborhood. This parking spillover could impact the nearby residential areas.

Temporary Construction Impact 1: There are likely to be significant, but temporary traffic impacts, resulting from the construction activity on the Project site. This impact derives from the haul truck traffic accessing the site and the delivery of materials/equipment. The Project applicant would prepare a Construction Traffic Management Plan to address the issues above.

Mitigation Measure 1: Mitigating this impact would require the implementation of the following measures:

The developer shall update their Construction Traffic Management Plan for the Project to include plans to accomplish the following:

- Maintain existing access for land uses in proximity of the Project site during construction.
- Schedule deliveries and pick-ups of construction materials to non-peak travel periods, to the maximum extent feasible.

- Coordinate deliveries and pick-ups to reduce the potential of trucks waiting to load or unload for protracted periods of time and to ensure that there are no vehicles waiting off-site and impeding public traffic flow on the surrounding streets.
- Use flagmen to control construction equipment traffic.
- Identify designated transport routes for heavy trucks and haul trucks.
- Establish requirements for loading/unloading and storage of materials on the Project site, where parking spaces would be encumbered, length of time traffic travel lanes can be encumbered, sidewalk closings or pedestrian diversions to ensure the safety of the pedestrian and access to local businesses.
- Coordinate with emergency service providers regarding the closure of South Peck Drive to ensure that adequate access exists to the Project site and to neighboring businesses and residents.
- Coordinate with adjacent businesses and residents to ensure that adequate access to their properties exists with the closure of South Peck Drive.

Significance After Mitigation: Less than significant

Temporary Construction Impact 2: Construction workers could choose to park in areas adjacent to the Project site including residential streets. These workers might choose to park in these areas because on-site parking could be limited due to the construction activities or off-site parking areas might be considered to be too remote or inconvenient.

Mitigation Measure 2: The developer shall submit a Construction Workers' Parking Plan identifying parking locations for construction workers. To the maximum extent feasible, all worker parking shall be accommodated on the Project site. During phases when construction worker parking cannot be accommodated on the site, the Project Construction Workers' Parking Plan shall identify alternate parking locations for construction workers and the method of transportation to and from the Project site for approval by the City 30 days prior to commencement of construction. The Construction Workers Parking Plan must include appropriate measures to ensure that the parking location requirements for construction workers would be strictly enforced. These include but are not limited to the following measures:

- Provide all construction contractors with written information on where their workers and their subcontractors are permitted to park. This information would clearly state that no parking is permitted on residential streets.
- Provide clear consequences to violators for failure to follow these regulations.

Significance After Mitigation: Less than significant

6.2.1 Cumulative Construction Traffic Impacts

Additional construction impacts could occur as the result of simultaneous construction activities in the Project area, such as the on-going construction of the Metro Line D Extension and the nearby subway station at Wilshire/Rodeo. Potential impacts include:

- Simultaneous arrival and departure of haul trucks – Construction activities would increase the volume of haul truck traffic and the number of trucks entering/exiting roadways surrounding the construction sites.
- Simultaneous arrival and departure of delivery trucks - Equipment and supply delivery vehicles would utilize the roadways in the vicinity of the construction sites. There may also be temporary queuing of these delivery vehicles if large numbers of vehicles arrive or depart at once.

Temporary Construction Impact 3: Simultaneous construction activities in the Project area could result in significant, although temporary, traffic impacts resulting from haul truck traffic and the simultaneous delivery of materials/equipment. For this reason, construction associated with the Project may have a cumulatively considerable, and therefore significant, contribution to cumulative traffic impacts.

Mitigation Measure 3: With implementation of the following mitigation measures, the Proposed Project's contribution to cumulative traffic impacts would be reduced to less than significant.

The developer for the Project shall coordinate with the City of Beverly Hills regarding the following:

- All temporary roadway closures shall be coordinated to limit overlap of roadway closures.
- All major deliveries shall be coordinated to limit the occurrence of simultaneous deliveries. The Project applicants shall ensure that deliveries of items such as concrete and other high-volume items shall not be made simultaneously.
- The applicants shall coordinate regarding the loading and unloading of delivery vehicles. Any off-site staging areas for delivery vehicles shall be consolidated and shared.
- Applicants or their representatives shall meet with the City on a regular basis during construction to address any outstanding issues related to construction traffic, deliveries, and worker parking.
- Applicants or their representatives shall coordinate with other nearby projects under construction to address construction traffic, deliveries, and worker parking, as necessary.

Significance After Mitigation: Less than significant

Appendix A:
SCAG Model Data for VMT Analysis

VMT Data from SCAG Travel Demand Model

Land Use/Socio-Economic Data and VMT Estimates	Project TAZ 1: 20863300			Project TAZ 2: 20863100		
	2012 Baseline	**2040 Baseline**	**2022**	**2012 Baseline**	**2040 Baseline**	**2022**
Population	1,062	1,161	1,097	584	627	599
Employment	3,157	3,955	3,442	3,581	4,054	3,750
Service Population	4,219	5,116	4,539	4,165	4,681	4,349
Home Based VMT	6,252	5,855	6,110	3,141	817	2,311
Home Based VMT/Capita	5.9	5.0	5.6	5.4	1.3	3.9
Home Based Work VMT	65,795	57,614	62,873	67,702	54,254	62,899
Home Based Work VMT/Employee	20.8	14.6	18.3	18.9	13.4	16.8

Land Use/Socio-Economic Data and VMT Estimates	Total for Project TAZs		
	2012 Baseline	**2040 Baseline**	**2022**
Total Population	1,646	1,788	1,697
Total Employment	6,738	8,009	7,192
Total Service Population	8,384	9,797	8,889
Total Home Based VMT	9,393	6,672	8,421
Average Home Based VMT/Capita	5.6	3.17	4.7
Total Home Based Work VMT	133,497.4	111,867.2	125,772.3
Average Home Based Work VMT/Employee	19.9	13.98	17.5

Notes:

TAZ = Traffic Analysis Zone

Source: Southern California Association of Government 2016 Travel Demand Model and Fehr & Peers, 2023.

9600 Wilshire Boulevard Specific Plan

Local Transportation Assessment

Prepared for:
Rincon Consulting, Inc.

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LA22-3436

FEHR & PEERS

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1. Study Overview

This local transportation assessment presents the results of the traffic operations analysis conducted by Fehr & Peers for the proposed 9600 Wilshire Boulevard Specific Plan Project (herein referred to as "Specific Plan" or "Project") in the City of Beverly Hills. The purpose of this study is to analyze traffic operations in the vicinity of the Specific Plan with the proposed land use development and site access. This chapter outlines the purpose of the study, the geographic scope of the local transportation assessment, and the study scenarios.

1.1 Study Purpose

The purpose of this study is to analyze traffic operations with the development of new land uses that would occur with the 9600 Wilshire Boulevard Specific Plan. In October 2019, the City of Beverly Hills Planning Commission adopted new transportation impact thresholds and guidelines to adhere to CEQA requirements pertaining to Senate Bill 743 (SB 743). The primary purpose of SB 743 was to eliminate the level of service (LOS) as a measure of vehicular capacity and traffic congestion as a basis for determining significant transportation impacts under CEQA. Additionally, SB 743 required lead agencies to shift the focus from evaluating traffic impacts based on metrics that only consider vehicle travel time and delay (i.e., impacts to drivers) to a new metric that captures the state's goals of improved air quality, reduced greenhouse gas emissions, and improved public health (i.e., impacts of driving) known as vehicle miles of travel (VMT).

While LOS no longer constitutes a CEQA impact, it can still be used to inform decision-makers about the overall effects of a project. Therefore, the City developed Local Transportation Assessment Guidelines at the time it adopted its new transportation thresholds in October 2019. The traffic operations analysis completed for this Local Transportation Assessment is based on the City's guidelines.

1.2 Project Overview & Study Area

The proposed 9600 Wilshire Boulevard Specific Plan would apply to an approximately four-acre site located south of Wilshire Boulevard, between Bedford Drive to the west and Camden Drive to the east, in the southwestern portion of the City of Beverly Hills. The Specific Plan Area generally consists of two rectangular blocks bisected by South Peck Drive. Local access to the Specific Plan is provided by Wilshire Boulevard, South Bedford Drive, South Peck Drive, and South Camden Drive, with regional access provided by the I-405. The Specific Plan is also served by a variety of public transit options, with several Los Angeles County Metropolitan Transit Authority (Metro) transit bus stops along Wilshire Boulevard in the vicinity of the Specific Plan Area. The Specific Plan Area is also located approximately 0.2 mile from the Metro D (Purple) Line Wilshire/Rodeo Station currently under construction.

For purposes of this analysis, the Specific Plan Area is divided into two districts (Wilshire Boulevard District, and Neighborhood District) and six subareas (9570 Wilshire, Parcel A, Parcel B, Saks

Rehabilitation, Neighborhood East, and Neighborhood West), which are also identified and described in more detail in Section 4.1. **Figure 1** displays the study area and the locations of the following study intersections:

1. Wilshire Boulevard & Linden Drive (Traffic Signal)
2. Wilshire Boulevard & Brighton Way/Roxbury Drive (Traffic Signal)
3. Wilshire Boulevard & Bedford Drive (Traffic Signal)
4. Wilshire Boulevard & Peck Drive (Side-Street Stop-Controlled)
5. Wilshire Boulevard & Camden Drive (Traffic Signal)
6. Wilshire Boulevard & Rodeo Drive (Traffic Signal)
7. Wilshire Boulevard & Beverly Drive (Traffic Signal)
8. Charleville Boulevard & S. Bedford Drive (All-Way Stop-Controlled)
9. Charleville Boulevard & S. Peck Drive (All-Way Stop-Controlled)
10. Charleville Boulevard & S. Camden Drive (All-Way Stop-Controlled)

Local roadways providing access to the site are also included as study locations. The following six (6) roadway segments are analyzed in this study.

1. S. Bedford Drive: Project Site to Charleville Boulevard
2. S. Bedford Drive: Charleville Boulevard to Gregory Way
3. S. Peck Drive: Project Site to Charleville Boulevard
4. S. Peck Drive: Charleville Boulevard to Gregory Way
5. S. Camden Drive: Project Site to Charleville Boulevard
6. S. Camden Drive: Charleville Boulevard to Gregory Way

Figure 1

Project Location and Study Intersections

1.3 Project Development Scenarios

The Specific Plan provides for a maximum development limits within the Project site and would also allow a portion of the commercial space to be converted to residential uses. In addition, a Conceptual Plan has also been proposed to implement a specific development scenario within the development maximums authorized by the Specific Plan. Therefore, the local transportation assessment analyzes operation of the Conceptual Plan at the Project level and also analyzes build-out of the Specific Plan at a programmatic level. The following scenarios analyze the range of foreseeable Specific Plan build-out scenarios in order to provide a conservative (worst-case) analysis for traffic operations:

- **Scenario 1 Conceptual Plan Buildout:** Under this scenario, 261,722 sf of commercial uses would be developed within the Wilshire Boulevard District (excluding the 9570 Wilshire Building which is not part of the Conceptual Plan). A total of 68 residential units and 10,581 sf of ground floor small shop/boutique retail would be developed in the Neighborhood District. In total, 272,303 sf of commercial uses would be developed across the Conceptual Plan site. The existing 107,000 sf of commercial space at 9570 Wilshire would remain in place and would not be altered. While the 9570 Wilshire Building is not part of the Conceptual Plan, the occupancy of the retail space is reflected in the transportation analysis.
- **Scenario 2 Maximum Buildout of the Specific Plan with No Residential Conversion:** Under this scenario, 400,000 sf of commercial floor area would be included within the Wilshire Boulevard District, of which 166,000 sf would be net new floor area. Also, 70 residential units and 15,000 sf of ground floor small shop/boutique retail would be developed in the Neighborhood District. A total of 415,000 sf of commercial uses and 70 residential units would be developed across the site.
- **Scenario 3 Maximum Buildout of the Specific Plan with Residential Conversion:** Under this scenario, 250,000 sf of commercial floor area would be included in the Wilshire Boulevard District, of which 16,000 sf would be net new floor area. As contemplated in the Specific Plan, 75 residential units consisting of 150,000 sf of floor area located above the ground floor would be developed across the Saks Rehabilitation and Parcel B subareas. In addition, 70 residential units and 15,000 sf of ground floor small shop/boutique retail would be developed in the Neighborhood District. This scenario assumes that no residential units would be developed on the 9570 Wilshire subarea, because while permissible in concept pursuant to the proposed Specific Plan, express findings under a conditional use permit, which the applicant is not seeking at this time, and additional environmental review and clearance would be required in order to authorize any such conversion. Also, a total of 265,000 sf of commercial uses and 145 residential units would be developed across the site.

1.4 Analysis Scenarios

For each of the above Project land use scenarios, traffic operations in the study area were analyzed during the weekday morning (AM) and evening (PM) peak hours under the following conditions:

- **Existing (2022) Conditions** – The analysis of existing traffic conditions is based on traffic counts collected in November 2022.
- **Baseline Conditions** – This traffic scenario accounts for 2022 traffic counts and the occupancy of the former Barneys New York building, at the southwest corner of Wilshire Boulevard and South Camden Drive (9570 Wilshire Boulevard), as a retail store prior to the implementation of the proposed Project. The former Barneys New York Building contains 107,000 sf of commercial space and would continue to be an independent retail building with its own self-contained, subterranean parking structure. Based on permits issued to 9570 Wilshire Boulevard prior to filing of an application for the Project, the Saks Fifth Avenue department store at 9600 Wilshire Boulevard will move into this building and utilize the existing parking structure. Therefore, this baseline conditions scenario accounts for the additional retail uses at 9570 Wilshire Boulevard prior to the construction of the proposed Project.
- **Baseline plus Project Conditions** – This traffic scenario provides an analysis of operating conditions with the addition of Project-generated traffic based on the development of the proposed Project. The baseline plus Project conditions analysis accounts for both the land use and site access proposed with the Project, including the relocation of the Saks Fifth Avenue store to 9570 Wilshire Boulevard. The changes to traffic operations are then compared to operations under baseline conditions.
- **Baseline plus Project Conditions with Via Closed** – This traffic scenario is the same as baseline plus Project conditions except that the eastern portion of the Via is assumed to be temporarily closed for a special event which means that no vehicle access is provided on the Via at S. Peck Drive and all vehicles would access the Via on the western end at S. Bedford Drive.
- **Future No Project Conditions** – Future traffic projections were developed to reflect the year 2028. The objective of this analysis is to project future traffic growth and operating conditions that could be expected to result from regional growth and related projects in the vicinity of the Project by the anticipated opening year. Similar to baseline conditions, this scenario also assumes occupancy of 9570 Wilshire Boulevard as a retail store.
- **Future plus Project Conditions** – This traffic scenario provides projected traffic volumes and analysis of operating conditions for the year 2028 and accounts for both the land use and site access proposed with the Project, including the relocation of the Saks Fifth Avenue store to 9570 Wilshire Boulevard. The changes to traffic operations are then compared to operations under future no project conditions.
- **Future plus Project Conditions with Via Closed** – This traffic scenario is the same as future plus Project conditions except that the eastern portion of the Via is assumed to be temporarily closed for a special event which means that no vehicle access is provided on the Via at S. Peck Drive and all vehicles would access the Via on the western end at S. Bedford Drive.

2. Analysis Methodology & Criteria

This chapter describes the analysis methodologies and criteria that are required by the City of Beverly Hills Local Transportation Assessment Guidelines. The purpose of analyzing traffic operations is to understand operational changes that are expected to occur as a result of the 9600 Wilshire Boulevard Specific Plan.

2.1 Traffic Analysis Methods

The analysis of roadway operations performed for this study is based on procedures presented in the *Highway Capacity Manual 6th Edition* (*HCM 6*), published by the Transportation Research Board in 2016. The operations of roadway facilities are described with the term LOS. LOS is a qualitative description of traffic flow based on factors such as speed, travel time, delay, and freedom to maneuver. Six levels are defined from LOS A, with the least congested operating conditions, to LOS F, with the most congested operating conditions. LOS E represents "at-capacity" operations. Operations are designated as LOS F when volumes exceed capacity, resulting in stop-and-go conditions. The methodologies for signalized and unsignalized intersections are described in the subsections below.

2.1.1 Signalized Intersections

The method described in "Chapter 19: Signalized Intersections" of the *HCM 6* was used to prepare the LOS calculations for the signalized study intersections. This LOS method analyzes a signalized intersection's operation based on average control delay per vehicle. Control delay alone is used to characterize LOS for the entire intersection or an approach. Control delay includes the initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. The average control delay for signalized intersections is calculated using Synchro 10.0 analysis software and is correlated to a LOS designation, as shown in **Table 1**. Synchro 10.0 analysis accounts for delays associated with conflicting pedestrian crossings, buses stopping and blocking the through lane, and vehicles pulling into or out of adjacent on-street parking. Other Synchro inputs including saturation flow rate, peak hour factor, and initial vehicle queues were estimated to reflect congested conditions that were observed in the study area.

Table 1: Level of Service Definitions for Signalized Intersections

Level of Service	Description	Delay in Seconds
A	Progression is extremely favorable, and most vehicles arrive during the green phase. Most vehicles do not stop at all. Short cycle lengths may also contribute to low delay.	≤ 10.0
B	Progression is good, cycle lengths are short, or both. More vehicles stop than with LOS A, causing higher levels of average delay.	> 10.0 to 20.0
C	Higher congestion may result from fair progression, longer cycle lengths, or both. Individual cycle failures may begin to appear at this level, though many still pass through the intersection without stopping.	> 20.0 to 35.0
D	The influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high V/C ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.	> 35.0 to 55.0
E	This level is considered by many agencies to be the limit of an acceptable delay. These high-delay values generally indicate poor progression, long cycle lengths, and high V/C ratios. Individual cycle failures are frequent occurrences.	> 55.0 to 80.0
F	This level is considered unacceptable with oversaturation, which is when arrival flow rates exceed the capacity of the intersection. This level may also occur at high V/C ratios below 1.0 with many individual cycle failures. Poor progression and long cycle lengths may also be contributing factors to such delay levels.	> 80.0

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

2.1.2 Unsignalized Intersections

The operations of the unsignalized intersections were evaluated using the method contained in "Chapter 20: Two-Way Stop-Controlled Intersections" and "Chapter 21: All-Way Stop-Controlled Intersections" of the *HCM 6*. LOS ratings for stop-sign-controlled intersections are based on the average control delay expressed in seconds per vehicle. At all-way stop-controlled (AWSC) intersections, such as the three study intersections on Charleville Boulevard, the average control delay is calculated using a weighted average of the delays by volume distributed across all motor vehicles entering the intersection. At a two-way- or side-street-stop-controlled (SSSC) intersection, such as the study intersection at S. Peck Drive & Wilshire Boulevard, the average control delay is calculated for the minor-street stopped movement and the major street left turns, not for the intersection as a whole. For approaches composed of a single lane, the control delay is computed as the average of all movements in that lane. For approaches with multiple lanes, the control delay is computed for each movement; the movement with the worst (i.e., longest) delay is presented for SSSC. As shown in **Table 2**, LOS F is assigned to the movement if the volume-to-capacity (V/C) ratio for the movement exceeds 1.0, regardless of the control delay. The average control delay for unsignalized intersections is calculated using Synchro 10.0 analysis software and is correlated to a LOS designation, as shown in **Table 2**.

Table 2: Unsignalized Intersection Level of Service Definitions

Level of Service ($v/c \leq 1.0$)	Level of Service ($v/c > 1.0$)[1]	Description	Average Control Delay Per Vehicle (Seconds)
A	F	Little or no delay.	≤ 10.0
B	F	Short traffic delay.	> 10.0 to 15.0
C	F	Average traffic delays.	> 15.0 to 25.0
D	F	Long traffic delays.	> 25.0 to 35.0
E	F	Very long traffic delays.	> 35.0 to 50.0
F	F	Extreme traffic delays with intersection capacity exceeded.	> 50.0

Source: *Highway Capacity Manual*, Transportation Research Board, 2016.
Notes:
[1] For approach-based and intersection-wide assessments, such as that used for all-way stop controlled intersections, LOS is defined solely by control delay.

2.2 Analysis Criteria

The analysis compares baseline or future operations to "plus project" conditions to determine whether implementation of the Specific Plan is expected to cause undesirable increases in delay on the surrounding intersections or cause undesirable increases in traffic volumes on nearby residential roadways. Based on the most recent City of Beverly Hills guidelines, the analysis criteria in place are described below.

2.2.1 Signalized Intersection Criteria

A signalized intersection should be identified as exceeding the City's delay criteria if it has an increase in average total delay equal to or greater than 10.0 seconds for intersections operating at LOS D, and equal to or greater than 5.0 seconds for intersections operating at LOS E or F after the addition of project traffic. Intersections operating at LOS A, B, or C after the addition of the project traffic are not considered undesirable regardless of the increase in delay. **Table 3** below summarizes the criteria for a signalized intersection.

Table 3: Signalized Intersection Criteria

LOS with Project	Average Total Delay (seconds per vehicle)	Project Related Increase in Delay
D	>35.0 – 55.0	Equal to or greater than 10.0 seconds
E or F	> 55.0	Equal to or greater than 5.0 seconds

Source: City of Beverly Hills Local Transportation Assessment Guidelines, October 2019.

2.2.2 Unsignalized Intersection Criteria

An unsignalized, AWSC intersection operation may be considered undesirable if the location has an increase in delay of 4.0 seconds or more for locations operating at LOS D, or an increase in delay of 3.0 seconds or more for locations operating at LOS E or LOS F. Intersections operating at LOS A, B, or C after the addition of the project traffic is not considered undesirable regardless of the increase in delay. **Table 4** below summarizes the criteria for an unsignalized AWSC intersection.

Table 4: City of Beverly Hills Unsignalized Intersection (AWSC) Criteria

LOS with Project	Average Total Delay (seconds per vehicle)	Project Related Increase in LOS or Seconds of Average Total Delay
D	> 25.0 and ≤ 35.0	Equal to or greater than 4.0 seconds
E or F	> 35.0	Equal to or greater than 3.0 seconds

Source: City of Beverly Hills Local Transportation Assessment Guidelines, October 2019.

An unsignalized, side-street stop-controlled intersection operations may be considered undesirable if the location has an increase in total delay that results in operations degrading from LOS D to LOS E, LOS E to LOS F, or by more than 10.0 seconds of delay for locations already operating at LOS F after the addition of project traffic. In addition to the delay thresholds, the unsignalized intersection should only be identified if it also meets the peak hour signal warrant. The signal warrants used for this evaluation are those described in Chapter 4C of the *California Manual of Uniform Control Devices* (CAMUTCD, 2014 Edition), published by the US Department of Transportation Federal Highways Administration (FHWA) and then revised and adopted by Caltrans. Intersections operating at LOS A, B, or C after the addition of the project traffic are not considered undesirable regardless of the increase in total delay. **Table 5** summarizes the criteria for an unsignalized intersection.

Table 5: City of Beverly Hills Unsignalized Intersection (SSSC) Criteria

LOS with Project	Average Total Delay for Side Street Approach (seconds per vehicle)	Project Related Increase in LOS or Seconds of Average Total Delay
E	> 35.0 and ≤ 50.0	LOS D or better to LOS E or worse, and meets the peak hour warrant for a traffic signal
F	> 50.0	LOS E to LOS F, or greater than 10.0 seconds for the worst-case approach is already at LOS F and meets the peak hour warrant for a traffic signal

Source: City of Beverly Hills Local Transportation Assessment Guidelines, October 2019.

2.2.3 Residential Roadway Criteria

Residential roadway analysis was conducted on six residential street segments in the neighborhood south of the Specific Plan. These streets were selected for analysis as they all provide direct access to the Project site. The volume changes with the Specific Plan were assessed using criteria established by the City of Beverly Hills, which are outlined in **Table 6**.

Table 6: City of Beverly Hills Residential Roadway Criteria

Daily Volume with Project	Project Related Increase in Traffic Volumes
0 to 2,000	16% or more of final ADT, 16% or more of peak hour, or both
2,001 to 4,000	12% or more of final ADT, 12% or more of peak hour, or both
4,001 to 6,750	8% or more of final ADT, 8% or more of peak hour, or both
6,751 or more	6.25% or more of final ADT, 6.25% or more of peak hour, or both

Source: City of Beverly Hills, October 2019.

3. Existing Conditions

This chapter discusses the existing traffic operations in the study area. A complete description of the study area's roadway network, transit service, and active transportation facilities is provided in the *9600 Wilshire Boulevard Specific Plan Transportation Impact Report* (Fehr & Peers, November 2023).

3.1 Existing Traffic Volumes

Intersection turning movement counts for all study intersections were collected during a typical weekday morning (7:00 to 10:00 AM) and evening (4:00 to 7:00 PM) in November 2022. Daily traffic counts for study segments were collected for two consecutive days in November 2022.

Existing lane configurations and signal controls were obtained through field observations. The City of Beverly Hills staff provided signal timing data for each of the signalized intersections. **Figure 2** presents the existing peak hour turning movement volumes, corresponding lane configurations, and traffic control devices. **Appendix A** provides traffic count data sheets.

3.2 Existing Intersection Operations

Existing peak hour volumes and lane configurations were used to calculate the LOS for each of the study intersections. The results of the existing LOS analysis are presented in **Table 7** and the corresponding LOS calculation sheets are included in **Appendix B**.

As shown in **Table 7**, most study intersections operate at LOS D or better under existing conditions. The Wilshire Boulevard & Brighton Way/Roxbury Drive intersection operates at LOS E in the PM peak hour. The Wilshire Boulevard & Peck Drive intersection operates at LOS F in the PM peak hour. The LOS F operation at the Wilshire Boulevard & Peck Drive intersection is due to the delay experienced by drivers making a northbound right-turn from Peck Drive onto Wilshire Boulevard. During field observations, many of the vehicles making this right-turn movement were immediately entering the left-turn pocket on eastbound Wilshire Boulevard to access the downtown triangle at the signalized intersection of Dayton Way & Camden Drive. This required drivers to wait for a longer gap in traffic in order to cross all three travel lanes on Wilshire Boulevard and then enter the left-turn lane in comparison to drivers continuing east on Wilshire Boulevard. While more vehicles are making the northbound right-turn movement onto Wilshire Boulevard in the AM peak hour (122 vehicles) than in the PM peak hour (93 vehicles), higher delay is experienced by drivers in the PM peak hour due to higher traffic volumes on Wilshire Boulevard.

1 Free right-turn movement to N. Roxbury Drive
2 Left-turn movement to N. Roxbury Drive
3 Right-turn movement to Dayton Way
4 Left-turn movement to N. Camden Drive

Study Intersections

Project Site

AM (PM) Peak Hour Traffic Volumes

Lane Configuration

One-Way Roadway

AM PM | E | F | A-C | D — Level of Service (LOS)

Figure 2

Peak Hour Traffic Volumes & Lane Configurations
Existing (2022) Conditions

Table 7: Existing (2022) Intersection Operations

Intersection	Control Type	Peak Hour	Existing Operations	
			Delay (sec/veh)[1]	LOS[2,3]
1. Wilshire Boulevard & Linden Drive	Signalized	AM	14.6	B
		PM	11.7	B
2. Wilshire Boulevard & Brighton Wy/Roxbury Drive	Signalized	AM	42.0	D
		PM	72.0	E
3. Wilshire Boulevard & Bedford Drive	Signalized	AM	10.1	B
		PM	11.7	B
4. Wilshire Boulevard & Peck Drive	SSSC	AM	23.7	C
		PM	103.5	F
5. Wilshire Boulevard & Camden Drive	Signalized	AM	40.6	D
		PM	47.0	D
6. Wilshire Boulevard & Rodeo Drive	Signalized	AM	11.1	B
		PM	8.9	A
7. Wilshire Boulevard & Beverly Drive	Signalized	AM	25.5	C
		PM	23.1	C
8. Charleville Boulevard & S. Bedford Drive	AWSC	AM	10.6	B
		PM	12.4	B
9. Charleville Boulevard & S. Peck Drive	AWSC	AM	10.9	B
		PM	12.3	B
10. Charleville Boulevard & S. Camden Drive	AWSC	AM	10.3	B
		PM	12.1	B

Source: Fehr & Peers, 2023.
Notes:
AWSC indicates all-way stop-controlled intersection.
SSSC indicates a side-street stop-controlled intersection.

1. Whole intersection weighted average stopped delay expressed in seconds per vehicle for signalized and AWSC intersections. The vehicular delay for the worst movement is reported for the SSSC intersections.
2. LOS calculations were performed using the *Highway Capacity Manual* 6th Edition (*HCM 6*) method.
3. Underlined text indicates a LOS of D, E, or F.

4. Proposed Project Transportation Characteristics

This chapter summarizes the land uses, site access, and vehicle trip generation for the 9600 Wilshire Boulevard Specific Plan. In addition to the trip generation estimates, this chapter presents the trip distribution forecasts and summarizes the parking that will be provided as part of the Project.

4.1 Project Overview

The proposed 9600 Wilshire Boulevard Specific Plan ("Specific Plan") would apply to an approximately four-acre site located south of Wilshire Boulevard, between Bedford Drive to the west and Camden Drive to the east, in the southwestern portion of the City of Beverly Hills. The Specific Plan Area generally consists of two rectangular blocks bisected by South Peck Drive. Local access to the Specific Plan Area is provided by Wilshire Boulevard, South Bedford Drive, South Camden Drive, and South Peck Drive. The Specific Plan Area is also served by a variety of public transit options, with several Los Angeles County Metropolitan Transit Authority (Metro) transit bus stops along Wilshire Boulevard in the vicinity of the Specific Plan Area. The Specific Plan Area is also located approximately 0.2 mile from the Metro D (Purple) Line Wilshire/Rodeo Station currently under construction.

The Specific Plan Area currently contains three existing commercial structures, an ancillary loading facility, and three surface parking lots. The Specific Plan Area also contains a portion of South Peck Drive, an approximately 27-foot-wide alley right-of-way (18-feet paved) that runs along the southwestern boundary of the site between South Bedford Drive and South Peck Drive, and an additional approximately 20-foot-wide alley right-of-way in the southeastern portion of the site that connects to South Camden Drive and an existing residential alley to the south of the Specific Plan Area.

The historic building located on the Saks Rehabilitation site (Saks Women's Building) is located in the northwestern portion of the site, at 9600 Wilshire Boulevard, and the former Barneys New York Building is located at 9570 Wilshire Boulevard in the northeastern portion of the site. The adjacent Shoe Building is located at 9620 Wilshire Boulevard (Parcel B) and is to be demolished during project construction. To the south of the Saks Women's Building and the Shoe Building is a surface parking lot with approximately 80 spaces, which is accessed from South Bedford Drive and South Peck Drive.

The former Barneys New York Building, at the southwest corner of Wilshire Boulevard and South Camden Drive is approximately 107,000 sf. The building was most recently used as a retail department store, which closed in 2020 and is currently vacant. Independent of this project (under building permits previously issued), the interior of the building is currently being rehabilitated as a retail department store and it is anticipated that Saks will relocate its women's retail operations to the site upon completion of the pending work. This building contains four levels of subterranean parking with 309 vehicle spaces, which is accessed by an alleyway that connects to South Peck Drive and South Camden Drive. In addition, to the south and west of the former Barneys New York Building are two surface parking lots with approximately 119 spaces and 48 spaces, respectively. These parking lots are accessed by South Peck Drive.

For the purpose of this analysis, the proposed project is divided into two districts (Wilshire Boulevard District, and Neighborhood District) and six subareas (9570 Wilshire, Parcel A, Parcel B, Saks Rehabilitation, Neighborhood East, and Neighborhood West), which are also identified and described in **Table 8**.

Table 8: Specific Plan Area

Subarea	Accessor's Parcel Numbers (APN)	Addresses
Existing 9570 Wilshire	4328-026-030, -039	9570 Wilshire Boulevard
Parcel A	4328-026-003, -004	9588-9596 Wilshire Boulevard
Saks Rehabilitation	4328-021-001, -002	9600-9610 Wilshire Boulevard
Parcel B	4328-021-019	9620 Wilshire Boulevard
Neighborhood East	4328-026-006, -007, -008, -013, -014, -015	133 S. Camden Drive, 128 S. Peck Drive
Neighborhood West	4328-021-020, -021, -022, -023	128 S. Bedford Drive, 133 S. Peck Drive

The Project opening year is expected to be 2028.

4.2 Specific Plan and Conceptual Plan Overview

The Project consists of the 9600 Wilshire Boulevard Specific Plan and an accompanying Conceptual Plan that proposes to establish a new specific plan to facilitate the orderly and efficient development of the Specific Plan Area by, among other things, establishing appropriate size, height, and square footage limits. Any new development within the Specific Plan Area would be implemented through the approval from time to time of a conceptual project plan consistent with the proposed Specific Plan. The "Conceptual Plan" refers to the proposed conceptual plan that accompanies the proposed Specific Plan. While the 9600 Wilshire Boulevard Specific Plan would apply to the entire Specific Plan Area, the Conceptual Plan excludes the 9570 Wilshire subarea (though limited work will be done on the associated loading parcel to integrate the site loading and access).

The proposed Conceptual Plan includes development on Parcel A, Parcel B, Saks Rehabilitation, Neighborhood West, and Neighborhood East, as well as rehabilitation of the existing Saks Women's Building. A description of each development area is provided below. **Figure 3** illustrates the development area locations and shows access to the site and circulation within the site.

4.2.1 Saks Rehabilitation and Parcel B

The Saks Rehabilitation and Parcel B development area is located at 9600 Wilshire Boulevard, between South Bedford Drive and South Peck Drive. The development consists of the redevelopment of the existing department store into retail, office, boutique hotel, social club, spa, restaurant, and ancillary space (including the lobby, circulation space, and the porte cochere/valet space). The Saks Rehabilitation and Parcel B development will contain 28,998 sf of retail, 3,046 sf of restaurant, 14,965 sf of social club, 67,108 sf of office, 17,215 sf of spa space, and a 40-suite boutique hotel with the Conceptual Plan. The Saks Rehabilitation and Parcel B would operate as a single, contiguous building.

4.2.2 Parcel A

Parcel A is located at 9596 Wilshire Boulevard, between South Peck Drive and the former Barneys New York Building at 9570 Wilshire Boulevard. The development consists of the construction of 11,657 sf of restaurant and 58,796 sf of office space, and 3,161sf of circulation space with the Conceptual Plan. The former Barneys New York Building at 9570 Wilshire Boulevard contains 107,000 sf of commercial space and would continue to be an independent retail building with its own self-contained, subterranean parking structure providing approximately 309 spaces. The building is currently vacant, but the Saks Fifth Avenue department store at 9600 Wilshire Boulevard would move into this building and utilize the existing parking structure. While the 9600 Wilshire Boulevard Specific Plan would apply to the entire Specific Plan Area, the Conceptual Plan excludes the 9570 Wilshire subarea.

4.2.3 Neighborhood West

The Neighborhood West residential development is located between South Bedford Drive and South Peck Drive. The development consists of the construction of 38 luxury residential units and 5,540 sf of ground-floor boutique retail with the Conceptual Plan.

4.2.4 Neighborhood East

The Neighborhood East residential development is located between South Peck Drive and South Camden Drive. The development consists of the construction of 30 luxury residential units and 5,041 sf of ground-floor boutique retail with the Conceptual Plan.

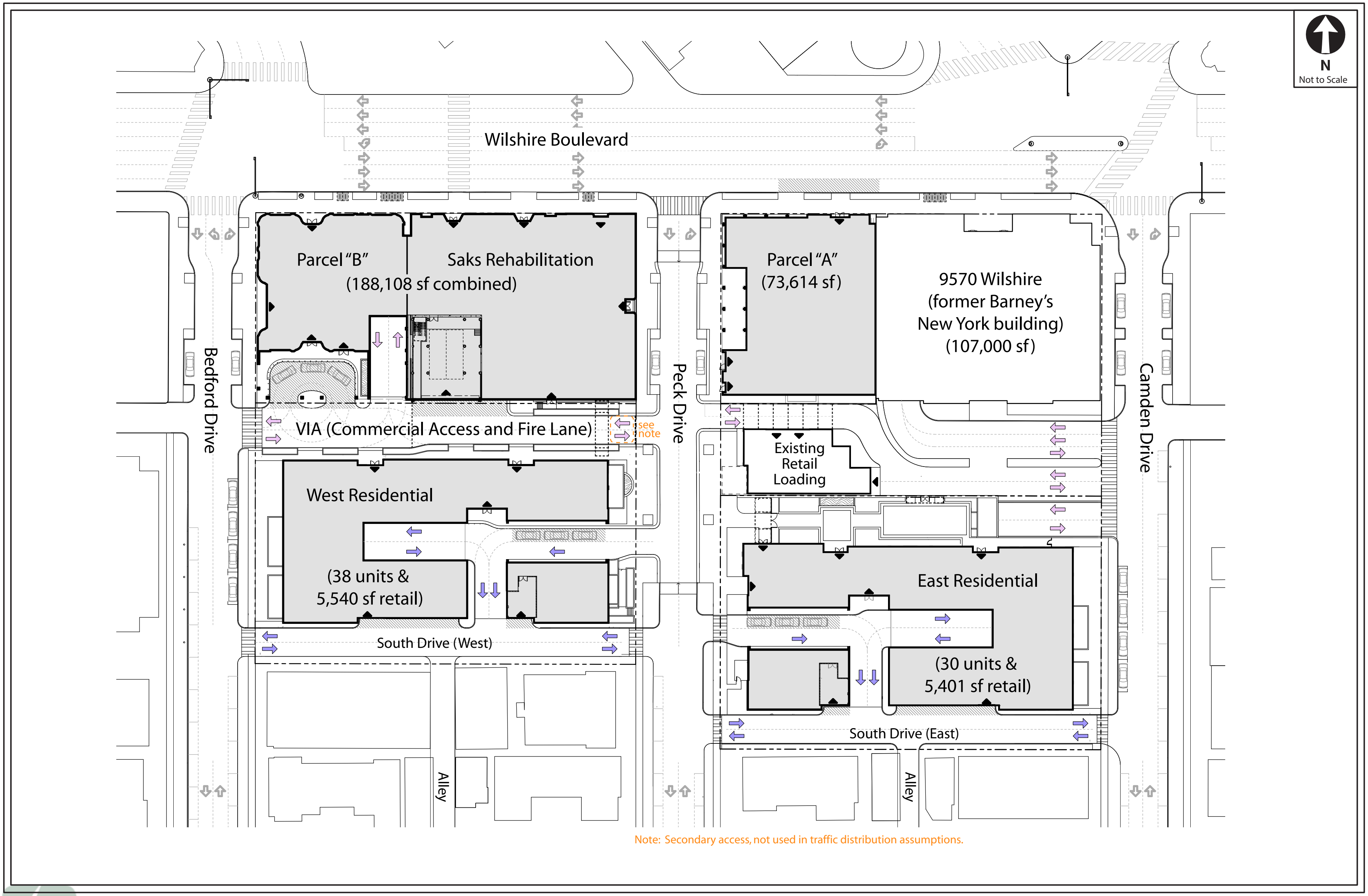


Figure 3

Plan Overview

Conceptual

4.3 Trip Generation for Baseline Conditions

The Saks Fifth Avenue store is currently active on the project site and will be relocated to the former Barneys New York Building at 9570 Wilshire Boulevard pursuant to previously issued building permits. As part of the *Traffic Sensitivity Analysis for the 9600 Wilshire Boulevard Project Beverly Hills, California Memorandum* dated October 23, 2022 from Gibson Transportation Consulting, Inc. (*Traffic Sensitivity Analysis*), 24-hour driveway counts were conducted at the parking lots for the existing Saks Fifth Avenue in April 2022. **Table 9** documents the empirical daily, AM peak hour, and PM peak hour vehicle counts at the Saks Fifth Avenue parking lot driveways. As shown, the existing uses generate approximately 1,090 daily vehicle trips with 28 vehicle trips occurring during the AM peak hour and 95 vehicle trips occurring during the PM peak hour.

Table 9: Saks Fifth Avenue Existing Trip Generation

Land Use	Vehicle Trip Estimates						
	Daily	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Existing Saks Fifth Avenue	1,092	19	9	28	32	63	95

The former Barneys New York Building at 9570 Wilshire Boulevard contains 107,000 sf of commercial space and would continue to be an independent retail building with its own self-contained, subterranean parking structure. The trip generation for the baseline conditions scenario assuming that the Barneys New York Building is also occupied as retail was estimated to determine the potential credit that could be applied to the project assuming full occupancy of the existing uses on the site.

The empirical driveway counts at Saks Fifth Avenue were utilized to estimate the trip generation of 9570 Wilshire Boulevard. The floor area ratio between the two buildings was applied to the empirical driveway counts to estimate the trip generation. The Saks Fifth Avenue building has an area of approximately 154,000 sf while 9570 Wilshire Boulevard has an area of approximately 107,000 sf. As such, 9570 Wilshire Boulevard is approximately 70% the size of the Saks Fifth Avenue store (107,000/154,000 = 70%). Therefore, the existing trip generation at the Saks Fifth Avenue store was multiplied by 70% to reflect the estimated trip generation of 9570 Wilshire Boulevard.

Table 10 documents the estimated trip generation of 9570 Wilshire Boulevard assuming occupancy of a high-end retail store. As shown, the 9570 Wilshire Building is estimated to generate approximately 800 daily vehicle trips with 19 vehicle trips occurring during the AM peak hour and 66 vehicle trips occurring during the PM peak hour.

Table 10: 9570 Wilshire Boulevard Estimated Trip Generation

Land Use	Vehicle Trip Estimates						
	Daily	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
9570 Wilshire Boulevard	759	13	6	19	22	44	66

4.4 Conceptual Plan Trip Generation

Trip generation estimates for the Project land uses were generally determined using trip generation rates provided in *Trip Generation, 11th Edition* (Institute of Transportation Engineers (ITE), 2021). Specific ITE Land Use codes for each use are provided in **Table 11** along with the trip generation rates. Additional information for the trip generation rates applied to the land uses being proposed as part of the Project is provided below.

The project proposes the development of 39,579 sf of retail space across the development area with the Conceptual Plan. With the inclusion of the commercial space at 9570 Wilshire Boulevard (107,000 sf) the entire Specific Plan area has a total of 146,579 sf of retail. Given the retail uses on the site and the adjacent retail uses, the trip generation rate for retail applied the trip generation rates for the ITE Shopping Center land use category for areas with greater than 150,000 sf of retail space.

For the restaurant uses, additional adjustments were made to the ITE trip generation estimates to reflect potential breakfast service at the Proposed restaurants. The ITE trip generation rate for Quality Restaurant (Land Use 931) states that most restaurants in this land use category do not provide breakfast service and provides a lower trip generation rate during the AM peak hour (AM peak hour trip generation rate of 0.73 trips per ksf). To estimate an AM peak hour rate for a restaurant with breakfast service, the PM peak hour trip generation rate for a Quality Restaurant was multiplied by the ratio of AM peak hour to PM peak hour rates for a High-turnover/Sit-down restaurant (ITE Land Use Code 932) which produced a rate of 8.25 trips per ksf (7.8 x (9.57/9.05) = 8.25 trips per ksf). The number of daily trips was also adjusted to account for potential breakfast service at the restaurant space.

Table 11: Trip Generation Rates

Land Use	Trip Rates		
	Daily	AM	PM
Retail[1]	37.01	0.84	3.40
Quality Restaurant[2]	92.39	8.25	7.80
Office[3]	10.84	1.52	1.44
Boutique Hotel[4]	7.99	0.46	0.59
Residential[5]	4.54	0.37	0.39

Notes: Trip generation rates based on *Trip Generation, 11th Edition,* Institute of Transportation Engineers (ITE), 2021.
(1) Retail trip rates based on Shopping Center (>150ksf) (ITE Code 820).
(2) Restaurant trip rates based on Quality Restaurant (ITE Code 931) with adjustments to the daily and AM peak hour trip generation rate to reflect potential breakfast service using trip generation rates for High-Turnover Sit-Down Restaurant (ITE Code 932).
(3) Office trip rates based on General Office (ITE Code 710).
(4) Boutique Hotel trip rates based on Hotel (ITE Code 310).
(5) Residential trip rates based on Multifamily Housing (Mid-Rise) (ITE Code 221).

The project consists of some land uses that are not documented in the ITE *Trip Generation, 11th Edition*. These uses included the Social Club and Spa. The Social Club and Spa trip generation was taken directly from the *Traffic Sensitivity Analysis*. The trip generation estimates for these uses were based on anticipated attendance levels by Social Club members and their guests and occupancy of the Spa on a typical weekday as documented by Gibson Transportation Consulting, Inc. in their May 2023 memorandum[1] (and independently reviewed by Fehr & Peers) regarding empirically derived trip generation rates for comparable uses. The Social Club and Spa uses are expected to generate approximately 500 daily trips with 15 trips occurring during the AM peak hour and 60 trips occurring during the PM peak hour.

Table 12 provides the detailed trip generation estimates for the Conceptual Plan. As shown, prior to considering the internalization of Project trips and alternative modes of travel generated by the site, the Saks Rehabilitation and Parcel B subareas generate the highest number of trips of the Specific Plan area with approximately 2,900 daily trips including 184 trips during the AM peak hour and 304 trips during the PM peak hour. The next highest trip generation occurs at Parcel A with approximately 1,715 daily trips including 185 trips during the AM peak hour and 176 trips during the PM peak hour. The residential subareas both have a much lower trip generation that the Wilshire District with the Neighborhood West generating approximately 400 daily trips (19 AM peak hour and 34 PM peak hour) and Neighborhood East generating approximately 325 daily trips (15 AM peak hour and 29 PM peak hour).

The Mixed-Use (MXD) Trip Generation Model was utilized to estimate the internalization of Project trips and the portion of trips expected to walk, bike, or take transit based on the Project location and mix of land uses upon buildout of the Conceptual Plan. The MXD Model was developed by Fehr & Peers and the

[1] *Trip Generation Estimates for the 9600 Wilshire Boulevard Project Social Club and Amenities, Beverly Hills, California Memorandum*, May 26, 2023, Gibson Transportation Consulting, Inc.

Environmental Protection Agency (EPA), and it accounts for the site context, site location, and other factors to estimate potential internalization and multimodal trip reductions. Land uses surrounding the Specific Plan Area include a mix of residential, retail, recreational, school, and service uses. Parcels to the north of the Specific Plan Area across Wilshire Boulevard are zoned C-3 and are improved with high-rise commercial buildings, such as the eight-story (112-foot) high rise containing a mix of uses, including upper-level office and a ground-floor gym (Equinox) and restaurant (Ocean Prime) at the northwestern corner of Wilshire Boulevard and South Camden Drive and the ten-story (156-foot) high rise containing office and financial institution uses at the northeastern corner of Wilshire Boulevard and South Bedford Drive. Parcels to the south of the Specific Plan Area are multi-family residential buildings ranging between one- and three-stories in height. Given the mixed-use development being proposed with the Project and the mix of land uses already in the Project area, the MXD Model was found to be the appropriate tool to estimate vehicle trip reduction estimates for the Project site.

The MXD model estimated a total vehicle trip reduction of approximately 26% on a daily basis and 32% to 33% during the AM and PM peak hours. A large portion of the estimated vehicle trip reduction was due to trips made by modes other than driving (transit, biking, and walking). To provide a more conservative (higher) estimate of vehicle trips generated by the Project, the number of trips made by these modes was reduced by 50%. The resulting trip reduction estimate was approximately 14% for the daily trips, 20% for the AM peak hour trips, and 21% for the PM peak hour trips. **Appendix C** contains the detailed trip generation and MXD Model calculations.

After accounting for the internalization of Project trips and trips expected to be made by walking, biking, and transit, the Conceptual Plan is estimated to generate approximately 4,600 daily vehicle trips, including 321 trips (224 inbound/97 outbound) during the AM peak hour and 428 trips (185 inbound/243 outbound) during the PM peak hour.

Table 12: Conceptual Plan Trip Generation Estimates

Land Use	Quantity	Trip Estimates						
		Daily	AM			PM		
			In	Out	Total	In	Out	Total
Saks Rehabilitation and Parcel B								
Retail	28,998 sf	1,073	15	9	24	48	51	99
Quality Restaurant	3,046 sf	281	14	11	25	16	8	24
Office	67,108 sf	727	90	12	102	16	81	97
Boutique Hotel	40 rooms	320	10	8	18	12	12	24
Social Club and Spa[1]	32,180 sf	500	10	5	15	35	25	60
Subtotal	--	**2,901**	**139**	**45**	**184**	**127**	**177**	**304**
Parcel A								
Quality Restaurant	11,657 sf	1,077	53	43	96	61	30	91
Office	58,796 sf	637	78	11	89	14	71	85
Subtotal	--	**1,714**	**131**	**54**	**185**	**75**	**101**	**176**
Neighborhood West								
Residential	38 units	173	3	11	14	9	6	15
Retail	5,540 sf	205	3	2	5	9	10	19
Subtotal	--	**378**	**6**	**13**	**19**	**18**	**16**	**34**
Neighborhood East								
Residential	30 units	136	3	8	11	7	5	12
Retail	5,041 sf	187	2	2	4	8	9	17
Subtotal	--	**323**	**5**	**10**	**15**	**15**	**14**	**29**
Commercial Land Use Trip Generation		5,007	275	103	378	219	297	516
Residential Land Use Trip Generation		309	6	19	25	16	11	27
Total Trip Generation		**5,316**	**281**	**122**	**403**	**235**	**308**	**543**
MXD+ Model Internalization and Walk/Bike/Transit Trip Reduction[2]		(758)	(57)	(25)	(82)	(50)	(65)	(115)
TOTAL VEHICLE TRIPS		**4,558**	**224**	**97**	**321**	**185**	**243**	**428**

Notes: Detailed trip generation calculation contained in **Attachment C.**

1. Social Club (14,965 sf) and Spa (17,215 sf) is not a land use identified in *Trip Generation, 11th Edition*. Trip generation estimates were taken directly from *Trip Generation Estimates for the 9600 Wilshire Boulevard Project Social Club and Amenities, Beverly Hills, California* memorandum dated May 26, 2023 from Gibson Transportation Consulting, Inc. The trip generation estimates for this land use were based on anticipated attendance levels by members and their guests on a typical weekday.
2. Fehr & Peers Mixed-Use (MXD) Trip Generation Model used to estimate internalization and walk/bike/transit trips generated by the proposed project.

4.5 Specific Plan Trip Generation

Trip generation estimates for the two Specific Plan Maximum Buildout scenarios, Scenario 2 with maximum buildout and Scenario 3 with the residential conversion, were estimated using the same trip generation rates as presented above for the Conceptual Plan. The MXD Model was used to estimate the vehicle trip reduction with the land uses that could occur under both buildout scenarios.

The land uses under Scenario 2 were developed based on the maximum buildout that could occur with the Specific Plan. The land uses for each subarea of the project with Scenario 2 in comparison to the Conceptual Plan are summarized below.

- The Saks Rehabilitation and Parcel B development area would continue to develop with retail/restaurant, office, boutique hotel, social club, and spa space. Given that the trip generation rates for restaurant uses are higher than retail, all of the space designated as restaurant/retail was conservatively assumed to develop as restaurant space (44,000 sf) in order to provide a conservative analysis. The amount of office space would increase from 67,108 sf in the Conceptual Plan to 75,000 sf in Scenario 2 and the hotel would increase from 40 rooms to 50 rooms. The social club and spa space would also increase from 32,108 sf to 39,000 sf.
- Parcel A would continue to provide restaurant/retail and office space. Up to 40,000 sf of restaurant space was conservatively assumed to be developed in comparison to 11,657 sf of restaurant space in the Conceptual Plan. The amount of office space was assumed to decrease from 58,796 in the Conceptual Plan to 40,000 sf in Scenario 2.
- The Neighborhood West residential development would provide slightly more residential units and boutique retail in Scenario 2. The number of residential units would increase from 38 in the Conceptual Plan to 39 in Scenario 2 and the amount of retail would increase from 5,540 sf of ground-floor boutique retail to 7,500 sf.
- The Neighborhood East residential development would also provide slightly more residential units and boutique retail in Scenario 2. The number of residential units would increase from 30 in the Conceptual Plan to 31 in Scenario 2 and the amount of retail would increase from 5,041 sf of ground-floor boutique retail to 7,500 sf.

Table 13 provides the detailed trip generation estimates for Scenario 2. As shown, the Saks Rehabilitation and Parcel B subareas continue to generate the highest number of trips under this scenario with approximately 5,880 daily trips including 518 trips during the AM peak hour and 554 trips during the PM peak hour prior to considering the trip reduction credits. The next highest trip generation occurs at Parcel A with approximately 4,130 daily trips including 391 trips during the AM peak hour and 370 trips during the PM peak hour. The residential subareas both have a much lower trip generation that the commercial portion of the project site with the Neighborhood West generating 455 daily trips (20 AM peak hour and 41 PM peak hour) and Neighborhood East generating 419 daily trips (17 AM peak hour and 38 PM peak hour).

Table 13: Scenario 2 Specific Plan Buildout Trip Generation Estimates

Land Use	Quantity	Trip Estimates						
		Daily	AM			PM		
			In	Out	Total	In	Out	Total
Saks Rehabilitation and Parcel B								
Retail	0 sf	0	0	0	0	0	0	0
Quality Restaurant	44,000 sf	4,065	200	163	363	230	113	343
Office	75,000 sf	813	100	14	114	18	90	108
Boutique Hotel	50 rooms	400	13	10	23	15	15	30
Social Club and Spa[1]	39,000 sf	606	12	6	18	42	31	73
Subtotal	**--**	**5,884**	**325**	**193**	**518**	**305**	**249**	**554**
Parcel A								
Quality Restaurant	40,000 sf	3,696	182	148	330	209	103	312
Office	40,000 sf	434	54	7	61	10	48	58
Subtotal	--	**4,130**	**236**	**155**	**391**	**219**	**151**	**370**
Neighborhood West								
Residential	39 units	177	3	11	14	9	6	15
Retail	7,500 sf	278	4	2	6	12	14	26
Subtotal	**--**	**455**	**7**	**13**	**20**	**21**	**20**	**41**
Neighborhood East								
Residential	31 units	141	3	8	11	7	5	12
Retail	7,500 sf	278	4	2	6	12	14	26
Subtotal	**--**	**419**	**7**	**10**	**17**	**19**	**19**	**38**
Commercial Land Use Trip Generation		10,570	569	352	921	548	428	976
Residential Land Use Trip Generation		318	6	19	25	16	11	27
Total Trip Generation		**10,888**	**575**	**371**	**946**	**564**	**439**	**1,003**
MXD+ Model Internalization and Walk/Bike/Transit Trip Reduction[2]		(1,562)	(106)	(69)	(175)	(104)	(81)	(185)
TOTAL VEHICLE TRIPS		**9,326**	**469**	**302**	**771**	**460**	**358**	**818**

Notes: Detailed trip generation calculation contained in **Attachment C.**

1. Social Club and Spa (39,000 sf) is not a land use identified in *Trip Generation, 11th Edition*. Trip generation estimates were taken directly from *Trip Generation Estimates for the 9600 Wilshire Boulevard Project Social Club and Amenities, Beverly Hills, California* memorandum dated May 26, 2023 from Gibson Transportation Consulting, Inc.. The trip generation estimates for this land use were based on anticipated attendance levels by members and their guests on a typical weekday.
2. Fehr & Peers Mixed-Use (MXD) Trip Generation Model used to estimate internalization and walk/bike/transit trips generated by the proposed project.

The MXD Trip Generation Model was utilized to estimate the internalization of project trips and the portion of trips expected to walk, bike, or take transit based on the project location and mix of land uses.

The same methodology was applied for estimating a more conservative (higher) vehicle trip generation and only 50% of the estimated trips by walking, biking, or transit were accounted for in the trip reduction estimate. This resulted in a vehicle trip reduction of approximately 14% for the daily trips and 18% for the AM and PM peak hour trips. After accounting for the internalization of project trips and trips expected to be made by walking, biking, and transit, Scenario 2 will generate approximately 9,300 daily vehicle trips, including 771 trips (469 inbound/302 outbound) during the AM peak hour and 818 trips (460 inbound/358 outbound) during the PM peak hour.

The land uses under Scenario 3 were developed based on the maximum buildout that could occur with the Specific Plan with the residential conversion. The land uses for each subarea of the project with Scenario 3 in comparison to Scenario 2 and the Conceptual Plan are summarized below.

- The Saks Rehabilitation and Parcel B development area would continue to develop with retail/restaurant (44,000 sf which is the same as Scenario 2) and spa space (19,000 sf). The office, boutique hotel, and social club uses proposed with the Conceptual Plan and considered under Scenario 2 would not occur under Scenario 3. Instead, up to 75 residential conversion units would be constructed.
- Parcel A would continue to provide restaurant/retail and office space. Up to 40,000 sf of restaurant space and 40,000 sf of office space was conservatively assumed to be developed in Scenario 3 (same as Scenario 2).
- The Neighborhood West residential development would continue to provide slightly more residential units and boutique retail than the Conceptual Plan and the same number of units and retail space as Scenario 2 (39 units and 7,500 sf of boutique retail).
- The Neighborhood East residential development would also continue to provide slightly more residential units and boutique retail than the Conceptual Plan and the same number of units and retail space as Scenario 2 (31 units and 7,500 sf of boutique retail).

Table 14 provides the detailed trip generation estimates for Scenario 3. As shown, the Saks Rehabilitation and Parcel B subareas continue to generate the highest number of trips under this Specific Plan buildout with residential conversion scenario with the elimination of the office space, hotel, and social club and addition of the residential units with approximately 4,700 daily trips including 400 trips during the AM peak hour and 407 trips during the PM peak hour. Parcel A generates the same number of trips as Scenario 2 with approximately 4,130 daily trips including 391 trips during the AM peak hour and 370 trips during the PM peak hour. The residential subareas also generate the same number of trips as Scenario 2 with the Neighborhood West generating 455 daily trips (20 AM peak hour and 41 PM peak hour) and Neighborhood East generating 419 daily trips (17 AM peak hour and 38 PM peak hour).

The MXD Trip Generation Model was utilized to estimate the internalization of project trips and the portion of trips expected to walk, bike, or take transit based on the project location and mix of land uses. The same methodology was applied for estimating a more conservative (higher) vehicle trip generation and only 50% of the estimated trips by walking, biking, or transit were accounted for in the trip reduction estimate. This resulted in a vehicle trip reduction of approximately 16% for the daily trips and 20% for the

AM and PM peak hour trips, which is slightly higher than Scenario 2 given the additional residential units on the site. After accounting for the internalization of project trips and trips expected to be made by walking, biking, and transit, Scenario 3 will generate approximately 8,100 daily vehicle trips, including 661 trips (369 inbound/292 outbound) during the AM peak hour and 682 trips (420 inbound/262 outbound) during the PM peak hour.

Table 14: Scenario 3 Specific Plan Buildout with Residential Trip Generation Estimates

Land Use	Quantity	Trip Estimates						
		Daily	AM			PM		
			In	Out	Total	In	Out	Total
Saks Rehabilitation and Parcel B								
Retail	0 sf	0	0	0	0	0	0	0
Quality Restaurant	44,000 sf	4,065	200	163	363	230	113	343
Office	0 sf	0	0	0	0	0	0	0
Residential	75 units	341	6	22	28	18	11	29
Spa[1]	19,000 sf	295	6	3	9	20	15	35
Subtotal	--	**4,701**	**212**	**188**	**400**	**268**	**139**	**407**
Parcel A								
Quality Restaurant	40,000 sf	3,696	182	148	330	209	103	312
Office	40,000 sf	434	54	7	61	10	48	58
Subtotal	--	**4,130**	**236**	**155**	**391**	**219**	**151**	**370**
Neighborhood West								
Residential	39 units	177	3	11	14	9	6	15
Retail	7,500 sf	278	4	2	6	12	14	26
Subtotal	--	**455**	**7**	**13**	**20**	**21**	**20**	**41**
Neighborhood East								
Residential	31 units	141	3	8	11	7	5	12
Retail	7,500 sf	278	4	2	6	12	14	26
Subtotal	--	**419**	**7**	**10**	**17**	**19**	**19**	**38**
Commercial Land Use Trip Generation		9,046	450	325	775	493	307	800
Residential Land Use Trip Generation		659	12	41	53	34	22	56
Total Trip Generation		**9,705**	**462**	**366**	**828**	**527**	**329**	**856**
MXD+ Model Internalization and Walk/Bike/Transit Trip Reduction[2]		(1,599)	(93)	(74)	(167)	(107)	(67)	(174)
TOTAL VEHICLE TRIPS		**8,106**	**369**	**292**	**661**	**420**	**262**	**682**

Notes: Detailed trip generation calculation contained in **Attachment A.**

1. Social Club and Spa (19,000 sf) is not a land use identified in *Trip Generation, 11th Edition*. Trip generation estimates were taken directly from *Trip Generation Estimates for the 9600 Wilshire Boulevard Project Social Club and Amenities, Beverly Hills, California* memorandum dated May 26, 2023 from Gibson Transportation Consulting, Inc.. The trip generation estimates for this land use were based on anticipated attendance levels by members and their guests on a typical weekday.
2. Fehr & Peers Mixed-Use (MXD) Trip Generation Model used to estimate internalization and walk/bike/transit trips generated by the proposed project.

Table 15 summarizes the total number of vehicle trips generated under the Conceptual Plan and two Specific Plan Buildout scenarios. As shown, Scenario 2 Specific Plan with maximum buildout would generate the highest number of vehicle trips followed by Scenario 3 that accounts for the potential residential conversion. In both Scenarios 2 and 3, the high number of vehicle trips is primarily due to the large amount of restaurant space that is assumed to potentially occur with maximum buildout of the specific plan (up to 84,000 sf of restaurant space under the Specific Plan scenarios in comparison to 14,700 sf in the Conceptual Plan).

Table 15: Land Use and Trip Generation Summary for Conceptual Plan and Specific Plan Buildout Scenarios

Land Use	Conceptual Plan				Scenario 2 Specific Plan				Scenario 3 Specific Plan with Residential			
	Quantity	Trip Estimates			Quantity	Trip Estimates			Quantity	Trip Estimates		
		Daily	AM	PM		Daily	AM	PM		Daily	AM	PM
Retail	39.6 KSF	1,465	33	135	15 KSF	556	12	52	15 KSF	556	12	52
Restaurant	14.7 KSF	1,358	121	115	84 KSF	7,761	693	655	84 KSF	7,761	693	655
Office	125.9 KSF	1,364	191	182	115 KSF	1,247	175	166	40 KSF	434	61	58
Social Club/Spa	32.18 KSF	500	15	60	39 KSF	606	18	73	19 KSF	295	9	35
Hotel	40 Rooms	320	18	24	50 Rooms	400	23	30	-	-	-	-
Residential	68 Units	309	25	27	70 Units	318	25	27	145 Units	659	53	56
Total Project Trips		**5,316**	**403**	**543**	**--**	**10,888**	**946**	**1,003**	**--**	**9,705**	**828**	**856**
MXD+ Model Reduction %		14%	20%	21%	--	14%	19%	18%	--	17%	20%	20%
MXD+ Model Trip Reduction		(758)	(82)	(115)	--	(1,562)	(175)	(185)	--	(1,599)	(167)	(174)
TOTAL VEHICLE TRIPS		**4,558**	**321**	**428**	**--**	**9,326**	**771**	**818**	**--**	**8,106**	**661**	**682**

4.6 Parking

The Specific Plan Area would be serviced by two subterranean parking structures: (1) the existing approximately 309-space subterranean parking structure on the eastern portion of the Specific Plan Area below 9570 Wilshire, and (2) the newly proposed subterranean parking structure developed under the Specific Plan Area, portions of which may be located under the public rights-of-way within the Specific Plan Area. The Specific Plan would establish automobile parking requirements based on current Beverly Hills Municipal Code (BHMC) regulations, or at the election of an Applicant, through a shared parking analysis, including derived parking rates. Any shared parking analysis would be required to account for the array of potential uses and establish appropriate minimum parking requirements to address the potential of parking spillover onto public streets in the vicinity of the Specific Plan Area. Tandem spaces and other alternative parking arrangements would be allowed to count towards required parking with provision of a valet or tandem parking assistance.

The Conceptual Plan provides for a new, up to four-level subterranean parking structure with up to 937 parking spaces, offering a total of up to 716 parking spaces for commercial uses and up to 221 parking spaces for residential uses. The residential parking spaces would be secured and separate from the commercial parking spaces, with up to 98 secured parking spaces located beneath the Neighborhood East building and up to 123 secured parking spaces beneath the Neighborhood West building.

The Conceptual Plan also proposes relocating and/or repurposing up to 16 existing on-street parking spaces and adding new short-term on-street parking spaces adjacent to the Wilshire Boulevard District. Approximately ten existing surface spaces on South Peck Drive would be removed to allow for the widening of sidewalks; these commercial parking spaces would be relocated below grade. A total of up to four parking meters on South Camden Drive and two parking meters South Bedford Drive would be removed, and this curb space would be repurposed for neighborhood residential parking purposes. Up to six new short-term surface parking spaces would be provided adjacent to the Wilshire Boulevard District, at the north end of South Camden Drive, South Peck Drive, and South Bedford Drive.

Of the 716 total commercial parking spaces, up to 100 stalls would be available to the members of the public residing in the vicinity of the Specific Plan Area for use after hours and on weekends. The applicant, in cooperation with the City, would organize, promote, and offer the aforementioned stalls to Beverly Hills residents in the neighborhood adjacent to the Specific Plan Area in order to promote efficient use of parking resources.

4.7 Project Access

Wilshire Boulevard would function as the main access corridor to and from the Specific Plan Area. Vehicular ingress and egress to the project site would be provided by new driveways located on South Bedford Drive, South Peck Drive, and South Camden Drive. South Drive, a new roadway on the south side of the Specific Plan Area, would provide local access between South Bedford Drive, South Peck Drive, and South Camden Drive. **Figure 4** illustrates the proposed circulation plan for the Conceptual Plan submitted with the Specific Plan. This figure is intended to show site circulation for the proposed Conceptual Plan; the building locations and other features depicted in that figure are based on the proposed Conceptual Plan and are included for reference purposes only.

The proposed Conceptual Plan would locate pedestrian entrances on South Bedford Drive, South Peck Drive, Wilshire Boulevard, and the publicly accessible Via and Terrace situated to the immediate south of the commercial buildings. Each ground floor commercial tenant space situated along Wilshire Boulevard would be individually accessible to enhance pedestrian activity along the street wall. An additional pedestrian access point could be provided along South Bedford Drive to access the ground floor restaurant use proposed on Parcel B. Pedestrian access to the Neighborhood East and West buildings would be provided on South Peck Drive and pedestrian entrances for the ground floor retail uses would be provided by the Via and Terrace. New street furniture and enhanced pavement, landscaping, and lighting would also be provided within the public rights-of-way to create a pleasant pedestrian environment.

Vehicle access to each of the subareas is described in more detail below. Additional Project design features enhancing access for pedestrians and bicyclists are described in *9600 Wilshire Boulevard Specific Plan Transportation Impact Report* (Fehr & Peers, November 2023).

4.7.1 Parcel A, Parcel B & Saks Rehabilitation

Vehicular ingress and egress for commercial parking would be provided in two locations. The first is through the proposed Via, with a second vehicular ingress and egress point at South Camden Drive. The Via would be located just south of Parcel B and the Saks Rehabilitation parcels and provide access at South Bedford Drive on the west and South Peck Drive on the east. The Via would provide direct access to the subterranean parking structure at the porte-cochere/valet area serving the hotel and other commercial uses within the Specific Plan area. While the Via would be designed to provide both vehicular and pedestrian access and circulation between South Bedford Drive and South Peck Drive, the eastern portion of the Via would be designed to be closed to vehicles during designated periods (such as for farmer's markets or other events). During times that require the eastern portion of the Via to be closed, vehicles would access the Via on South Bedford Drive or alternatively utilize the proposed driveway on South Camden Drive.

The second vehicular ingress and egress point for commercial parking would be provided from South Camden Drive through a proposed two-way driveway adjacent to the Terrace. This access point would connect to the commercial parking (described above) and allow automobiles to circulate throughout the entire subterranean garage through a connection below South Peck Drive.

4.7.2 9570 Wilshire Building

The existing two-way driveway on South Camden Drive serving 9570 Wilshire Boulevard would continue to provide access to the existing parking garage at 9570 Wilshire serving that use.

4.7.3 Neighborhood West

Vehicular ingress to the secured parking for the Neighborhood West building would be provided by a one-way driveway on South Peck Drive, with egress provided on South Drive. South Drive would be an approximately 20-foot-wide two-way roadway with an enhanced landscape buffer located along the southern boundary of the Specific Plan Area. The western portion of South Drive would provide access between South Bedford Drive and South Peck Drive.

4.7.4 Neighborhood East

Similar to the Neighborhood West building, vehicular ingress to the secured parking for the Neighborhood East Building would be provided by a one-way driveway located on South Peck Drive. Egress from the parking area would be provided on South Drive. The eastern portion of South Drive would provide access between South Peck Drive and South Camden Drive.

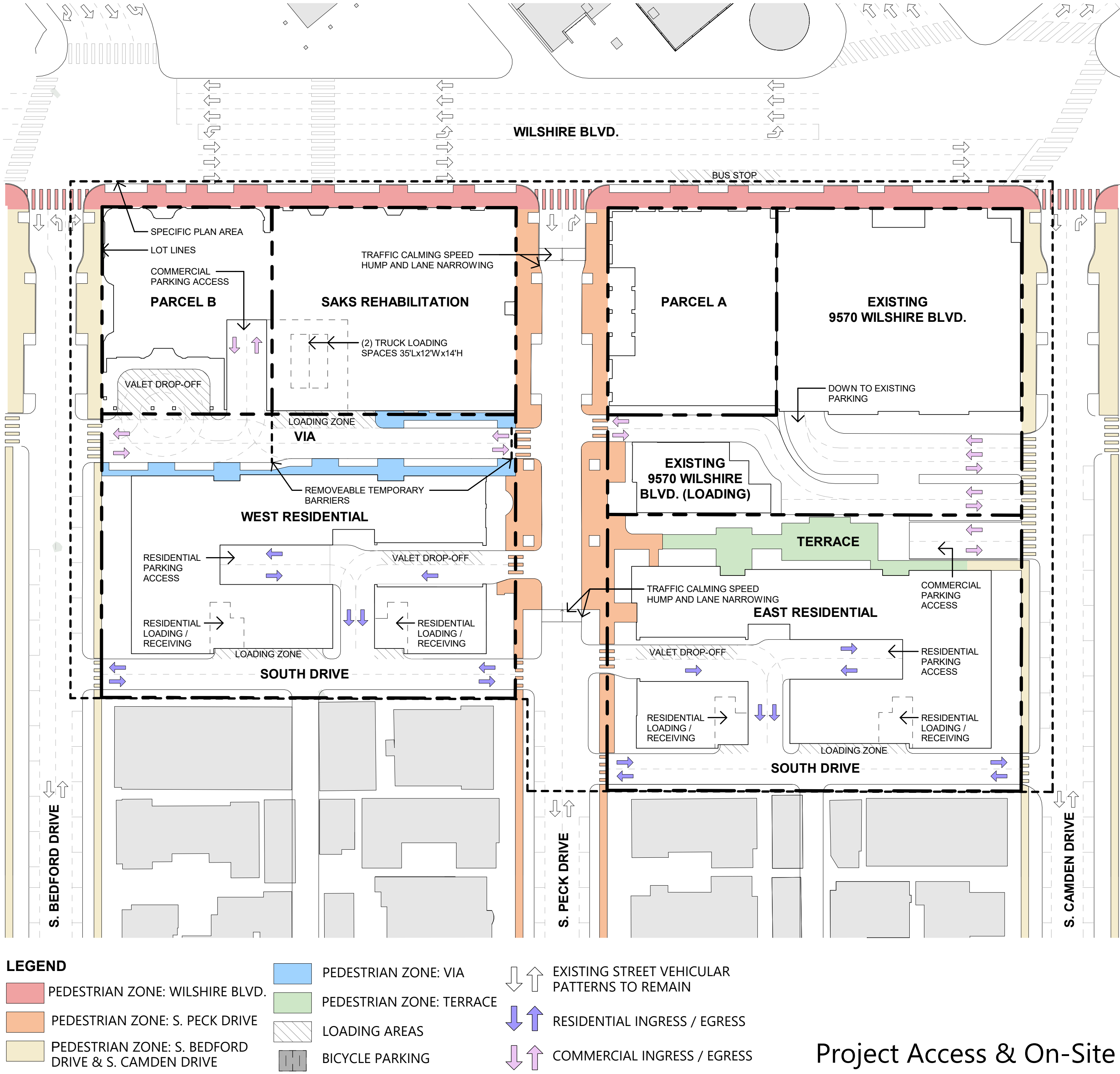


Figure 4

Project Access & On-Site Circulation

4.8 Trip Distribution

The distribution of Project generated trips is shown in **Figure 5.** As shown, the majority of vehicle trips are expected to utilize Wilshire Boulevard to access the Specific Plan Area. Approximately 35% of Project trips are expected to travel to/from the east on Wilshire Boulevard and approximately 30% are expected to travel to/from the west on Wilshire Boulevard. A portion of vehicles traveling to the Project site will also utilize Wilshire Boulevard to access the roadways serving the downtown triangle to the north and neighborhoods further north and east, such as N. Roxbury Drive, N. Bedford Drive, Dayton Way, Brighton Way, and Rodeo Drive (approximately 5% each). To the south of the Specific Plan Area, approximately 15% of vehicles are expected to travel on Charleville Boulevard (10% to/from the east and 5% to/from the west) and 5% are expected to travel on either South Bedford Drive, South Peck Drive, or South Camden Drive to access Olympic Boulevard. Below is a summary of the local travel patterns for vehicles entering the site given the permitted turning movements at the primary access points on Wilshire Boulevard:

- Bedford Drive is controlled by a traffic signal at Wilshire Boulevard. All turning movements between Wilshire Boulevard and South Beford Drive are permitted. North of Wilshire Boulevard, North Bedford Drive has one-way southbound operations. Therefore, vehicles exiting the Project site by traveling on northbound South Bedford Drive must make a left or right-turn onto Wilshire Boulevard.
- South Peck Drive is stop-controlled at Wilshire Boulevard. Only right-turns are allowed from S. Peck Drive onto eastbound Wilshire Boulevard and no left-turns from Wilshire Boulevard are allowed onto South Peck Drive. Therefore, vehicles can only enter the project site on South Peck Drive by making a right-turn from eastbound Wilshire Boulevard. Vehicles traveling westbound on Wilshire Boulevard can enter the Project site at the signalized intersections at Bedford Drive or Camden Drive.
- Camden Drive is controlled by a traffic signal at Wilshire Boulevard. North of Wilshire Boulevard, North Camden Drive operates as one-way northbound. Dayton Way also connects to this intersection and provides access one-way north/eastbound. Only right-turns are allowed from South Camden Drive onto eastbound Wilshire Boulevard with no access to North Camden Drive or Dayton Way. Therefore, vehicles exiting the Project site and desiring access to either Camden Drive or Dayton Way would need to access Wilshire Boulevard at South Bedford Drive or Peck Drive. Both left and right-turns are allowed from Wilshire Boulevard onto South Camden Drive.

Given the turning movement restrictions at the primary intersections on Wilshire Boulevard providing access to the Specific Plan Area, South Drive can be utilized by residents, employees, and visitors of the Specific Plan to travel between South Bedford Drive, South Peck Drive, and Camden Drive. The construction of South Drive eliminates the need for vehicles to circulate the entire block and minimizes traffic volume increases on the local roadways providing access to the Project site and on Charleville Boulevard.

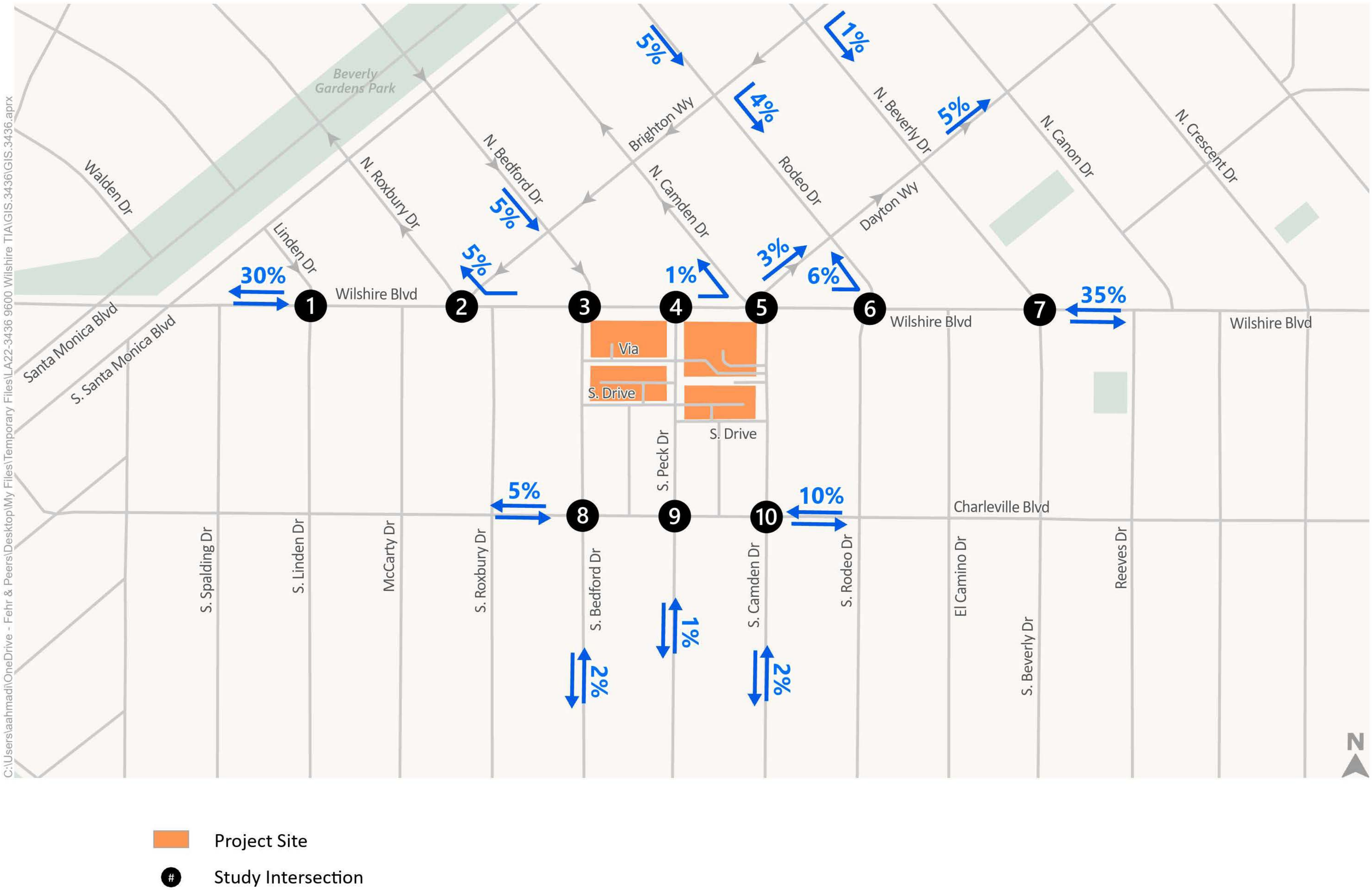


Figure 5

Project Trip Distribution

5. Baseline Plus Project Conditions

This chapter presents the traffic operations analysis for baseline and baseline plus Project conditions with the proposed 9600 Wilshire Boulevard Specific Plan.

5.1 Baseline Traffic Volumes

The baseline conditions scenario accounts for 2022 traffic counts and the occupancy of 9570 Wilshire Boulevard as a retail store prior to the implementation of the proposed Project. The former Barneys New York Building at 9570 Wilshire Boulevard contains 107,000 sf of commercial space and would continue to be an independent retail building with its own self-contained, subterranean parking structure. The Project is proposing that the Saks Fifth Avenue department store at 9600 Wilshire Boulevard would move into this building and utilize the existing parking structure; however, occupancy of this space as retail could happen without the approval of the proposed Project and with Saks Fifth Avenue remaining in its current location, and therefore, this baseline conditions scenario was analyzed.

The trip generation of 9570 Wilshire Boulevard presented in the above chapter was used to forecast the change in peak hour traffic volumes at each of the study intersections with the occupancy of this retail space. The resulting 9570 Wilshire Boulevard trip assignment is provided in **Figure 6**. These volumes were added to the existing conditions traffic counts to develop baseline conditions traffic forecasts. The AM and PM peak hour traffic forecasts for baseline conditions are shown in **Figure 7**.

5.2 Baseline Plus Conceptual Plan Traffic Volumes

The traffic volumes for the proposed Conceptual Plan are comprised of the baseline conditions traffic volumes with the proposed land uses in place. The plus project traffic volumes also reflect the relocation of the existing Sake Fifth Avenue department store. The trip generation and trip distribution presented in the above chapter were used to forecast the number of vehicle trips traveling through each study intersection with the development of the Conceptual Plan. The Conceptual Plan trip assignment is shown in **Figure 8**. These project trips were then used to generate the baseline plus Conceptual Plan traffic volumes provided in **Figure 9**.

5.3 Baseline Plus Conceptual Plan Traffic Volumes with Via Closed

This traffic scenario is the same as baseline plus Project conditions except that the Via is assumed to be temporarily closed for a special event which means that no access is provided to/from S. Peck Drive. The Conceptual Plan trip assignment with the Via closure is shown in **Figure 10**. **Figure 11** provides the baseline plus Conceptual Plan traffic volumes with the Via closure.

1 Free right-turn movement to N. Roxbury Drive
2 Left-turn movement to N. Roxbury Drive
3 Right-turn movement to Dayton Way
4 Left-turn movement to N. Camden Drive

Study Intersections

Project Site

AM (PM) Peak Hour Traffic Volumes

Lane Configuration

One-Way Roadway

Figure 6

9570 Wilshire Boulevard Trip Assignment

1 Free right-turn movement to N. Roxbury Drive
2 Left-turn movement to N. Roxbury Drive
3 Right-turn movement to Dayton Way
4 Left-turn movement to N. Camden Drive

Study Intersections

Project Site

AM (PM) Peak Hour Traffic Volumes

Lane Configuration

One-Way Roadway

AM PM | E | F | A-C | D — Level of Service (LOS)

Figure 7

Peak Hour Traffic Volumes & Lane Configurations
Baseline Conditions

1 Free right-turn movement to N. Roxbury Drive
2 Left-turn movement to N. Roxbury Drive
3 Right-turn movement to Dayton Way
4 Left-turn movement to N. Camden Drive

Study Intersections

Project Site

AM (PM) Peak Hour Traffic Volumes

Lane Configuration

One-Way Roadway

Figure 8A

Conceptual Plan Trip Assignment

Figure 8B

Conceptual Plan Trip Assignment
(Internal Intersecions)

1 Free right-turn movement to N. Roxbury Drive
2 Left-turn movement to N. Roxbury Drive
3 Right-turn movement to Dayton Way
4 Left-turn movement to N. Camden Drive

Study Intersections

Project Site

AM (PM) Peak Hour Traffic Volumes

Lane Configuration

One-Way Roadway

AM PM E F A C D Level of Service (LOS)

Figure 9

Peak Hour Traffic Volumes & Lane Configurations
Baseline Plus Conceptual Plan Conditions

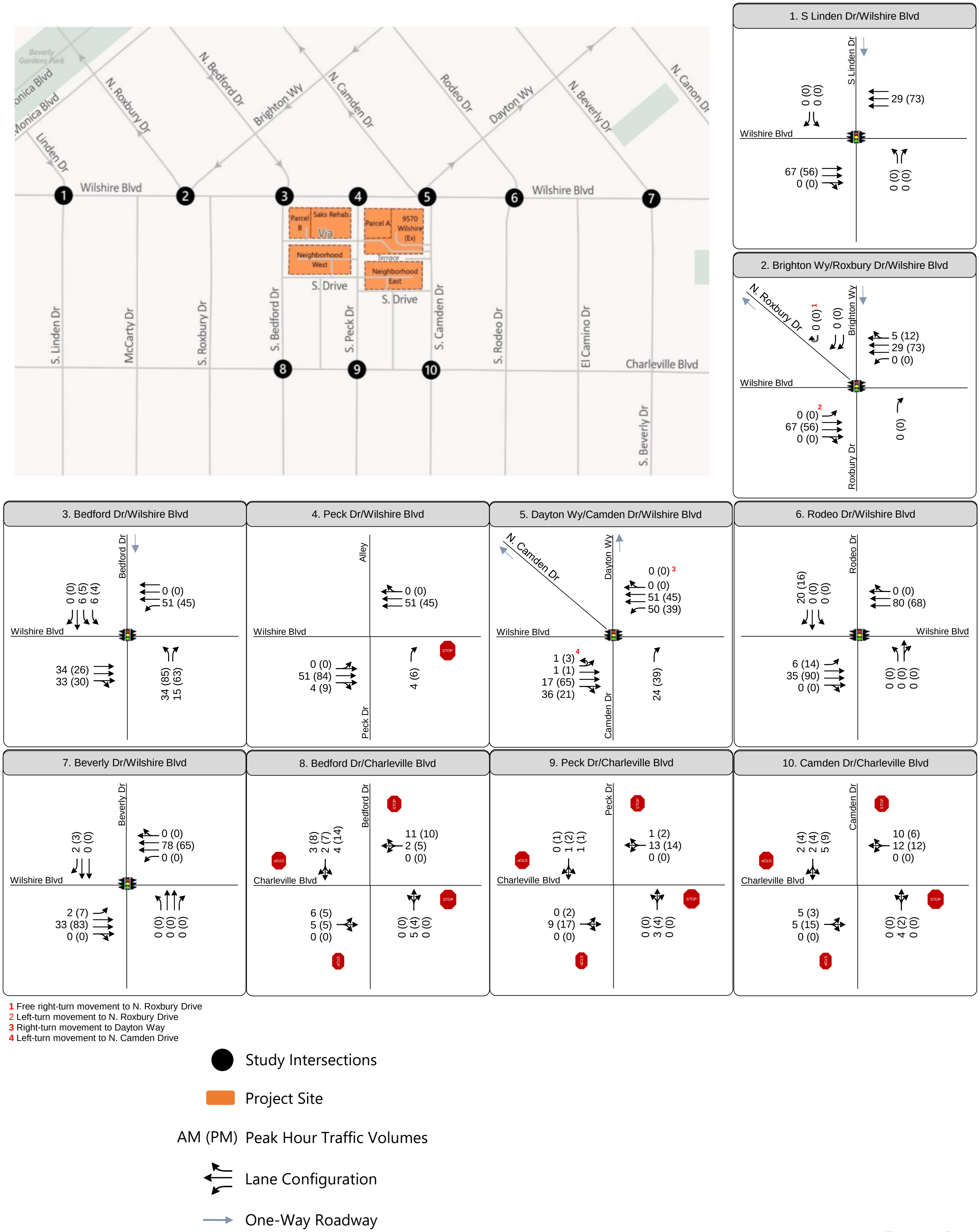


Figure 10A

Conceptual Plan Trip Assignment with Via Closure

Figure 10B

Conceptual Plan Trip Assignment with Via Closure (Internal Intersections)

1 Free right-turn movement to N. Roxbury Drive
2 Left-turn movement to N. Roxbury Drive
3 Right-turn movement to Dayton Way
4 Left-turn movement to N. Camden Drive

Study Intersections

Project Site

AM (PM) Peak Hour Traffic Volumes

Lane Configuration

One-Way Roadway

AM PM E F A C D Level of Service (LOS)

Figure 11

Peak Hour Traffic Volumes & Lane Configurations
Baseline Plus Conceptual Plan Conditions with Via Closure

5.4 Baseline Plus Conceptual Plan Intersection Operations

The baseline and baseline plus Conceptual Plan traffic volumes with and without the Via closure were used to analyze operations at each study intersection during the AM and PM peak hours. As shown in **Table 16**, when comparing baseline conditions to the baseline plus Conceptual Plan intersection operations and to operations with the Via closure, most of the study intersections experience an increase in average vehicle delay. Despite the increases in delay, most study intersections are projected to operate at LOS D or better under baseline plus Conceptual Plan conditions with and without the Via closure. The LOS calculation sheets are included in **Appendix B**. The following intersections are projected to operate at LOS D, E or F with implementation of the Project under one or both peak hours:

- At the **Wilshire Boulevard & Brighton Way/ Roxbury Drive** intersection, the addition of Project traffic is expected to result in LOS D operations during the AM peak hour with a decrease in delay of 1.4 seconds. During the PM peak hour, the intersection would operate at LOS E with a decrease in delay of 2.4 seconds. Since the increase in delay during both peak hours is less than 5 seconds, the **Conceptual Plan does not exceed the City's criteria for signalized intersections at this study intersection**.
- At the **Wilshire Boulevard & Camden Drive** intersection, the addition of Project traffic is expected to result in LOS D operations during the AM peak hour with an increase in delay of 0.4 seconds (0.3 seconds with Via closure). During the PM peak hour, the intersection would continue operating at LOS D with an increase in delay of 0.6 seconds (0.3 seconds with Via closure). Since the increase in delay during both peak hours is less than 5 seconds, the **Conceptual Plan does not exceed the City's criteria for signalized intersections at this study intersection**.
- At the **Wilshire Boulevard & Peck Drive** intersection, the addition of Project traffic is expected to exacerbate the LOS conditions in both peak hours. In the AM peak hour, the intersection will degrade to LOS D with an increase in delay of 2.6 seconds (1.7 seconds with Via closure). In the PM peak hour, traffic operations will operate at LOS F with an increase in delay of more than 100 seconds (24.0 seconds with Via closure). The LOS D and LOS F operations are due to the delay experienced by drivers making a northbound right-turn from Peck Drive onto Wilshire Boulevard. The Conceptual Plan is expected to add approximately 13 vehicles to this movement during the AM peak hour and 53 vehicles to this movement during the PM peak hour. These project-trips would decrease to only 4 vehicles during the AM peak hour and 6 vehicles during the PM peak hour with the Via closure. Vehicle delay at side-street stop-controlled intersections is very sensitive to any change in traffic volumes once the vehicle demand approaches the capacity of the turning movements from the side-street (Peck Drive) onto the major street (Wilshire Boulevard). This is apparent when reviewing the estimated increase in delay during the PM peak hour with the Via closure. While only 6 additional vehicles would be making the northbound left-turn onto Wilshire Boulevard, the vehicle delay is estimated to increase by 24.0 seconds per vehicle in comparison to baseline conditions. Because the City's analysis criteria for side-street stop control intersections are based on change in delay, the calculated HCM value is reported in this study. However, drivers are likely to accept smaller gaps in vehicle flows on Wilshire Boulevard than assumed in the HCM methodology and are also likely to select alternate travel

routes if delays become substantial. Since the increase in delay during the PM peak hour is more than ten seconds, the **Conceptual Plan results in this location exceeding the City's criteria for SSSC intersections**.

Table 16: Baseline and Baseline Plus Conceptual Plan Intersection Operations

Intersection	Control	Peak Hour	Baseline No Project		Baseline Plus Project		Change in Delay (sec/veh)	Baseline Plus Project with Via Closed		Change in Delay (sec/veh)
			Delay[1]	LOS[2]	Delay[1]	LOS[2]		Delay[1]	LOS[2]	
Wilshire Blvd & Linden Drive	Signal	AM	14.6	B	14.5	B	-0.1	14.5	B	-0.1
		PM	11.6	B	11.4	B	-0.2	11.4	B	-0.2
Wilshire Blvd & Brighton Wy/ Roxbury Drive	Signal	AM	41.8	D	40.4	D	-1.4	40.4	D	-1.4
		PM	71.6	E	69.2	E	-2.4	69.2	E	-2.4
Wilshire Blvd & Bedford Drive	Signal	AM	10.1	B	9.9	A	-0.2	9.9	A	-0.2
		PM	11.7	B	11.6	B	-0.1	11.6	B	-0.1
Wilshire Blvd & Peck Drive	SSSC	AM	23.9	C	26.5	D	2.6	25.6	D	1.7
		PM	105.4	F	**256.1**	**F**	**150.7**	**129.4**	**F**	**24.0**
Wilshire Blvd & Camden Drive	Signal	AM	40.5	D	40.9	D	0.4	40.8	D	0.3
		PM	46.8	D	47.4	D	0.6	47.1	D	0.3
Wilshire Blvd & Rodeo Drive	Signal	AM	11.1	B	10.9	B	-0.2	10.9	B	-0.2
		PM	8.8	A	8.5	A	-0.3	8.5	A	-0.3
Wilshire Blvd & Beverly Drive	Signal	AM	25.5	C	25.7	C	0.2	25.7	C	0.2
		PM	23.1	C	22.8	C	-0.3	22.8	C	-0.3
Charleville Blvd & S. Bedford Drive	AWSC	AM	10.7	B	10.8	B	0.1	11.0	B	0.3
		PM	12.5	B	12.8	B	0.3	13.1	B	0.6
Charleville Blvd & S. Peck Drive	AWSC	AM	10.9	B	11.2	B	0.3	11.3	B	0.4
		PM	12.4	B	12.8	B	0.4	12.8	B	0.4
Charleville Blvd & S. Camden Drive	AWSC	AM	10.4	B	10.9	B	0.5	10.9	B	0.5
		PM	12.5	B	13.5	B	1.0	13.5	B	1.0

Source: Fehr & Peers, 2023.
Notes:
AWSC indicates all-way stop-controlled intersection.
SSSC indicates side-street stop-controlled intersection.
Underlined text indicates a LOS of D, E, or F.
Bold text indicates that the delay or LOS exceeds the City's criteria as a result of the Project trips.

1. Whole intersection weighted average stopped delay expressed in seconds per vehicle for signalized and AWSC intersections. The vehicular delay for the worst movement is reported for the SSSC intersections.
2. LOS calculations were performed using the *Highway Capacity Manual* 6th Edition (HCM 6) method.

5.5 Baseline Plus Specific Plan Buildout Traffic Volumes

The traffic volumes for the Specific Plan Buildout scenarios are comprised of the baseline conditions traffic volumes with the potential buildout of the land uses under Scenarios 2 and 3. The plus project traffic volumes also reflect the removal of the existing Sake Fifth Avenue department store. The trip generation and trip distribution presented in the above chapter were used to generate the baseline plus Specific Plan traffic volumes at each of the study intersections. The Scenario 2 Specific Plan Buildout trip assignment is shown in **Figure 12** and the Scenario 3 Specific Plan Buildout with Residential trip assignment is shown in **Figure 13**. **Figure 14** provides the baseline plus Scenario 2 Specific Plan Buildout conditions traffic volumes and **Figure 15** provides the baseline plus Scenario 3 Specific Plan Buildout with Residential conditions traffic volumes.

5.6 Baseline Plus Specific Plan Buildout Traffic Volumes with Via Closed

This traffic scenario is the same as baseline plus Specific Plan Buildout conditions except that the Via is assumed to be temporarily closed for a special event which means that no access is provided to/from S. Peck Drive. The Specific Plan trip assignment with the Via closure is shown in **Figure 16 (Scenario 2)** and **Figure 17 (Scenario 3)**. **Figure 18** provides the baseline plus Scenario 2 Specific Plan Buildout conditions traffic volumes with Via closed and **Figure 19** provides the baseline plus Scenario 3 Specific Plan Buildout with Residential conditions traffic volumes with Via closed.

1 Free right-turn movement to N. Roxbury Drive
2 Left-turn movement to N. Roxbury Drive
3 Right-turn movement to Dayton Way
4 Left-turn movement to N. Camden Drive

● Study Intersections

Project Site

AM (PM) Peak Hour Traffic Volumes

Lane Configuration

One-Way Roadway

Figure 12A

Scenario 2 Specific Plan Buildout Trip Assignment

Study Intersections

Project Site

AM (PM) Peak Hour Traffic Volumes

Lane Configuration

Figure 12B

Scenario 2 Specific Plan Buildout Trip Assignment (Internal Intersections)

1 Free right-turn movement to N. Roxbury Drive
2 Left-turn movement to N. Roxbury Drive
3 Right-turn movement to Dayton Way
4 Left-turn movement to N. Camden Drive

Study Intersections

Project Site

AM (PM) Peak Hour Traffic Volumes

Lane Configuration

One-Way Roadway

Figure 13A

Scenario 3 Specific Plan Buildout with Residential Trip Assignment

Figure 13B

Scenario 3 Specific Plan Buildout with Residential Trip Assignment (Internal Intersections)

1 Free right-turn movement to N. Roxbury Drive
2 Left-turn movement to N. Roxbury Drive
3 Right-turn movement to Dayton Way
4 Left-turn movement to N. Camden Drive

Study Intersections

Project Site

AM (PM) Peak Hour Traffic Volumes

Lane Configuration

One-Way Roadway

AM PM | E | F | A C | D — Level of Service (LOS)

Figure 14

Peak Hour Traffic Volumes & Lane Configurations
Baseline Plus Scenario 2 Specific Plan Buildout Conditions

1 Free right-turn movement to N. Roxbury Drive
2 Left-turn movement to N. Roxbury Drive
3 Right-turn movement to Dayton Way
4 Left-turn movement to N. Camden Drive

Study Intersections

Project Site

AM (PM) Peak Hour Traffic Volumes

Lane Configuration

One-Way Roadway

AM PM | E | F | A C | D Level of Service (LOS)

Figure 15

Peak Hour Traffic Volumes & Lane Configurations
Baseline Plus Scenario 3 Specific Plan Buildout with Residential Conditions

1 Free right-turn movement to N. Roxbury Drive
2 Left-turn movement to N. Roxbury Drive
3 Right-turn movement to Dayton Way
4 Left-turn movement to N. Camden Drive

Study Intersections

Project Site

AM (PM) Peak Hour Traffic Volumes

Lane Configuration

One-Way Roadway

Figure 16A

Scenario 2 Specific Plan Buildout Trip Assignment with Via Closure

Figure 16B

Scenario 2 Specific Plan Buildout Trip Assignment with Via Closure (Internal Intersections)

1 Free right-turn movement to N. Roxbury Drive
2 Left-turn movement to N. Roxbury Drive
3 Right-turn movement to Dayton Way
4 Left-turn movement to N. Camden Drive

- Study Intersections
- Project Site
- AM (PM) Peak Hour Traffic Volumes
- Lane Configuration
- One-Way Roadway

Figure 17A

Scenario 3 Specific Plan Buildout with Residential Trip Assignment with Via Closure

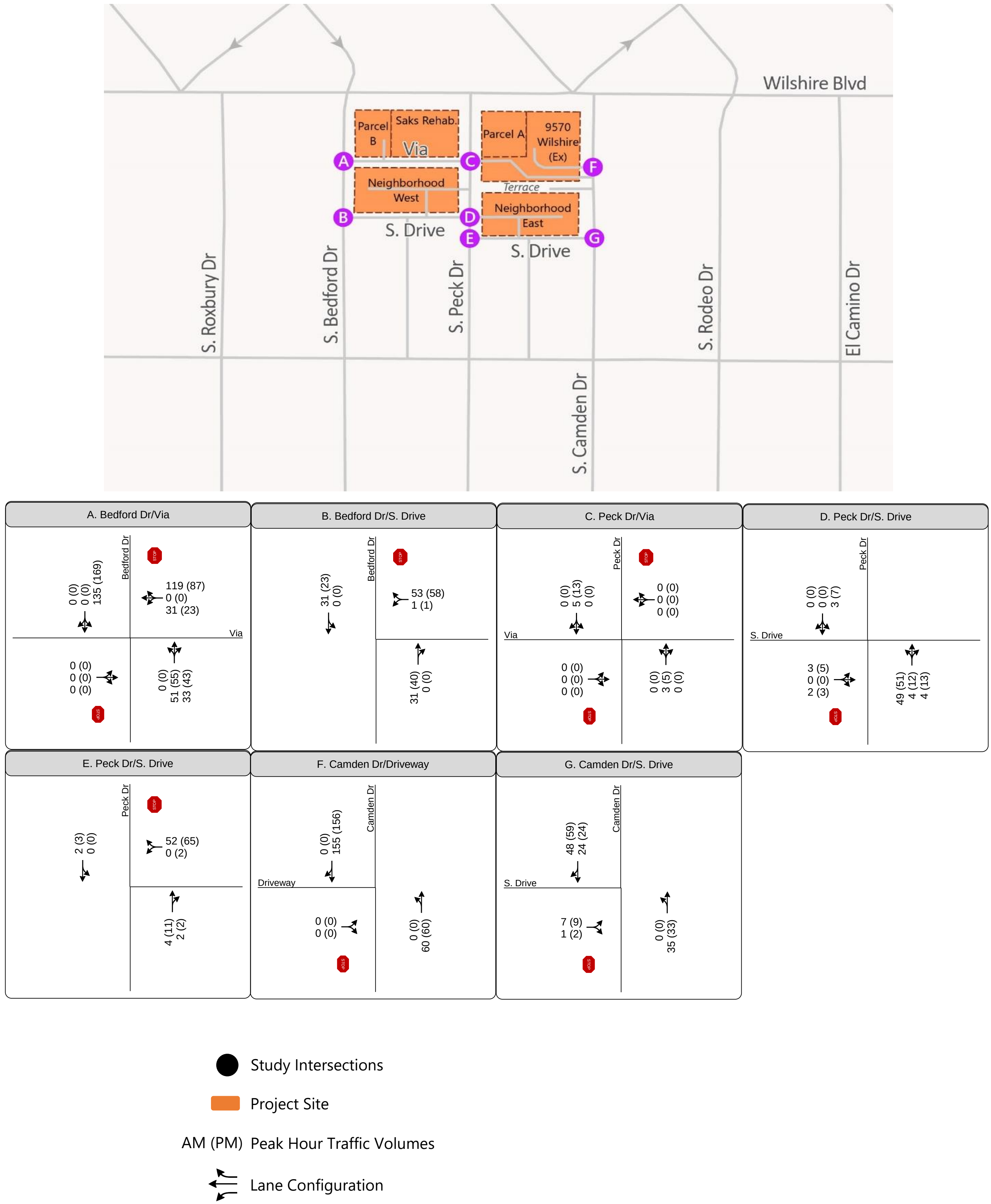
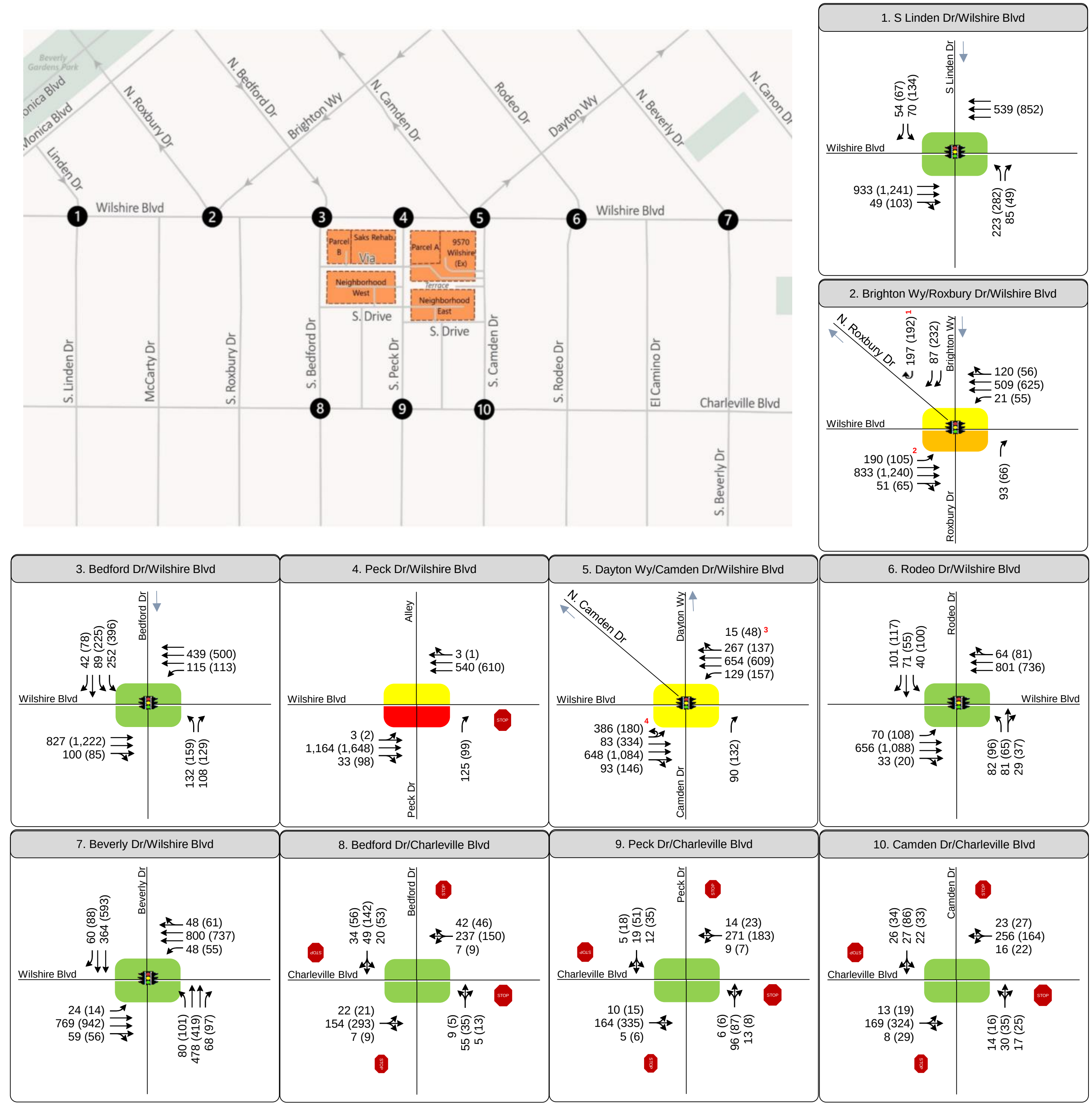


Figure 17B

Scenario 3 Specific Plan Buildout with Residential Trip Assignment with Via Closure (Internal Intersections)



1 Free right-turn movement to N. Roxbury Drive
2 Left-turn movement to N. Roxbury Drive
3 Right-turn movement to Dayton Way
4 Left-turn movement to N. Camden Drive

Study Intersections

Project Site

AM (PM) Peak Hour Traffic Volumes

Lane Configuration

One-Way Roadway

AM PM | E | F | Level of Service (LOS)

A C | D

Figure 18

Peak Hour Traffic Volumes & Lane Configurations
Baseline Plus Scenario 2 Specific Plan Buildout Conditions with Via Closure

1 Free right-turn movement to N. Roxbury Drive
2 Left-turn movement to N. Roxbury Drive
3 Right-turn movement to Dayton Way
4 Left-turn movement to N. Camden Drive

Study Intersections

Project Site

AM (PM) Peak Hour Traffic Volumes

Lane Configuration

One-Way Roadway

AM PM E F A-C D Level of Service (LOS)

Figure 19

Peak Hour Traffic Volumes & Lane Configurations
Baseline Plus Scenario 3 Specific Plan Buildout with Residential Conditions with Via Closure

5.7 Baseline Plus Specific Plan Buildout Intersection Operations

The baseline and baseline plus Specific Plan traffic volumes with and without the Via closure were used to analyze operations at each study intersection during the AM and PM peak hours. As shown in **Table 17**, when comparing baseline conditions to the baseline plus Scenario 2 Specific Plan Buildout intersection operations and to operations with the Via closure, most of the study intersections experience an increase in average vehicle delay. Despite the increases in delay, most study intersections are projected to operate at LOS D or better under Scenario 2 baseline plus Specific Plan Buildout conditions. The following intersections are projected to operate at LOS D, E or F with implementation of Scenario 2 under one or both peak hours (LOS calculation sheets are included in **Appendix B**):

- At the **Wilshire Boulevard & Brighton Way/ Roxbury Drive** intersection, the addition of Project traffic is expected to result in LOS D operations during the AM peak hour with a decrease in delay of 3.4 seconds. During the PM peak hour, the intersection would operate at LOS E with a decrease in delay of 4.8 seconds. Since the increase in delay during both peak hours is less than 5 seconds, **Scenario 2 does not exceed the City's criteria for signalized intersections at this study intersection**.
- At the **Wilshire Boulevard & Camden Drive** intersection, the addition of Project traffic is expected to result in LOS D operations during the AM peak hour with an increase in delay of 2.2 seconds (1.7 seconds with Via closure). During the PM peak hour, the intersection would continue operating at LOS D with an increase in delay of 0.9 seconds (0.2 seconds with Via closure). Since the increase in delay during both peak hours is less than 5 seconds, **Scenario 2 does not exceed the City's criteria for signalized intersections at this study intersection**.
- At the **Wilshire Boulevard & Peck Drive** intersection, the addition of Project traffic is expected to exacerbate the LOS conditions in both peak hours. In the AM peak hour, the intersection will degrade to LOS E (LOS D with Via closure) with an increase in delay of 13.1 seconds (4.4 seconds with Via closure). In the PM peak hour, traffic operations will operate at LOS F with an increase in delay of more than 100 seconds (50.3 seconds with Via closure). As explained under the Conceptual Plan operations results, the LOS D and LOS F operations are due to the delay experienced by drivers making a northbound right-turn from Peck Drive onto Wilshire Boulevard. Scenario 2 is expected to add approximately 56 vehicles to this movement during the AM peak hour and 72 vehicles to this movement during the PM peak hour. These project-trips would decrease to only 3 vehicles during the AM peak hour and 6 vehicles during the PM peak hour with the Via closure. Vehicle delay at side-street stop-controlled intersections is very sensitive to any change in traffic volumes once the vehicle demand approaches the capacity of the turning movements from the side-street (Peck Drive) onto the major street (Wilshire Boulevard). Because the City's analysis criteria for side-street stop control intersections are based on change in delay, the calculated value is reported in this study. However, drivers are likely to accept smaller gaps in vehicle flows on Wilshire Boulevard than assumed in the HCM methodology and are also likely to select alternate travel routes if delays become substantial. Since the increase in delay during the PM peak hour is more than ten seconds, **Scenario 2 results in this location exceeding the City's criteria for SSSC intersections**.

Table 17: Baseline and Baseline Plus Scenario 2 Specific Plan Buildout Intersection Operations

Intersection	Control	Peak Hour	Baseline No Project		Baseline Plus Scenario 2		Change in Delay (sec/veh)	Baseline Plus Scenario 2 with Via Closed		Change in Delay (sec/veh)
			Delay[1]	LOS[2]	Delay[1]	LOS[2]		Delay[1]	LOS[2]	
Wilshire Blvd & Linden Drive	Signal	AM	14.6	B	14.2	B	-0.4	14.2	B	-0.4
		PM	11.6	B	11.3	B	-0.3	11.3	B	-0.3
Wilshire Blvd & Brighton Wy/ Roxbury Drive	Signal	AM	41.8	D	38.4	D	-3.4	38.4	D	-3.4
		PM	71.6	E	66.8	E	-4.8	66.8	E	-4.8
Wilshire Blvd & Bedford Drive	Signal	AM	10.1	B	11.7	B	1.6	11.7	B	1.6
		PM	11.7	B	11.6	B	-0.1	11.6	B	-0.1
Wilshire Blvd & Peck Drive	SSSC	AM	23.9	C	**37**	**E**	**13.1**	28.3	D	4.4
		PM	105.4	F	**> 300**	**F**	**> 100**	**155.7**	**F**	**50.3**
Wilshire Blvd & Camden Drive	Signal	AM	40.5	D	42.7	D	2.2	42.2	D	1.7
		PM	46.8	D	47.7	D	0.9	47.0	D	0.2
Wilshire Blvd & Rodeo Drive	Signal	AM	11.1	B	10.5	B	-0.6	10.5	B	-0.6
		PM	8.8	A	8.3	A	-0.5	8.3	A	-0.5
Wilshire Blvd & Beverly Drive	Signal	AM	25.5	C	26.0	C	0.5	26.0	C	0.5
		PM	23.1	C	22.7	C	-0.4	22.7	C	-0.4
Charleville Blvd & S. Bedford Drive	AWSC	AM	10.7	B	11.2	B	0.5	11.9	B	1.2
		PM	12.5	B	13.4	B	0.9	14.0	B	1.5
Charleville Blvd & S. Peck Drive	AWSC	AM	10.9	B	12.0	B	1.1	12.0	B	1.1
		PM	12.4	B	13.3	B	0.9	13.7	B	1.3
Charleville Blvd & S. Camden Drive	AWSC	AM	10.4	B	11.8	B	1.4	11.8	B	1.4
		PM	12.5	B	14.5	B	2.0	14.5	B	2.0

Source: Fehr & Peers, 2023.
Notes:
AWSC indicates all-way stop-controlled intersection.
SSSC indicates side-street stop-controlled intersection.
Underlined text indicates a LOS of D, E, or F.
Bold text indicates that the delay or LOS exceeds the City's criteria as a result of the Project trips.

1. Whole intersection weighted average stopped delay expressed in seconds per vehicle for signalized and AWSC intersections. The vehicular delay for the worst movement is reported for the SSSC intersections.
2. LOS calculations were performed using the *Highway Capacity Manual* 6th Edition (*HCM 6*) method.

Under Scenario 3 Specific Plan Buildout with Residential, the baseline and baseline plus Specific Plan traffic volumes with and without the Via closure were used to analyze operations at each study intersection during the AM and PM peak hours. As shown in **Table 18**, when comparing baseline conditions to the baseline plus Scenario 3 Specific Plan Buildout with Residential intersection operations and to operations with the Via closure, most of the study intersections experience an increase in average vehicle delay. Despite the increases in delay, most study intersections are projected to operate at LOS D or better under baseline plus Scenario 3 Specific Plan Buildout with Residential conditions. The following intersections are projected to operate at LOS D, E or F with implementation of Scenario 3 under one or both peak hours (LOS calculation sheets are included in **Appendix B**):

- At the **Wilshire Boulevard & Brighton Way/ Roxbury Drive** intersection, the addition of Project traffic is expected to result in LOS D operations during the AM peak hour with a decrease in delay of 2.9 seconds. During the PM peak hour, the intersection would operate at LOS E with a decrease in delay of 4.0 seconds. Since the increase in delay during both peak hours is less than 5 seconds, **Scenario 3 does not exceed the City's criteria for signalized intersections at this study intersection**.
- At the **Wilshire Boulevard & Camden Drive** intersection, the addition of Project traffic is expected to result in LOS D operations during the AM peak hour with an increase in delay of 2.0 seconds (1.5 seconds with Via closure). During the PM peak hour, the intersection would continue operating at LOS D with a decrease in delay of 0.0 seconds (0.3 seconds with Via closure). Since the increase in delay during both peak hours is less than 5 seconds, **Scenario 3 does not exceed the City's criteria for signalized intersections at this study intersection**.
- At the **Wilshire Boulevard & Peck Drive** intersection, the addition of Project traffic is expected to exacerbate the LOS conditions in both peak hours. In the AM peak hour, the intersection will degrade to LOS E (LOS D with Via closure) with an increase in delay of 11.8 seconds (4.3 seconds with Via closure). In the PM peak hour, traffic operations will operate at LOS F with an increase in delay of 124.1 seconds (32.2 seconds with Via closure). As explained under the Conceptual Plan operations results, the LOS D and LOS F operations are due to the delay experienced by drivers making a northbound right-turn from Peck Drive onto Wilshire Boulevard. Scenario 3 is expected to add approximately 53 vehicles to this movement during the AM peak hour and 41 vehicles to this movement during the PM peak hour. These project trips would decrease to only 3 vehicles during the AM peak hour and 5 vehicles during the PM peak hour with the Via closure. Vehicle delay at side-street stop-controlled intersections is very sensitive to any change in traffic volumes once the vehicle demand approaches the capacity of the turning movements from the side-street (Peck Drive) onto the major street (Wilshire Boulevard). Because the City's analysis criteria for side-street stop control intersections are based on change in delay, the calculated value is reported in this study. However, drivers are likely to accept smaller gaps in vehicle flows on Wilshire Boulevard than assumed in the HCM methodology and are also likely to select alternate travel routes if delays become substantial. Since the increase in delay during the PM peak hour is more than ten seconds, **Scenario 3 results in this location exceeding the City's criteria for SSSC intersections**.

Table 18: Baseline and Baseline Plus Scenario 3 Specific Plan Buildout with Residential Intersection Operations

Intersection	Control	Peak Hour	Baseline No Project		Baseline Plus Scenario 3		Change in Delay (sec/veh)	Baseline Plus Scenario 3 with Via Closed		Change in Delay (sec/veh)
			Delay[1]	LOS[2]	Delay[1]	LOS[2]		Delay[1]	LOS[2]	
Wilshire Blvd & Linden Drive	Signal	AM	14.6	B	14.2	B	-0.4	14.2	B	-0.4
		PM	11.6	B	11.4	B	-0.2	11.4	B	-0.2
Wilshire Blvd & Brighton Wy/ Roxbury Drive	Signal	AM	41.8	D	38.9	D	-2.9	38.9	D	-2.9
		PM	71.6	E	67.6	E	-4.0	67.6	E	-4.0
Wilshire Blvd & Bedford Drive	Signal	AM	10.1	B	11.4	B	1.3	11.4	B	1.3
		PM	11.7	B	11.6	B	-0.1	11.6	B	-0.1
Wilshire Blvd & Peck Drive	SSSC	AM	23.9	C	35.7	E	11.8	28.2	D	4.3
		PM	105.4	F	**229.5**	**F**	**124.1**	**137.6**	**F**	**32.2**
Wilshire Blvd & Camden Drive	Signal	AM	40.5	D	42.5	D	2.0	42.0	D	1.5
		PM	46.8	D	46.8	D	0.0	46.5	D	-0.3
Wilshire Blvd & Rodeo Drive	Signal	AM	11.1	B	10.6	B	-0.5	10.6	B	-0.5
		PM	8.8	A	8.4	A	-0.4	8.4	A	-0.4
Wilshire Blvd & Beverly Drive	Signal	AM	25.5	C	25.7	C	0.2	25.7	C	0.2
		PM	23.1	C	22.8	C	-0.3	22.8	C	-0.3
Charleville Blvd & S. Bedford Drive	AWSC	AM	10.7	B	11.1	B	0.4	11.6	B	0.9
		PM	12.5	B	13.2	B	0.7	13.6	B	1.1
Charleville Blvd & S. Peck Drive	AWSC	AM	10.9	B	11.7	B	0.8	11.7	B	0.8
		PM	12.4	B	13.1	B	0.7	13.3	B	0.9
Charleville Blvd & S. Camden Drive	AWSC	AM	10.4	B	11.5	B	1.1	11.5	B	1.1
		PM	12.5	B	14.1	B	1.6	14.1	B	1.6

Source: Fehr & Peers, 2023.
Notes:
AWSC indicates all-way stop-controlled intersection.
SSSC indicates side-street stop-controlled intersection.
Underlined text indicates a LOS of D, E, or F.
Bold text indicates that the delay or LOS exceeds the City's criteria as a result of the Project trips.

1. Whole intersection weighted average stopped delay expressed in seconds per vehicle for signalized and AWSC intersections. The vehicular delay for the worst movement is reported for the SSSC intersections.
2. LOS calculations were performed using the *Highway Capacity Manual* 6th Edition (*HCM 6*) method.

6. Future (2028) Conditions

This chapter addresses the traffic operations with the Proposed Project under future (2028) conditions, which represents conditions as they are expected to occur with the buildout of the 9600 Wilshire Boulevard Specific Plan and other local and regional growth anticipated by the opening year of the Project.

6.1 Future Traffic Volume Forecasts

The year 2028 was used to forecast future conditions to reflect the expected opening year of the Proposed Project. The growth in traffic in the study area reflects future travel demands from regional growth and related projects in the vicinity of the project site. A variety of sources were consulted to develop the cumulative traffic forecasts. These sources include:

- Existing traffic volumes collected in 2022
- Traffic from approved and pending projects in the City of Beverly Hills
- Ambient growth in existing traffic volumes to reflect growth in regional traffic (a growth rate of 0.5% per year was applied to the existing traffic volumes to reflect this ambient growth)

Traffic volumes for future (2028) No Project conditions are shown on **Figure 20**.

1 Free right-turn movement to N. Roxbury Drive
2 Left-turn movement to N. Roxbury Drive
3 Right-turn movement to Dayton Way
4 Left-turn movement to N. Camden Drive

Study Intersections

Project Site

AM (PM) Peak Hour Traffic Volumes

Lane Configuration

One-Way Roadway

AM PM E F A-C D Level of Service (LOS)

Figure 20

Peak Hour Traffic Volumes & Lane Configurations
Future (2028) No Project Conditions

6.2 Future Plus Conceptual Plan Traffic Volumes

The traffic volumes for the proposed Conceptual Plan are comprised of the future conditions traffic volumes with the proposed land uses in place. The plus project traffic volumes also reflect the removal of the existing Sake Fifth Avenue department store. The trip generation and trip distribution presented in the above chapter were used to forecast the number of vehicle trips traveling through each study intersection with the development of the Conceptual Plan. The Conceptual Plan trip assignment was used to generate the future plus Conceptual Plan traffic volumes provided in **Figure 21**.

6.3 Future Plus Conceptual Plan Traffic Volumes with Via Closed

This traffic scenario is the same as future plus Conceptual Plan conditions except that the Via is assumed to be temporarily closed for a special event which means that no access is provided to/from S. Peck Drive. **Figure 22** provides the future plus Conceptual Plan traffic volumes with the Via closure.

1 Free Righ-Turn movement to N. Roxbury Drive
2 Left-Turn movement to N. Roxbury Drive
3 Righ-Turn movement to Dayton Way
4 Left-Turn movement to N. Camden Drive

Study Intersections

Project Site

AM (PM) Peak Hour Traffic Volumes

Lane Configuration

One-Way Roadway

AM PM | E | F | A-C | D Level of Service (LOS)

Figure 21

Peak Hour Traffic Volumes & Lane Configurations
Future Plus Conceptual Plan Conditions

1 Free Righ-Turn movement to N. Roxbury Drive
2 Left-Turn movement to N. Roxbury Drive
3 Righ-Turn movement to Dayton Way
4 Left-Turn movement to N. Camden Drive

Study Intersections

Project Site

AM (PM) Peak Hour Traffic Volumes

Lane Configuration

One-Way Roadway

AM PM | E | F | A-C | D — Level of Service (LOS)

Figure 22

Peak Hour Traffic Volumes & Lane Configurations
Future Plus Conceptual Plan Conditions with Via Closure

6.4 Future Plus Conceptual Plan Intersection Operations

The future and future plus Conceptual Plan traffic volumes with and without the Via closure were used to analyze operations at each study intersection during the AM and PM peak hours. As shown in **Table 19**, when comparing future conditions to the future plus Conceptual Plan intersection operations and to operations with the Via closure, most of the study intersections experience an increase in average vehicle delay. Despite the increases in delay, most study intersections are projected to operate at LOS D or better under future plus Conceptual Plan conditions. The LOS calculation sheets are included in **Appendix B**. The following intersections are projected to operate at LOS D, E or F with implementation of the Conceptual Plan under one or both peak hours:

- At the **Wilshire Boulevard & Brighton Way/ Roxbury Drive** intersection, the addition of Project traffic is expected to result in LOS D operations during the AM peak hour with a decrease in delay of 1.0 seconds (1.1 seconds with Via closure). During the PM peak hour, the intersection would operate at LOS E with a decrease in delay of 1.3 seconds. Since the increase in delay during both peak hours is less than 5 seconds, the **Conceptual Plan does not exceed the City's criteria for signalized intersections at this study intersection**.
- At the **Wilshire Boulevard & Camden Drive** intersection, the addition of Project traffic is expected to result in LOS D operations during the AM peak hour with an increase in delay of 1.0 seconds (0.9 seconds with Via closure). During the PM peak hour, the intersection would continue operating at LOS D with an increase in delay of 0.3 seconds (0.2 seconds with Via closure). Since the increase in delay during both peak hours is less than 5 seconds, the **Conceptual Plan does not exceed the City's criteria for signalized intersections at this study intersection**.
- At the **Wilshire Boulevard & Peck Drive** intersection, the addition of Project traffic is expected to exacerbate the LOS conditions in both peak hours. In the AM peak hour, the intersection will degrade to LOS E with an increase in delay of 6.0 seconds (3.2 seconds with Via closure). In the PM peak hour, traffic operations will operate at LOS F with an increase in delay of more than 100 seconds (42.0 seconds with Via closure). The LOS E and LOS F operations are due to the delay experienced by drivers making a northbound right-turn from Peck Drive onto Wilshire Boulevard. Vehicle delay at side-street stop-controlled intersections is very sensitive to any change in traffic volumes once the vehicle demand approaches the capacity of the turning movements from the side-street (Peck Drive) onto the major street (Wilshire Boulevard). Because the City's analysis criteria for side-street stop control intersections are based on change in delay, the calculated HCM value is reported in this study. However, drivers are likely to accept smaller gaps in vehicle flows on Wilshire Boulevard than assumed in the HCM methodology and are also likely to select alternate travel routes if delays become substantial. Since the increase in delay during the PM peak hour is more than ten seconds, the **Conceptual Plan results in this location exceeding the City's criteria for SSSC intersections**.

Table 19: Future and Future Plus Conceptual Plan Intersection Operations

Intersection	Control	Peak Hour	Future No Project		Future Plus Conceptual Plan		Change in Delay (sec/veh)	Future Plus Conceptual Plan with Via Closed		Change in Delay (sec/veh)
			Delay[1]	LOS[2]	Delay[1]	LOS[2]		Delay[1]	LOS[2]	
Wilshire Blvd & Linden Drive	Signal	AM	15.6	B	15.7	B	0.1	15.7	B	0.1
		PM	11.9	B	11.7	B	-0.2	11.7	B	-0.2
Wilshire Blvd & Brighton Wy/ Roxbury Drive	Signal	AM	39.0	D	38.0	D	-1.0	37.9	D	-1.1
		PM	66.3	E	65.0	E	-1.3	65.0	E	-1.3
Wilshire Blvd & Bedford Drive	Signal	AM	7.7	A	7.7	A	0.0	7.7	A	0.0
		PM	9.4	A	9.3	A	-0.1	9.3	A	-0.1
Wilshire Blvd & Peck Drive	SSSC	AM	33.9	D	39.9	E	6.0	37.1	E	3.2
		PM	184.0	F	**> 300**	**F**	**> 100**	**226.0**	**F**	**42.0**
Wilshire Blvd & Camden Drive	Signal	AM	40.5	D	41.5	D	1.0	41.4	D	0.9
		PM	45.8	D	46.1	D	0.3	46.0	D	0.2
Wilshire Blvd & Rodeo Drive	Signal	AM	10.1	B	10.1	B	0.0	10.1	B	0.0
		PM	7.7	A	7.6	A	-0.1	7.6	A	-0.1
Wilshire Blvd & Beverly Drive	Signal	AM	29.3	C	30.0	C	0.7	30.0	C	0.7
		PM	25.0	C	24.8	C	-0.2	24.8	C	-0.2
Charleville Blvd & S. Bedford Drive	AWSC	AM	11.5	B	11.6	B	0.1	12.0	B	0.5
		PM	13.8	B	14.1	B	0.3	14.5	B	0.7
Charleville Blvd & S. Peck Drive	AWSC	AM	11.8	B	12.2	B	0.4	12.2	B	0.4
		PM	13.8	B	14.1	B	0.3	14.4	B	0.6
Charleville Blvd & S. Camden Drive	AWSC	AM	11.1	B	11.7	B	0.6	11.7	B	0.6
		PM	14.0	B	15.0	B	1.0	15.0	B	1.0

Source: Fehr & Peers, 2023.
Notes:
AWSC indicates all-way stop-controlled intersection.
SSSC indicates side-street stop-controlled intersection.
Underlined text indicates a LOS of D, E, or F.
Bold text indicates that the delay or LOS exceeds the City's criteria as a result of the Project trips.

1. Whole intersection weighted average stopped delay expressed in seconds per vehicle for signalized and AWSC intersections. The vehicular delay for the worst movement is reported for the SSSC intersections.
2. LOS calculations were performed using the *Highway Capacity Manual* 6th Edition (*HCM 6*) method.

6.5 Future Plus Specific Plan Buildout Traffic Volumes

The traffic volumes for the Specific Plan Buildout scenarios are comprised of the future conditions traffic volumes with the potential buildout of the land uses under Scenarios 2 and 3. The plus project traffic volumes also reflect the removal of the existing Sake Fifth Avenue department store. The trip generation and trip distribution presented in the above chapter were used to generate the Future plus Specific Plan traffic volumes at each of the study intersections. **Figure 23** provides the future plus Scenario 2 Specific Plan Buildout conditions traffic volumes and **Figure 24** provides the future plus Scenario 3 Specific Plan Buildout with Residential conditions traffic volumes.

6.6 Future Plus Specific Plan Buildout Traffic Volumes with Via Closed

This traffic scenario is the same as future plus Specific Plan Buildout conditions except that the Via is assumed to be temporarily closed for a special event which means that no access is provided to/from S. Peck Drive. **Figure 25** provides the future plus Scenario 2 Specific Plan Buildout conditions traffic volumes with Via closed and **Figure 26** provides the future plus Scenario 3 Specific Plan Buildout with Residential conditions traffic volumes with Via closed.

1 Free Righ-Turn movement to N. Roxbury Drive
2 Left-Turn movement to N. Roxbury Drive
3 Righ-Turn movement to Dayton Way
4 Left-Turn movement to N. Camden Drive

Study Intersections

Project Site

AM (PM) Peak Hour Traffic Volumes

Lane Configuration

One-Way Roadway

AM PM | E | F | A-C | D — Level of Service (LOS)

Figure 23

Peak Hour Traffic Volumes & Lane Configurations
Future Plus Scenario 2 Specific Plan Buildout Conditions

1 Free Righ-Turn movement to N. Roxbury Drive
2 Left-Turn movement to N. Roxbury Drive
3 Righ-Turn movement to Dayton Way
4 Left-Turn movement to N. Camden Drive

Study Intersections

Project Site

AM (PM) Peak Hour Traffic Volumes

Lane Configuration

One-Way Roadway

AM PM | E | F | A-C | D — Level of Service (LOS)

Figure 24

Peak Hour Traffic Volumes & Lane Configurations
Future Plus Scenario 3 Specific Plan Buildout with Residential Conditions

1 Free Righ-Turn movement to N. Roxbury Drive
2 Left-Turn movement to N. Roxbury Drive
3 Righ-Turn movement to Dayton Way
4 Left-Turn movement to N. Camden Drive

Study Intersections

Project Site

AM (PM) Peak Hour Traffic Volumes

Lane Configuration

One-Way Roadway

AM PM | E | F | Level of Service (LOS)

A-C | D

Figure 25

Peak Hour Traffic Volumes & Lane Configurations
Future Plus Scenario 2 Specific Plan Buildout Conditions with Via Closure

1 Free Righ-Turn movement to N. Roxbury Drive
2 Left-Turn movement to N. Roxbury Drive
3 Righ-Turn movement to Dayton Way
4 Left-Turn movement to N. Camden Drive

Study Intersections

Project Site

AM (PM) Peak Hour Traffic Volumes

Lane Configuration

One-Way Roadway

AM PM | E | F | A-C | D — Level of Service (LOS)

Figure 26

Peak Hour Traffic Volumes & Lane Configurations
Future Plus Scenario 3 Specific Plan Buildout with Residential Conditions with Via Closure

6.7 Future Plus Specific Plan Buildout Intersection Operations

The future and future plus Specific Plan traffic volumes with and without the Via closure were used to analyze operations at each study intersection during the AM and PM peak hours. As shown in **Table 20**, when comparing future conditions to the future plus Scenario 2 Specific Plan Buildout intersection operations and to operations with the Via closure, most of the study intersections experience an increase in average vehicle delay. The following intersections are projected to operate at LOS D, E or F with implementation of Scenario 2 under one or both peak hours (see **Appendix B** for LOS calculation sheets):

- At the **Wilshire Boulevard & Brighton Way/ Roxbury Drive** intersection, the addition of Project traffic is expected to result in LOS D operations during the AM peak hour with a decrease in delay of 2.4 seconds. During the PM peak hour, the intersection would operate at LOS E with a decrease in delay of 3.1 seconds. Since the increase in delay during both peak hours is less than 5 seconds, **Scenario 2 does not exceed the City's criteria for signalized intersections at this study intersection**.
- At the **Wilshire Boulevard & Camden Drive** intersection, the addition of Project traffic is expected to result in LOS D operations during the AM peak hour with an increase in delay of 3.9 seconds (3.4 seconds with Via closure). During the PM peak hour, the intersection would continue operating at LOS D with an increase in delay of 2.0 seconds (1.9 seconds with Via closure). Since the increase in delay during both peak hours is less than 5 seconds, **Scenario 2 does not exceed the City's criteria for signalized intersections at this study intersection**.
- At the **Wilshire Boulevard & Peck Drive** intersection, the addition of Project traffic is expected to exacerbate the LOS conditions in both peak hours. In the AM peak hour, the intersection will degrade to LOS F (LOS E with Via closure) with an increase in delay of 33.2 seconds (9.2 seconds with Via closure). In the PM peak hour, traffic operations will operate at LOS F with an increase in delay of more than 100 seconds (80.8 seconds with Via closure). The LOS E (with Via closure) and LOS F operations are due to the delay experienced by drivers making a northbound right-turn from Peck Drive onto Wilshire Boulevard. Vehicle delay at side-street stop-controlled intersections is very sensitive to any change in traffic volumes once the vehicle demand approaches the capacity of the turning movements from the side-street (Peck Drive) onto the major street (Wilshire Boulevard). Because the City's analysis criteria for side-street stop control intersections are based on change in delay, the calculated HCM value is reported in this study. However, drivers are likely to accept smaller gaps in vehicle flows on Wilshire Boulevard than assumed in the HCM methodology and are also likely to select alternate travel routes if delays become substantial. Since the increase in delay during the AM and PM peak hours is more than ten seconds, **Scenario 2 results in this location exceeding the City's criteria for SSSC intersections**.

Table 20: Future and Future Plus Scenario 2 Specific Plan Buildout Intersection Operations

Intersection	Control	Peak Hour	Future No Project		Future Plus Scenario 2		Change in Delay (sec/veh)	Future Plus Scenario 2 with Via Closed		Change in Delay (sec/veh)
			Delay[1]	LOS[2]	Delay[1]	LOS[2]		Delay[1]	LOS[2]	
Wilshire Blvd & Linden Drive	Signal	AM	15.6	B	15.9	B	0.3	15.9	B	0.3
		PM	11.9	B	11.8	B	-0.1	11.8	B	-0.1
Wilshire Blvd & Brighton Wy/ Roxbury Drive	Signal	AM	39.0	D	36.6	D	-2.4	36.6	D	-2.4
		PM	66.3	E	63.2	E	-3.1	63.2	E	-3.1
Wilshire Blvd & Bedford Drive	Signal	AM	7.7	A	9.4	A	1.7	9.4	A	1.7
		PM	9.4	A	9.4	A	0.0	9.4	A	0.0
Wilshire Blvd & Peck Drive	SSSC	AM	33.9	D	**67.1**	**F**	**33.2**	43.1	E	9.2
		PM	184	F	**> 300**	**F**	**> 100**	**264.8**	**F**	**80.8**
Wilshire Blvd & Camden Drive	Signal	AM	40.5	D	44.4	D	3.9	43.9	D	3.4
		PM	45.8	D	47.8	D	2.0	47.7	D	1.9
Wilshire Blvd & Rodeo Drive	Signal	AM	10.1	B	10.0	A	-0.1	10.0	A	-0.1
		PM	7.7	A	7.4	A	-0.3	7.4	A	-0.3
Wilshire Blvd & Beverly Drive	Signal	AM	29.3	C	31.6	C	2.3	31.6	C	2.3
		PM	25.0	C	24.9	C	-0.1	24.9	C	-0.1
Charleville Blvd & S. Bedford Drive	AWSC	AM	11.5	B	12.1	B	0.6	13.3	B	1.8
		PM	13.8	B	15.0	B	1.2	15.7	C	1.9
Charleville Blvd & S. Peck Drive	AWSC	AM	11.8	B	13.1	B	1.3	13.2	B	1.4
		PM	13.8	B	14.8	B	1.0	15.2	C	1.4
Charleville Blvd & S. Camden Drive	AWSC	AM	11.1	B	12.9	B	1.8	12.9	B	1.8
		PM	14.0	B	16.5	C	2.5	16.5	C	2.5

Source: Fehr & Peers, 2023.
Notes:
AWSC indicates all-way stop-controlled intersection.
SSSC indicates side-street stop-controlled intersection.
Underlined text indicates a LOS of D, E, or F.
Bold text indicates that the delay or LOS exceeds the City's criteria as a result of the Project trips.

1. Whole intersection weighted average stopped delay expressed in seconds per vehicle for signalized and AWSC intersections. The vehicular delay for the worst movement is reported for the SSSC intersections.
2. LOS calculations were performed using the *Highway Capacity Manual* 6th Edition (*HCM 6*) method.

Under Scenario 3 Specific Plan Buildout with Residential, the future and future plus Specific Plan traffic volumes with and without the Via closure were used to analyze operations at each study intersection during the AM and PM peak hours. As shown in **Table 21**, when comparing future conditions to the future plus Scenario 3 Specific Plan Buildout with Residential intersection operations and to operations with the Via closure, most of the study intersections experience an increase in average vehicle delay.

Despite the increases in delay, most study intersections are projected to operate at LOS D or better under future plus Scenario 3 Specific Plan Buildout with Residential conditions. The following intersections are projected to operate at LOS D, E or F with implementation of Scenario 3 under one or both peak hours (see **Appendix B** for LOS calculation sheets):

- At the **Wilshire Boulevard & Brighton Way/ Roxbury Drive** intersection, the addition of Project traffic is expected to result in LOS D operations during the AM peak hour with a decrease in delay of 2.1 seconds. During the PM peak hour, the intersection would operate at LOS E with a decrease in delay of 2.6 seconds. Since the increase in delay during both peak hours is less than 5 seconds, **Scenario 3 does not exceed the City's criteria for signalized intersections at this study intersection**.
- At the **Wilshire Boulevard & Camden Drive** intersection, the addition of Project traffic is expected to result in LOS D operations during the AM peak hour with an increase in delay of 2.9 seconds (2.4 seconds with Via closure). During the PM peak hour, the intersection would continue operating at LOS D with an increase in delay of 0.7 seconds (0.6 seconds with Via closure). Since the increase in delay during both peak hours is less than 5 seconds, **Scenario 3 does not exceed the City's criteria for signalized intersections at this study intersection**.
- At the **Wilshire Boulevard & Peck Drive** intersection, the addition of Project traffic is expected to exacerbate the LOS conditions in both peak hours. In the AM peak hour, the intersection will degrade to LOS F (LOS E with Via closure) with an increase in delay of 30.2 seconds (8.5 seconds with Via closure). In the PM peak hour, traffic operations will operate at LOS F with an increase in delay of more than 100 seconds (52.8 seconds with Via closure). The LOS E (with Via closure) and LOS F operations are due to the delay experienced by drivers making a northbound right-turn from Peck Drive onto Wilshire Boulevard. Vehicle delay at side-street stop-controlled intersections is very sensitive to any change in traffic volumes once the vehicle demand approaches the capacity of the turning movements from the side-street (Peck Drive) onto the major street (Wilshire Boulevard). Because the City's analysis criteria for side-street stop control intersections are based on change in delay, the calculated HCM value is reported in this study. However, drivers are likely to accept smaller gaps in vehicle flows on Wilshire Boulevard than assumed in the HCM methodology and are also likely to select alternate travel routes if delays become substantial. Since the increase in delay during the PM peak hour is more than ten seconds, **Scenario 3 results in this location exceeding the City's criteria for SSSC intersections**.

Table 21: Future and Future Plus Scenario 3 Specific Plan Buildout with Residential Intersection Operations

Intersection	Control	Peak Hour	Future No Project		Future Plus Scenario 3		Change in Delay (sec/veh)	Future Plus Scenario 3 with Via Closed		Change in Delay (sec/veh)
			Delay[1]	LOS[2]	Delay[1]	LOS[2]		Delay[1]	LOS[2]	
Wilshire Blvd & Linden Drive	Signal	AM	15.6	B	15.7	B	0.1	15.7	B	0.1
		PM	11.9	B	11.9	B	0.0	11.9	B	0.0
Wilshire Blvd & Brighton Wy/ Roxbury Drive	Signal	AM	39.0	D	36.9	D	-2.1	36.9	D	-2.1
		PM	66.3	E	63.7	E	-2.6	63.7	E	-2.6
Wilshire Blvd & Bedford Drive	Signal	AM	7.7	A	9.1	A	1.4	9.1	A	1.4
		PM	9.4	A	9.3	A	-0.1	9.3	A	-0.1
Wilshire Blvd & Peck Drive	SSSC	AM	33.9	D	**64.1**	**F**	**30.2**	42.4	E	8.5
		PM	184	F	**> 300**	**F**	**> 100**	**236.8**	**F**	**52.8**
Wilshire Blvd & Camden Drive	Signal	AM	40.5	D	43.4	D	2.9	42.9	D	2.4
		PM	45.8	D	46.5	D	0.7	46.4	D	0.6
Wilshire Blvd & Rodeo Drive	Signal	AM	10.1	B	10.0	B	-0.1	10.0	B	-0.1
		PM	7.7	A	7.5	A	-0.2	7.5	A	-0.2
Wilshire Blvd & Beverly Drive	Signal	AM	29.3	C	31.1	C	1.8	31.1	C	1.8
		PM	25.0	C	25.0	C	0.0	25.0	C	0.0
Charleville Blvd & S. Bedford Drive	AWSC	AM	11.5	B	12.0	B	0.5	12.6	B	1.1
		PM	13.8	B	14.7	B	0.9	15.2	C	1.4
Charleville Blvd & S. Peck Drive	AWSC	AM	11.8	B	12.8	B	1.0	12.7	B	0.9
		PM	13.8	B	14.5	B	0.7	14.7	B	0.9
Charleville Blvd & S. Camden Drive	AWSC	AM	11.1	B	12.6	B	1.5	12.6	B	1.5
		PM	14.0	B	15.9	C	1.9	15.9	C	1.9

Source: Fehr & Peers, 2023.
Notes:
AWSC indicates all-way stop-controlled intersection.
SSSC indicates side-street stop-controlled intersection.
Underlined text indicates a LOS of D, E, or F.
Bold text indicates that the delay or LOS exceeds the City's criteria as a result of the Project trips.

1. Whole intersection weighted average stopped delay expressed in seconds per vehicle for signalized and AWSC intersections. The vehicular delay for the worst movement is reported for the SSSC intersections.
2. LOS calculations were performed using the *Highway Capacity Manual* 6th Edition (HCM 6) method.

7. Residential Roadway Analysis

Fehr & Peers evaluated the effect of the Proposed Project on several nearby residential streets. The purpose of this analysis is to estimate the potential increases in Project-related trips in comparison to the City's residential roadway criteria.

7.1 Residential Roadway Criteria

To determine whether the addition of project-generated trips to a residential street segment results in a significant project effect, the City of Beverly Hills has established criteria for residential roadway segments as documented in Chapter 2.

7.2 Conceptual Plan Analysis Results

The study residential roadway segments were analyzed under baseline and future (2028) Conditions with the implementation of the Conceptual Plan. The results of the residential analysis are presented in **Table 22** and **Table 23**. As shown, the Project would exceed the City's criteria at the following three study residential roadway segments:

- **South Bedford Drive from Project Site to Charleville Boulevard** would experience a 17.8% increase in traffic volumes during the AM peak hour, a 12.8% increase during the PM peak hour and a 12.5% increase in ADT under Baseline Plus Project with Via Closure conditions which **exceeds the City's criteria of 12%**. Under Future plus Project Via Closure conditions, this segment would experience a 17.2% increase in traffic volumes during the AM peak hour, a 12.5% increase during the PM peak hour and a 12.1% increase in ADT, which also **exceeds the City's criteria**. With the Via closure the Project is expected to add approximately 27 vehicles during the AM peak hour, 37 vehicles during the PM peak hour, and 379 vehicles daily to this segment of Bedford Drive. These Project trips are primarily due to vehicles exiting the 9600 Wilshire Boulevard site to access Charleville Boulevard.
- **South Peck Drive from Project Site to Charleville Boulevard** would experience a 12.9% increase in traffic volumes during the AM peak hour, a 15.0% increase during the PM peak hour and a 12.3% increase in ADT under Baseline Plus Project with Via Open conditions which **exceeds the City's criteria of 12%**. Under Future plus Project Via Open conditions, this segment would experience a 12.5% increase in traffic volumes during the AM peak hour and a 14.5% increase during the PM peak hour, which also **exceeds the City's criteria**. The Project is expected to add approximately 18 vehicles during the AM peak hour, 32 vehicles during the PM peak hour, and 316 vehicles daily to this segment of Peck Drive. These Project trips are primarily due to vehicles exiting the 9600 Wilshire Boulevard site to access Charleville Boulevard.
- **South Camden Drive from Project Site to Charleville Boulevard** would experience a 33.3% increase in traffic volumes during the AM peak hour, a 16.2% increase during the PM peak hour and a 13.7% increase in ADT under Baseline Plus Project both with Via Open and with Via Closure

conditions which **exceeds the City's criteria of 12%**. Under Future plus Project with Via Open and with Via Closure conditions, this segment would experience a 32.4% increase in traffic volumes during the AM peak hour, a 15.7% increase during the PM peak hour and a 13.3% increase in ADT, which also **exceeds the City's criteria**. The Project is expected to add approximately 28 vehicles during the AM peak hour, 28 vehicles during the PM peak hour, and 301 vehicles daily to this segment of Camden Drive. These Project trips are primarily due to vehicles exiting the 9600 Wilshire Boulevard site to access Charleville Boulevard.

Table 22: Residential Roadway Analysis Baseline Plus Conceptual Plan Conditions

Roadway Segment	Time of Day	Baseline Volume	Baseline Plus Project Volume	Baseline Plus Project Volume with Via Closed	% Change Plus Project	% Change Plus Project with Via Closed	City's Criteria	Criteria Exceeded? Project/Via Closure
S Bedford Drive Project Site to Charleville Blvd	ADT	3,030	3,161	3,409	4.3%	**12.5%**	**12%**	No/**Yes**
	AM	152	164	179	7.9%	**17.8%**	**12%**	No/**Yes**
	PM	288	301	325	4.5%	**12.8%**	**12%**	No/**Yes**
S Bedford Drive Charleville Blvd to Gregory Way	ADT	1,997	2,106	2,106	5.5%	5.5%	12%	No/No
	AM	123	130	130	5.7%	5.7%	12%	No/No
	PM	202	213	213	5.4%	5.4%	12%	No/No
S Peck Drive Project Site to Charleville Blvd	ADT	2,563	2,879	2,631	**12.3%**	2.7%	**12%**	**Yes**/No
	AM	140	158	143	**12.9%**	2.1%	**12%**	**Yes**/No
	PM	214	246	222	**15.0%**	3.7%	**12%**	**Yes**/No
S Peck Drive Charleville Blvd to Gregory Way	ADT	1,995	1,994	1,994	-0.1%	-0.1%	16%	No/No
	AM	132	134	134	1.5%	1.5%	16%	No/No
	PM	166	166	166	0.0%	0.0%	16%	No/No
S Camden Drive Project Site to Charleville Blvd	ADT	2,201	2,502	2,502	**13.7%**	**13.7%**	**12%**	**Yes/Yes**
	AM	84	112	112	**33.3%**	**33.3%**	**12%**	**Yes/Yes**
	PM	173	201	201	**16.2%**	**16.2%**	**12%**	**Yes/Yes**
S Camden Drive Charleville Blvd to Gregory Way	ADT	1,928	1,993	1,993	3.4%	3.4%	16%	No/No
	AM	96	102	102	6.3%	6.3%	16%	No/No
	PM	185	191	191	3.2%	3.2%	16%	No/No

Source: Fehr & Peers, 2023.
ADT= Average Daily Traffic.
Bold text indicates that the roadway volume increase exceeds the City's criteria for residential streets.

Table 23: Residential Roadway Analysis Future (2028) Plus Conceptual Plan Conditions

Roadway Segment	Time of Day	Future Volume	Future Plus Project Volume	Future Plus Project Volume with Via Closed	% Change Plus Project	% Change Plus Project with Via Closed	City's Criteria	Criteria Exceeded? Project/Via Closure
S Bedford Drive Project Site to Charleville Blvd	ADT	3,122	3,253	3,501	4.2%	**12.1%**	**12%**	No/**Yes**
	AM	157	169	184	7.7%	**17.2%**	**12%**	No/**Yes**
	PM	297	310	334	4.4%	**12.5%**	**12%**	No/**Yes**
S Bedford Drive Charleville Blvd to Gregory Way	ADT	2,058	2,167	2,167	5.3%	5.3%	12%	No/No
	AM	127	134	134	5.5%	5.5%	12%	No/No
	PM	208	219	219	5.3%	5.3%	12%	No/No
S Peck Drive Project Site to Charleville Blvd	ADT	2,641	2,957	2,709	12.0%	2.6%	12%	No/No
	AM	144	162	147	**12.5%**	2.1%	**12%**	**Yes**/No
	PM	221	253	229	**14.5%**	3.6%	**12%**	**Yes**/No
S Peck Drive Charleville Blvd to Gregory Way	ADT	2,056	2,055	2,055	0.0%	0.0%	12%	No/No
	AM	136	138	138	1.5%	1.5%	12%	No/No
	PM	171	171	171	0.0%	0.0%	12%	No/No
S Camden Drive Project Site to Charleville Blvd	ADT	2,268	2,569	2,569	**13.3%**	**13.3%**	**12%**	**Yes/Yes**
	AM	87	115	115	**32.4%**	**32.4%**	**12%**	**Yes/Yes**
	PM	178	206	206	**15.7%**	**15.7%**	**12%**	**Yes/Yes**
S Camden Drive Charleville Blvd to Gregory Way	ADT	1,987	2,052	2,052	3.3%	3.3%	12%	No/No
	AM	99	105	105	6.1%	6.1%	12%	No/No
	PM	191	197	197	3.1%	3.1%	12%	No/No

Source: Fehr & Peers, 2023.
ADT= Average Daily Traffic.
Bold text indicates that the roadway volume increase exceeds the City's criteria for residential streets.

7.3 Specific Plan Analysis Results

The study residential roadway segments were analyzed under baseline and future (2028) Conditions with the implementation of the two Specific Plan Buildout scenarios. For Scenario 2 Specific Plan Buildout, the results of the residential analysis are presented in **Table 24** and **Table 25**. As shown, Scenario 2 would exceed the City's criteria at the following five study residential roadway segments:

- **South Bedford Drive from Project Site to Charleville Boulevard** would experience a 23.7% increase (50.7% increase with Via closure) in traffic volumes during the AM peak hour, a 10.8% increase (26.0% increase with Via closure) during the PM peak hour and a 12.3% increase (28.9% increase with Via closure) in ADT under Baseline Plus Project with Via Open and Via Closure conditions which **exceeds the City's criteria of 12%**. Under Future plus Project with Via Open and with Via Closure conditions, this segment would experience a 17.2% increase (37.7% increase with Via closure) in traffic volumes during the AM peak hour, a 7.1% increase (17.9% increase with Via closure) during the PM peak hour and an 8.9% increase (21.9% increase with Via closure) in ADT, which also **exceeds the City's criteria**. The Project is expected to add approximately 27 (77 with Via closure) vehicles during the AM peak hour, 31 (75 with Via closure) vehicles during the PM peak hour, and 373 (877 with Via closure) vehicles daily to this segment of Bedford Drive. These Project trips are primarily due to vehicles exiting the 9600 Wilshire Boulevard site to access Charleville Boulevard.

- **South Bedford Drive from Charleville Boulevard to Gregory Way** would experience a 14.6% increase in traffic volumes during the PM peak hour under Baseline Plus Project with Via Open and with Via Closure conditions which **exceeds the City's criteria of 12%**. Under Future plus Project with Via Open and Via Closure conditions, this segment would experience a volume increase of 14.2% which also **exceeds the City's criteria**. The Project is expected to add approximately 18 vehicles to this segment of Bedford Drive during the PM peak hour. These Project trips are primarily due to vehicles exiting the 9600 Wilshire Boulevard site going south at the Bedford Drive & Charleville Boulevard intersection to access Gregory Way.
- **South Peck Drive from Project Site to Charleville Boulevard** would experience a 37.9% increase in traffic volumes during the AM peak hour, a 28.5% increase during the PM peak hour and a 24.5% increase in ADT under Baseline Plus Project with Via Open conditions which **exceeds the City's criteria of 12%**. Under Future plus Project with Via Open conditions, this segment would experience a 36.7% increase in traffic volumes during the AM peak hour, a 27.7% increase during the PM peak hour and a 23.7% increase in ADT, which also **exceeds the City's criteria**. The Project is expected to add approximately 53 vehicles during the AM peak hour, 61 vehicles during the PM peak hour, and 627 vehicles daily to this segment of Peck Drive. These Project trips are primarily due to vehicles exiting the 9600 Wilshire Boulevard site to access Charleville Boulevard.
- **South Camden Drive from Project Site to Charleville Boulevard** would experience a 72.6% increase in traffic volumes during the AM peak hour, a 34.7% increase during the PM peak hour and a 32.1% increase in ADT under Baseline Plus Project both with Via Open and with Via Closure conditions which **exceeds the City's criteria of 12%**. Under Future plus Project Via Open and Via Closure conditions, this segment would experience a 70.5% increase in traffic volumes during the AM peak hour, a 33.7% increase during the PM peak hour and a 31.1% increase in ADT, which also **exceeds the City's criteria**. The Project is expected to add approximately 61 vehicles during the AM peak hour, 60 vehicles during the PM peak hour, and 706 vehicles daily to this segment of Camden Drive. These Project trips are primarily due to vehicles exiting the 9600 Wilshire Boulevard site to access Charleville Boulevard.
- **South Camden Drive from Charleville Boulevard to Gregory Way** would experience a 13.5% increase in traffic volumes during the AM peak hour under Baseline Plus Project with Via Open and with Via Closure conditions which **exceeds the City's criteria of 12%**. Under Future plus Project with Via Open and with Via Closure conditions, this segment would experience a volume increase of 13.1% which also **exceeds the City's criteria**. The Project is expected to add approximately 13 vehicles to this segment of Camden Drive during the AM peak hour. These

Project trips are primarily due to vehicles exiting the 9600 Wilshire Boulevard site going south at the Camden Drive & Charleville Boulevard intersection to access Gregory Way.

Table 24: Residential Roadway Analysis Baseline Plus Scenario 2 Specific Plan Buildout Conditions

Roadway Segment	Time of Day	Baseline Volume	Baseline Plus Project Volume	Baseline Plus Project Volume with Via Closed	% Change Plus Project	% Change Plus Project with Via Closed	City's Criteria	Criteria Exceeded? Project/Via Closure
S Bedford Drive Project Site to Charleville Blvd	ADT	3,030	3,403	3,907	**12.3%**	**28.9%**	**12%**	**Yes/Yes**
	AM	152	188	229	**23.7%**	**50.7%**	**12%**	**Yes/Yes**
	PM	288	319	363	10.8%	**26.0%**	**12%**	No/**Yes**
S Bedford Drive Charleville Blvd to Gregory Way	ADT	1,997	2,218	2,218	11.1%	11.1%	12%	No/No
	AM	123	141	141	**14.6%**	**14.6%**	**12%**	**Yes/Yes**
	PM	202	221	221	9.4%	9.4%	12%	No/No
S Peck Drive Project Site to Charleville Blvd	ADT	2,563	3,190	2,686	**24.5%**	4.8%	**12%**	**Yes**/No
	AM	140	193	152	**37.9%**	8.6%	**12%**	**Yes**/No
	PM	214	275	231	**28.5%**	7.9%	**12%**	**Yes**/No
S Peck Drive Charleville Blvd to Gregory Way	ADT	1,995	2,031	2,031	1.8%	1.8%	12%	No/No
	AM	132	139	139	5.3%	5.3%	12%	No/No
	PM	166	170	170	2.4%	2.4%	12%	No/No
S Camden Drive Project Site to Charleville Blvd	ADT	2,201	2,907	2,907	**32.1%**	**32.1%**	**12%**	**Yes/Yes**
	AM	84	145	145	**72.6%**	**72.6%**	**12%**	**Yes/Yes**
	PM	173	233	233	**34.7%**	**34.7%**	**12%**	**Yes/Yes**
S Camden Drive Charleville Blvd to Gregory Way	ADT	1,928	2,084	2,084	8.1%	8.1%	12%	No/No
	AM	96	109	109	**13.5%**	**13.5%**	**12%**	**Yes/Yes**
	PM	185	198	198	7.0%	7.0%	12%	No/No

Source: Fehr & Peers, 2023.
ADT= Average Daily Traffic.
Bold text indicates that the roadway volume increase exceeds the City's criteria for residential streets.

Table 25: Residential Roadway Analysis Future (2028) Plus Scenario 2 Specific Plan Buildout Conditions

Roadway Segment	Time of Day	Future Volume	Future Plus Project Volume	Future Plus Project Volume with Via Closed	% Change Plus Project	% Change Plus Project with Via Closed	City's Criteria	Criteria Exceeded? Project/Via Closure
S Bedford Drive Project Site to Charleville Blvd	ADT	3,122	3,495	3,999	11.9%	**28.1%**	**12%**	No/**Yes**
	AM	157	193	234	**23.0%**	**49.2%**	**12%**	**Yes/Yes**
	PM	297	328	372	10.4%	**25.3%**	**12%**	No/**Yes**
S Bedford Drive Charleville Blvd to Gregory Way	ADT	2,058	2,279	2,279	10.7%	10.7%	12%	No/No
	AM	127	145	145	**14.2%**	**14.2%**	**12%**	**Yes/Yes**
	PM	208	227	227	9.1%	9.1%	12%	No/No
S Peck Drive Project Site to Charleville Blvd	ADT	2,641	3,268	2,764	**23.7%**	4.7%	**12%**	**Yes**/No
	AM	144	197	156	**36.7%**	8.3%	**12%**	**Yes**/No
	PM	221	282	238	**27.7%**	7.7%	**12%**	**Yes**/No
S Peck Drive Charleville Blvd to Gregory Way	ADT	2,056	2,092	2,092	1.8%	1.8%	12%	No/No
	AM	136	143	143	5.1%	5.1%	12%	No/No
	PM	171	175	175	2.3%	2.3%	12%	No/No
S Camden Drive Project Site to Charleville Blvd	ADT	2,268	2,974	2,974	**31.1%**	**31.1%**	**12%**	**Yes/Yes**
	AM	87	148	148	**70.5%**	**70.5%**	**12%**	**Yes/Yes**
	PM	178	238	238	**33.7%**	**33.7%**	**12%**	**Yes/Yes**
S Camden Drive Charleville Blvd to Gregory Way	ADT	1,987	2,143	2,143	7.9%	7.9%	12%	No/No
	AM	99	112	112	**13.1%**	**13.1%**	**12%**	**Yes/Yes**
	PM	191	204	204	6.8%	6.8%	12%	No/No

Source: Fehr & Peers, 2023.
ADT= Average Daily Traffic.
Bold text indicates that the roadway volume increase exceeds the City's criteria for residential streets.

For Scenario 3 Specific Plan Buildout with Residential, the results of the residential roadway analysis are presented in **Table 26** and **Table 27**. As shown, Scenario 3 would exceed the City's criteria at the following four study residential roadway segments:

- **South Bedford Drive from Project Site to Charleville Boulevard** would experience a 17.8% increase (38.8% increase with Via closure) in traffic volumes during the AM peak hour, a 7.3% increase (18.4% increase with Via closure) during the PM peak hour and a 9.2% increase (22.5% increase with Via closure) in ADT under Baseline Plus Project with Via Open and with Via Closure conditions which **exceeds the City's criteria of 12%**. Under Future plus Project with Via Open and with Via Closure conditions, this segment would experience a 17.2% increase (37.7% increase with Via closure) in traffic volumes during the AM peak hour, a 7.1% increase (17.9% increase with Via closure) during the PM peak hour and an 8.9% increase (21.9% increase with Via closure) in

ADT, which also **exceeds the City's criteria**. The Project is expected to add approximately 27 (59 with Via closure) vehicles during the AM peak hour, 21 (53 with Via closure) vehicles during the PM peak hour, and 279 (683 with Via closure) vehicles daily to this segment of Bedford Drive. These Project trips are primarily due to vehicles exiting the 9600 Wilshire Boulevard site to access Charleville Boulevard.

- **South Peck Drive from Project Site to Charleville Boulevard** would experience a 26.4% increase in traffic volumes during the AM peak hour, a 21.5% increase during the PM peak hour and a 19.1% increase in ADT under Baseline Plus Project with Via Open conditions which **exceeds the City's criteria of 12%**. Under Future plus Project with Via Open conditions, this segment would experience a 25.6% increase in traffic volumes during the AM peak hour, a 20.9% increase during the PM peak hour and an 18.6% increase in ADT, which also **exceeds the City's criteria**. The Project is expected to add approximately 37 vehicles during the AM peak hour, 46 vehicles during the PM peak hour, and 490 vehicles daily to this segment of Peck Drive. These Project trips are primarily due to vehicles exiting the 9600 Wilshire Boulevard site to access Charleville Boulevard.
- **South Camden Drive from Project Site to Charleville Boulevard** would experience a 71.4% increase in traffic volumes during the AM peak hour, a 34.1% increase during the PM peak hour and a 31.6% increase in ADT under Baseline Plus Project both with Via Open and with Via Closure conditions which **exceeds the City's criteria of 12%**. Under Future plus Project with Via Open and with Via Closure conditions, this segment would experience a 69.3% increase in traffic volumes during the AM peak hour, a 33.1% increase during the PM peak hour and a 30.6% increase in ADT, which also **exceeds the City's criteria**. The Project is expected to add approximately 60 vehicles during the AM peak hour, 59 vehicles during the PM peak hour, and 695 vehicles daily to this segment of Camden Drive. These Project trips are primarily due to vehicles exiting the 9600 Wilshire Boulevard site to access Charleville Boulevard.
- **South Camden Drive from Charleville Boulevard to Gregory Way** would experience a 13.5% increase in traffic volumes during the AM peak hour under Baseline Plus Project with Via Open and with Via Closure conditions which **exceeds the City's criteria of 12%**. Under Future plus Project with Via Open and with Via Closure conditions, this segment would experience a volume increase of 13.1% which also **exceeds the City's criteria**. The Project is expected to add approximately 13 vehicles to this segment of Camden Drive during the AM peak hour. These Project trips are primarily due to vehicles exiting the 9600 Wilshire Boulevard site going south at the Camden Drive & Charleville Boulevard intersection to access Gregory Way.

Table 26: Residential Roadway Analysis Baseline Plus Scenario 3 Specific Plan Buildout with Residential Conditions

Roadway Segment	Time of Day	Baseline Volume	Baseline Plus Project Volume	Baseline Plus Project Volume with Via Closed	% Change Plus Project	% Change Plus Project with Via Closed	City's Criteria	Criteria Exceeded? Project/Via Closure
S Bedford Drive Project Site to Charleville Blvd	ADT	3,030	3,309	3,713	9.2%	**22.5%**	**12%**	No/**Yes**
	AM	152	179	211	**17.8%**	**38.8%**	**12%**	**Yes/Yes**
	PM	288	309	341	7.3%	**18.4%**	**12%**	No/**Yes**
S Bedford Drive Charleville Blvd to Gregory Way	ADT	1,997	2,174	2,174	8.9%	8.9%	12%	No/No
	AM	123	137	137	11.4%	11.4%	12%	No/No
	PM	202	216	216	6.9%	6.9%	12%	No/No
S Peck Drive Project Site to Charleville Blvd	ADT	2,563	3,053	2,649	**19.1%**	3.4%	**12%**	**Yes**/No
	AM	140	177	145	**26.4%**	3.6%	**12%**	**Yes**/No
	PM	214	260	228	**21.5%**	6.5%	**12%**	**Yes**/No
S Peck Drive Charleville Blvd to Gregory Way	ADT	1,995	2,015	2,015	1.0%	1.0%	12%	No/No
	AM	132	135	135	2.3%	2.3%	12%	No/No
	PM	166	169	169	1.8%	1.8%	12%	No/No
S Camden Drive Project Site to Charleville Blvd	ADT	2,201	2,896	2,896	**31.6%**	**31.6%**	**12%**	**Yes/Yes**
	AM	84	144	144	**71.4%**	**71.4%**	**12%**	**Yes/Yes**
	PM	173	232	232	**34.1%**	**34.1%**	**12%**	**Yes/Yes**
S Camden Drive Charleville Blvd to Gregory Way	ADT	1,928	2,084	2,084	8.1%	8.1%	12%	No/No
	AM	96	109	109	**13.5%**	**13.5%**	**12%**	**Yes/Yes**
	PM	185	198	198	7.0%	7.0%	12%	No/No

Source: Fehr & Peers, 2023.
ADT= Average Daily Traffic.
Bold text indicates that the roadway volume increase exceeds the City's criteria for residential streets.

Table 27: Residential Roadway Analysis Future (2028) Plus Scenario 3 Specific Plan Buildout with Residential Conditions

Roadway Segment	Time of Day	Future Volume	Future Plus Project Volume	Future Plus Project Volume with Via Closed	% Change Plus Project	% Change Plus Project with Via Closed	City's Criteria	Criteria Exceeded? Project/Via Closure
S Bedford Drive Project Site to Charleville Blvd	ADT	3,122	3,401	3,805	8.9%	**21.9%**	**12%**	No/**Yes**
	AM	157	184	216	**17.2%**	**37.7%**	**12%**	**Yes/Yes**
	PM	297	318	350	7.1%	**17.9%**	**12%**	No/**Yes**
S Bedford Drive Charleville Blvd to Gregory Way	ADT	2,058	2,235	2,235	8.6%	8.6%	12%	No/No
	AM	127	141	141	11.0%	11.0%	12%	No/No
	PM	208	222	222	6.7%	6.7%	12%	No/No
S Peck Drive Project Site to Charleville Blvd	ADT	2,641	3,131	2,727	**18.6%**	3.3%	**12%**	**Yes**/No
	AM	144	181	149	**25.6%**	3.5%	**12%**	**Yes**/No
	PM	221	267	235	**20.9%**	6.3%	**12%**	**Yes**/No
S Peck Drive Charleville Blvd to Gregory Way	ADT	2,056	2,076	2,076	1.0%	1.0%	12%	No/No
	AM	136	139	139	2.2%	2.2%	12%	No/No
	PM	171	174	174	1.8%	1.8%	12%	No/No
S Camden Drive Project Site to Charleville Blvd	ADT	2,268	2,963	2,963	**30.6%**	**30.6%**	**12%**	**Yes/Yes**
	AM	87	147	147	**69.3%**	**69.3%**	**12%**	**Yes/Yes**
	PM	178	237	237	**33.1%**	**33.1%**	**12%**	**Yes/Yes**
S Camden Drive Charleville Blvd to Gregory Way	ADT	1,987	2,143	2,143	7.9%	7.9%	12%	No/No
	AM	99	112	112	**13.1%**	**13.1%**	**12%**	**Yes/Yes**
	PM	191	204	204	6.8%	6.8%	12%	No/No

Source: Fehr & Peers, 2023.
ADT= Average Daily Traffic.
Bold text indicates that the roadway volume increase exceeds the City's criteria for residential streets.

Appendix A:
Historic Traffic Counts

INTERSECTION TURNING MOVEMENT COUNTS

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

T218

DATE:	LOCATION:	Beverly Hills	PROJECT #:	SC3746
Tue, Nov 15, 22	NORTH & SOUTH:	Linden	LOCATION #:	1
	EAST & WEST:	Wilshire	CONTROL:	SIGNAL

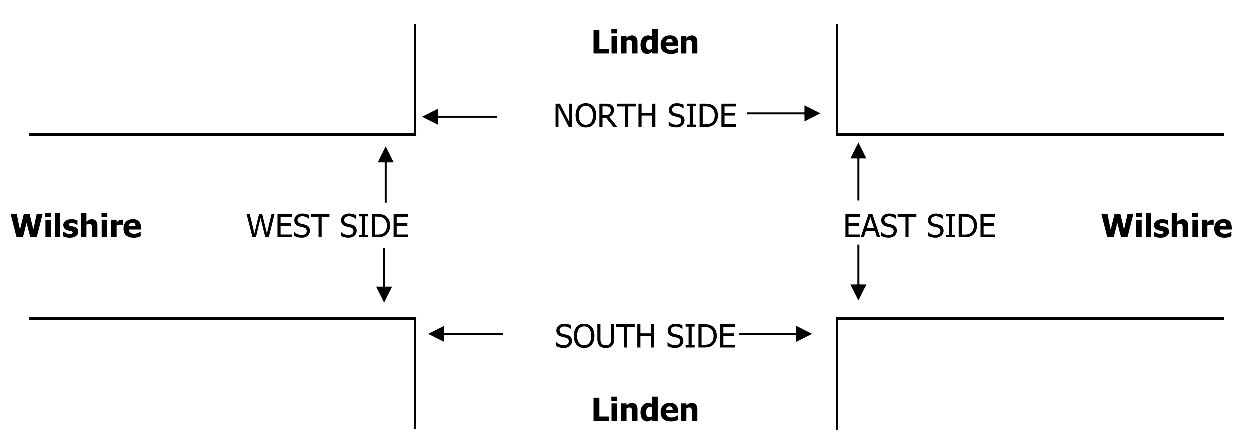
NOTES:

AM PM MD OTHER OTHER

▲ N ◄ W E ► S ▼

☑ Add U-Turns to Left Turns

		NORTHBOUND Linden			SOUTHBOUND Linden			EASTBOUND Wilshire			WESTBOUND Wilshire				U-TURNS				
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB	TTL
	LANES:	1	X	1	1	X	1	X	3	0	X	3	X		0	0	0	0	
AM	7:00 AM	26	0	1	4	0	3	0	92	4	0	97	0	227	0	0	1	0	1
AM	7:15 AM	46	0	9	7	0	7	0	105	9	0	114	0	297	0	0	0	0	0
AM	7:30 AM	52	0	7	8	0	8	0	149	7	0	124	0	355	0	0	0	0	0
AM	7:45 AM	48	0	15	14	0	7	0	169	7	0	126	0	386	0	0	0	0	0
AM	8:00 AM	51	0	16	9	0	3	0	192	10	0	142	0	423	0	0	0	0	0
AM	8:15 AM	36	0	20	13	0	6	0	194	11	0	140	0	420	0	0	0	0	0
AM	8:30 AM	50	0	21	19	0	12	0	197	20	0	114	0	433	0	0	0	0	0
AM	8:45 AM	52	0	22	10	0	9	0	202	7	0	108	0	410	0	0	0	0	0
AM	9:00 AM	64	0	19	18	0	7	0	207	10	0	116	0	441	0	0	0	0	0
AM	9:15 AM	64	0	17	14	0	18	0	192	8	0	117	0	430	0	0	0	0	0
AM	9:30 AM	52	0	21	17	0	17	0	189	15	0	124	0	435	0	0	0	0	0
AM	9:45 AM	43	0	28	21	0	12	0	206	16	0	91	0	417	0	0	0	0	0
AM	VOLUMES	584	0	196	154	0	109	0	2,094	124	0	1,413	0	4,675	0	0	1	0	1
AM	APPROACH %	75%	0%	25%	59%	0%	41%	0%	94%	6%	0%	100%	0%						
AM	APP/DEPART	780	/	0	263	/	124	2,219	/	2,444	1,413	/	2,107	0					
AM	BEGIN PEAK HR		9:00 AM																
AM	VOLUMES	223	0	85	70	0	54	0	794	49	0	448	0	1,723					
AM	APPROACH %	72%	0%	28%	56%	0%	44%	0%	94%	6%	0%	100%	0%						
AM	PEAK HR FACTOR		0.928			0.912			0.949			0.903		0.977					
AM	APP/DEPART	308	/	0	124	/	49	843	/	949	448	/	725	0					
PM	4:00 PM	74	0	15	24	0	14	0	266	21	0	167	0	581	0	0	0	0	0
PM	4:15 PM	62	0	11	23	0	14	0	207	25	0	175	0	517	0	0	0	0	0
PM	4:30 PM	73	0	11	30	0	12	0	260	19	0	186	0	591	0	0	0	0	0
PM	4:45 PM	60	0	14	22	0	17	0	270	19	0	177	0	579	0	0	0	0	0
PM	5:00 PM	80	0	17	47	0	20	0	255	33	0	197	0	649	0	0	0	0	0
PM	5:15 PM	76	0	9	33	0	8	0	281	25	0	184	0	616	0	0	0	0	0
PM	5:30 PM	66	0	9	32	0	22	0	300	26	0	183	0	638	0	0	0	0	0
PM	5:45 PM	44	0	10	22	0	14	0	260	12	0	158	0	520	0	0	0	0	0
PM	6:00 PM	51	0	14	18	0	7	0	176	14	0	145	0	425	0	0	0	0	0
PM	6:15 PM	52	0	6	13	0	7	0	228	14	0	161	0	481	0	0	0	0	0
PM	6:30 PM	56	0	4	10	0	10	0	223	13	0	143	0	459	0	0	0	0	0
PM	6:45 PM	46	0	7	8	0	4	0	198	8	0	129	0	400	0	0	0	0	0
PM	VOLUMES	740	0	127	282	0	149	0	2,924	229	0	2,005	0	6,456	0	0	0	0	0
PM	APPROACH %	85%	0%	15%	65%	0%	35%	0%	93%	7%	0%	100%	0%						
PM	APP/DEPART	867	/	0	431	/	229	3,153	/	3,333	2,005	/	2,894	0					
PM	BEGIN PEAK HR		4:45 PM																
PM	VOLUMES	282	0	49	134	0	67	0	1,106	103	0	741	0	2,482					
PM	APPROACH %	85%	0%	15%	67%	0%	33%	0%	91%	9%	0%	100%	0%						
PM	PEAK HR FACTOR		0.853			0.750			0.927			0.940		0.956					
PM	APP/DEPART	331	/	0	201	/	103	1,209	/	1,289	741	/	1,090	0					



		PEDESTRIAN + BIKE CROSSINGS					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM	2	5	0	2	9	2	5	0	2	9	0	0	0	0	0
AM	7:15 AM	8	3	4	7	22	7	3	4	7	21	1	0	0	0	1
AM	7:30 AM	10	6	2	10	28	10	6	2	10	28	0	0	0	0	0
AM	7:45 AM	18	4	2	7	31	18	4	2	7	31	0	0	0	0	0
AM	8:00 AM	11	6	1	10	28	11	6	1	10	28	0	0	0	0	0
AM	8:15 AM	8	8	1	5	22	7	8	1	5	21	1	0	0	0	1
AM	8:30 AM	4	8	2	8	22	4	8	2	8	22	0	0	0	0	0
AM	8:45 AM	19	16	3	14	52	18	15	3	14	50	1	1	0	0	2
AM	9:00 AM	17	12	2	45	76	17	10	1	44	72	0	2	1	1	4
AM	9:15 AM	15	9	2	63	89	15	9	2	63	89	0	0	0	0	0
AM	9:30 AM	11	9	0	12	32	11	9	0	12	32	0	0	0	0	0
AM	9:45 AM	17	8	1	11	37	17	8	1	11	37	0	0	0	0	0
AM	TOTAL	140	94	20	194	448	137	91	19	193	440	3	3	1	1	8
	AM BEGIN PEAK HR			9:00 AM			60	36	4	130	230					
PM	4:00 PM	14	12	0	6	32	13	11	0	6	30	1	1	0	0	2
PM	4:15 PM	13	14	0	11	38	13	13	0	11	37	0	1	0	0	1
PM	4:30 PM	13	17	2	8	40	13	17	2	8	40	0	0	0	0	0
PM	4:45 PM	10	17	0	9	36	9	17	0	9	35	1	0	0	0	1
PM	5:00 PM	14	23	0	14	51	14	23	0	14	51	0	0	0	0	0
PM	5:15 PM	7	24	1	9	41	7	23	1	9	40	0	1	0	0	1
PM	5:30 PM	7	18	0	11	36	6	18	0	10	34	1	0	0	1	2
PM	5:45 PM	5	11	0	3	19	5	11	0	3	19	0	0	0	0	0
PM	6:00 PM	5	12	0	2	19	5	12	0	2	19	0	0	0	0	0
PM	6:15 PM	10	16	3	6	35	10	15	3	6	34	0	1	0	0	1
PM	6:30 PM	2	7	1	2	12	1	7	1	2	11	1	0	0	0	1
PM	6:45 PM	2	6	0	1	9	1	6	0	1	8	1	0	0	0	1
PM	TOTAL	102	177	7	82	368	97	173	7	81	358	5	4	0	1	10
	PM BEGIN PEAK HR			4:45 PM			36	81	1	42	160					

INTERSECTION TURNING MOVEMENT COUNTS

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

DATE:	LOCATION:	Beverly Hills	PROJECT #:	SC3746
Tue, Nov 15, 22	NORTH & SOUTH:	Roxbury	LOCATION #:	2
	EAST & WEST:	Wilshire	CONTROL:	SIGNAL

NOTES:

AM PM MD OTHER OTHER

▲ N ◄ W E ► S ▼

☑ Add U-Turns to Left Turns

	NORTHBOUND (Roxbury)			SOUTHBOUND (Brighton)			EASTBOUND (Wilshire)			WESTBOUND (Wilshire)			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	X	X	1	X	X	2	1	3	0	1	3	0	
AM 7:00 AM	0	0	1	0	0	10	29	70	1	2	96	8	217
7:15 AM	0	0	9	0	0	10	31	85	6	1	113	12	267
7:30 AM	0	0	10	0	0	16	30	117	9	6	97	9	294
7:45 AM	0	0	16	0	0	24	38	156	9	8	122	28	401
8:00 AM	0	0	18	0	0	19	29	156	7	3	114	20	366
8:15 AM	0	0	23	0	0	18	43	177	14	5	130	25	435
8:30 AM	0	0	22	0	0	22	49	179	9	7	90	24	402
8:45 AM	0	0	27	0	0	23	44	173	14	2	94	29	406
9:00 AM	0	0	23	0	0	24	54	165	14	7	104	28	419
9:15 AM	0	0	18	0	0	42	47	182	13	5	96	21	424
9:30 AM	0	0	24	0	0	31	38	160	15	5	87	13	373
9:45 AM	0	0	20	0	0	34	45	159	26	7	78	27	396
VOLUMES	0	0	211	0	0	273	477	1,779	137	58	1,221	244	4,916
APPROACH %	0%	0%	100%	0%	0%	35%	20%	74%	6%	4%	80%	16%	
APP/DEPART	211	/	1,236	788	/	195	2,393	/	1,991	1,524	/	1,494	0
BEGIN PEAK HR		8:15 AM											
VOLUMES	0	0	95	0	0	87	190	694	51	21	418	106	1,860
APPROACH %	0%	0%	100%	0%	0%	31%	20%	74%	5%	4%	77%	19%	
PEAK HR FACTOR		0.880			0.845			0.986			0.853		0.957
APP/DEPART	95	/	493	284	/	72	935	/	790	546	/	505	0
PM 4:00 PM	0	0	11	0	0	43	29	252	15	13	126	13	502
4:15 PM	0	0	20	0	0	58	17	227	25	12	129	23	511
4:30 PM	0	0	18	0	0	48	24	239	27	12	135	15	518
4:45 PM	0	0	25	0	0	51	25	264	10	12	125	12	524
5:00 PM	0	0	23	0	0	68	28	281	16	21	123	11	571
5:15 PM	0	0	16	0	0	70	29	273	27	6	127	10	558
5:30 PM	0	0	17	0	0	43	23	287	12	16	139	7	544
5:45 PM	0	0	21	0	0	45	36	291	22	4	103	10	532
6:00 PM	0	0	21	0	0	47	27	169	19	7	98	12	400
6:15 PM	0	0	20	0	0	60	21	220	10	15	97	11	454
6:30 PM	0	0	20	0	0	40	23	214	14	8	103	8	430
6:45 PM	0	0	20	0	0	48	23	205	11	6	90	7	410
VOLUMES	0	0	232	0	0	621	305	2,922	208	132	1,395	139	6,406
APPROACH %	0%	0%	100%	0%	0%	58%	9%	85%	6%	8%	84%	8%	
APP/DEPART	232	/	895	1,072	/	340	3,435	/	3,155	1,667	/	2,016	0
BEGIN PEAK HR		4:45 PM											
VOLUMES	0	0	81	0	0	232	105	1,105	65	55	514	40	2,390
APPROACH %	0%	0%	100%	0%	0%	55%	8%	87%	5%	9%	84%	7%	
PEAK HR FACTOR		0.810			0.898			0.969			0.941		0.962
APP/DEPART	81	/	337	424	/	120	1,275	/	1,187	610	/	746	0

U-TURNS

	NB	SB	EB	WB	TTL
	0	0	0	0	
7:00 AM	0	26	0	0	26
7:15 AM	0	29	0	0	29
7:30 AM	0	22	0	0	22
7:45 AM	0	30	0	0	30
8:00 AM	0	43	0	0	43
8:15 AM	0	51	0	0	51
8:30 AM	0	46	0	0	46
8:45 AM	0	40	0	1	41
9:00 AM	0	60	0	0	60
9:15 AM	0	55	0	0	55
9:30 AM	0	58	0	0	58
9:45 AM	0	55	0	0	55
VOLUMES	0	515	0	1	516
4:00 PM	0	41	0	0	41
4:15 PM	0	46	0	0	46
4:30 PM	0	44	0	0	44
4:45 PM	0	50	0	0	50
5:00 PM	0	50	0	0	50
5:15 PM	0	44	0	1	45
5:30 PM	0	48	0	0	48
5:45 PM	0	32	0	0	32
6:00 PM	0	40	0	0	40
6:15 PM	0	25	0	0	25
6:30 PM	0	20	0	0	20
6:45 PM	0	11	0	0	11
VOLUMES	0	451	0	1	452

Roxbury

← NORTH SIDE →

Wilshire WEST SIDE EAST SIDE **Wilshire**

← SOUTH SIDE →

Roxbury

PEDESTRIAN + BIKE CROSSINGS

	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
AM 7:00 AM	9	8	0	3	20
7:15 AM	7	4	0	4	15
7:30 AM	6	3	0	8	17
7:45 AM	21	2	0	15	38
8:00 AM	11	6	0	9	26
8:15 AM	9	7	0	7	23
8:30 AM	19	4	0	9	32
8:45 AM	15	5	0	11	31
9:00 AM	23	8	0	10	41
9:15 AM	21	8	0	13	42
9:30 AM	24	6	2	17	49
9:45 AM	16	11	0	21	48
TOTAL	181	72	2	127	382
AM BEGIN PEAK HR			8:15 AM		
PM 4:00 PM	26	29	0	13	68
4:15 PM	20	29	0	23	72
4:30 PM	13	36	0	29	78
4:45 PM	21	28	0	27	76
5:00 PM	29	48	0	23	100
5:15 PM	18	24	0	9	51
5:30 PM	15	16	0	16	47
5:45 PM	14	9	0	11	34
6:00 PM	8	13	0	10	31
6:15 PM	12	16	0	12	40
6:30 PM	7	20	0	10	37
6:45 PM	9	2	0	4	15
TOTAL	192	270	0	187	649
PM BEGIN PEAK HR			4:45 PM		

PEDESTRIAN CROSSINGS

	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
7:00 AM	9	8	0	3	20
7:15 AM	6	4	0	4	14
7:30 AM	6	3	0	7	16
7:45 AM	21	2	0	15	38
8:00 AM	11	6	0	9	26
8:15 AM	9	7	0	7	23
8:30 AM	18	4	0	8	30
8:45 AM	14	5	0	11	30
9:00 AM	23	8	0	10	41
9:15 AM	21	8	0	13	42
9:30 AM	24	6	2	17	49
9:45 AM	16	11	0	21	48
TOTAL	178	72	2	125	377
AM BEGIN PEAK HR	64	24	0	36	124
4:00 PM	25	28	0	13	66
4:15 PM	20	27	0	23	70
4:30 PM	13	35	0	29	77
4:45 PM	21	28	0	27	76
5:00 PM	29	48	0	23	100
5:15 PM	18	23	0	9	50
5:30 PM	15	16	0	16	47
5:45 PM	14	9	0	10	33
6:00 PM	8	13	0	9	30
6:15 PM	12	15	0	12	39
6:30 PM	6	20	0	10	36
6:45 PM	7	2	0	4	13
TOTAL	188	264	0	185	637
PM BEGIN PEAK HR	83	115	0	75	273

BICYCLE CROSSINGS

	NS	SS	ES	WS	TOTAL
7:00 AM	0	0	0	0	0
7:15 AM	1	0	0	0	1
7:30 AM	0	0	0	1	1
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	1	0	0	1	2
8:45 AM	1	0	0	0	1
9:00 AM	0	0	0	0	0
9:15 AM	0	0	0	0	0
9:30 AM	0	0	0	0	0
9:45 AM	0	0	0	0	0
TOTAL	3	0	0	2	5
4:00 PM	1	1	0	0	2
4:15 PM	0	2	0	0	2
4:30 PM	0	1	0	0	1
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	1	0	0	1
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	1	1
6:00 PM	0	0	0	1	1
6:15 PM	0	1	0	0	1
6:30 PM	1	0	0	0	1
6:45 PM	2	0	0	0	2
TOTAL	4	6	0	2	12

INTERSECTION TURNING MOVEMENT COUNTS

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

DATE:	LOCATION:	Beverly Hills	PROJECT #:	SC3746
Tue, Nov 15, 22	NORTH & SOUTH:	Bedford	LOCATION #:	3
	EAST & WEST:	Wilshire	CONTROL:	SIGNAL

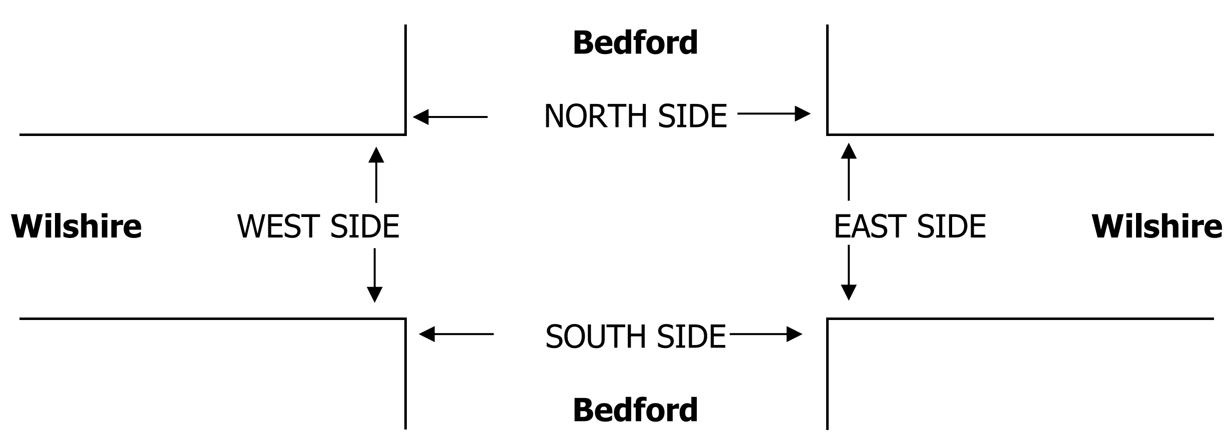
NOTES:

AM PM MD OTHER OTHER

N S W E

☐ Add U-Turns to Left Turns

		NORTHBOUND Bedford			SOUTHBOUND Bedford			EASTBOUND Wilshire			WESTBOUND Wilshire				U-TURNS				
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB	TTL
	LANES:	1	X	1	2	1	1	X	3	0	1	3	X		0	0	0	0	
AM	7:00 AM	4	0	3	18	9	4	0	71	0	2	98	0	209	0	0	0	0	0
	7:15 AM	5	0	3	18	9	1	0	93	1	1	120	0	251	0	0	0	0	0
	7:30 AM	3	0	3	31	15	4	0	124	3	0	105	0	288	0	0	0	0	0
	7:45 AM	7	0	5	27	15	7	0	170	2	3	144	0	380	0	0	0	0	0
	8:00 AM	10	0	9	25	12	7	0	169	5	2	120	0	359	0	0	0	0	0
	8:15 AM	12	0	8	32	16	7	0	198	0	4	141	0	418	0	0	1	0	1
	8:30 AM	4	0	7	45	17	9	0	198	3	2	108	0	393	0	0	0	0	0
	8:45 AM	6	0	11	60	15	17	0	194	7	1	103	0	414	0	0	1	0	1
	9:00 AM	11	0	8	76	25	8	0	179	9	0	120	0	436	0	0	0	0	0
	9:15 AM	6	0	12	60	20	8	0	194	6	5	108	0	419	0	0	0	0	0
	9:30 AM	3	0	9	72	14	14	0	181	3	1	88	0	385	0	0	0	1	1
	9:45 AM	11	0	8	76	19	11	0	171	6	1	90	0	393	0	0	0	0	0
	VOLUMES	82	0	86	540	186	97	0	1,942	45	22	1,345	0	4,348	0	0	2	1	3
	APPROACH %	49%	0%	51%	66%	23%	12%	0%	98%	2%	2%	98%	0%						
	APP/DEPART	168	/	0	823	/	253	1,989	/	2,569	1,368	/	1,526	0					
	BEGIN PEAK HR		8:30 AM																
	VOLUMES	27	0	38	241	77	42	0	765	25	8	439	0	1,663					
	APPROACH %	42%	0%	58%	67%	21%	12%	0%	97%	3%	2%	98%	0%						
	PEAK HR FACTOR		0.813			0.826			0.979			0.771		0.954					
	APP/DEPART	65	/	0	360	/	110	791	/	1,044	447	/	509	0					
PM	4:00 PM	7	0	13	82	41	26	0	248	9	5	119	0	550	0	0	0	1	1
	4:15 PM	9	0	20	76	46	27	0	243	4	5	128	0	558	0	0	0	0	0
	4:30 PM	10	0	17	100	42	24	0	252	5	5	128	0	583	0	0	1	0	1
	4:45 PM	11	0	17	91	50	21	0	286	3	3	117	0	599	0	0	0	0	0
	5:00 PM	7	0	9	109	48	19	0	298	6	5	129	0	630	0	0	0	0	0
	5:15 PM	5	0	17	97	60	20	0	282	8	1	119	0	609	0	0	0	0	0
	5:30 PM	9	0	10	88	57	18	0	303	1	10	135	0	631	0	0	0	0	0
	5:45 PM	6	0	12	80	36	8	0	309	3	1	103	0	558	0	0	0	0	0
	6:00 PM	7	0	8	67	42	21	0	189	1	9	89	0	433	0	0	0	0	0
	6:15 PM	5	0	9	67	25	16	0	233	7	1	102	0	465	0	0	0	0	0
	6:30 PM	4	0	14	67	24	8	0	231	3	0	107	0	458	0	0	0	0	0
	6:45 PM	2	0	11	76	31	8	0	222	3	4	93	0	450	0	0	0	0	0
	VOLUMES	82	0	157	1,000	502	216	0	3,096	53	49	1,369	0	6,526	0	0	1	1	2
	APPROACH %	34%	0%	66%	58%	29%	13%	0%	98%	2%	3%	96%	0%						
	APP/DEPART	239	/	0	1,718	/	604	3,150	/	4,254	1,419	/	1,668	0					
	BEGIN PEAK HR		4:45 PM																
	VOLUMES	32	0	53	385	215	78	0	1,169	18	19	500	0	2,469					
	APPROACH %	38%	0%	62%	57%	32%	12%	0%	98%	2%	4%	96%	0%						
	PEAK HR FACTOR		0.759			0.958			0.976			0.895		0.978					
	APP/DEPART	85	/	0	678	/	252	1,187	/	1,607	519	/	610	0					



		PEDESTRIAN + BIKE CROSSINGS					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM	2	6	0	3	11	2	6	0	3	11	0	0	0	0	0
	7:15 AM	7	4	0	5	16	7	3	0	5	15	0	1	0	0	1
	7:30 AM	5	3	3	3	14	5	3	3	3	14	0	0	0	0	0
	7:45 AM	13	4	0	3	20	13	4	0	3	20	0	0	0	0	0
	8:00 AM	3	7	0	4	14	3	7	0	4	14	0	0	0	0	0
	8:15 AM	7	7	0	1	15	7	6	0	1	14	0	1	0	0	1
	8:30 AM	9	4	0	2	15	9	4	0	2	15	0	0	0	0	0
	8:45 AM	5	6	0	6	17	4	6	0	6	16	1	0	0	0	1
	9:00 AM	10	5	0	6	21	10	5	0	6	21	0	0	0	0	0
	9:15 AM	15	13	0	7	35	15	13	0	7	35	0	0	0	0	0
	9:30 AM	18	5	0	9	32	18	5	0	9	32	0	0	0	0	0
	9:45 AM	10	11	0	13	34	10	11	0	13	34	0	0	0	0	0
	TOTAL	104	75	3	62	244	103	73	3	62	241	1	2	0	0	3
	AM BEGIN PEAK HR			8:30 AM			38	28	0	21	87					
PM	4:00 PM	15	36	0	16	67	15	33	0	16	64	0	3	0	0	3
	4:15 PM	6	34	0	7	47	6	32	0	7	45	0	2	0	0	2
	4:30 PM	12	38	0	7	57	12	38	0	6	56	0	0	0	1	1
	4:45 PM	22	36	0	11	69	22	36	0	11	69	0	0	0	0	0
	5:00 PM	21	39	0	11	71	20	39	0	11	70	1	0	0	0	1
	5:15 PM	17	24	0	6	47	17	23	0	6	46	0	1	0	0	1
	5:30 PM	6	34	0	8	48	6	34	0	8	48	0	0	0	0	0
	5:45 PM	8	14	0	5	27	7	14	0	5	26	1	0	0	0	1
	6:00 PM	11	19	0	2	32	11	19	0	2	32	0	0	0	0	0
	6:15 PM	5	33	0	3	41	5	32	0	3	40	0	1	0	0	1
	6:30 PM	10	12	0	11	33	9	11	0	11	31	1	1	0	0	2
	6:45 PM	5	9	0	5	19	4	9	0	5	18	1	0	0	0	1
	TOTAL	138	328	0	92	558	134	320	0	91	545	4	8	0	1	13
	PM BEGIN PEAK HR			4:45 PM			65	132	0	36	233					

INTERSECTION TURNING MOVEMENT COUNTS

T218

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

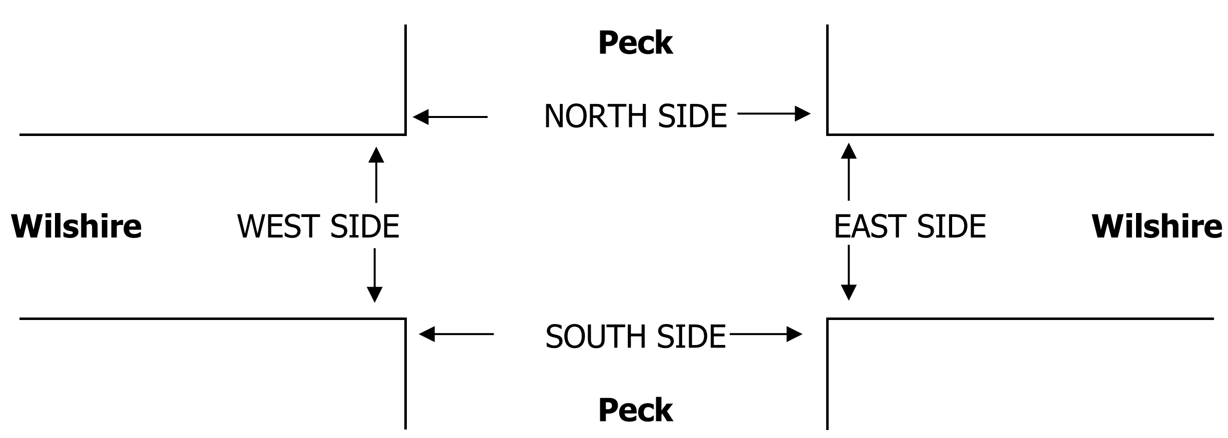
DATE:	LOCATION:	Beverly Hills	PROJECT #:	SC3746
Tue, Nov 15, 22	NORTH & SOUTH:	Peck	LOCATION #:	4
	EAST & WEST:	Wilshire	CONTROL:	STOP N

NOTES:

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

☑ Add U-Turns to Left Turns

	NORTHBOUND Peck			SOUTHBOUND Peck			EASTBOUND Wilshire			WESTBOUND Wilshire			TOTAL	U-TURNS NB	SB	EB	WB	TTL
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR		NB	SB	EB	WB	TTL
LANES:	X	X	1	X	X	X	1	3	0	0	3	0		0	0	0	0	
AM																		
7:00 AM	0	0	6	0	0	0	0	84	8	0	100	0	198	0	0	0	0	0
7:15 AM	0	0	15	0	0	0	0	108	6	1	120	1	251	0	0	0	0	0
7:30 AM	0	0	11	0	0	0	1	153	4	1	105	0	275	0	0	0	0	0
7:45 AM	0	0	25	0	0	0	0	195	7	0	147	0	374	0	0	0	0	0
8:00 AM	0	0	24	0	0	0	1	200	2	0	122	0	349	0	0	0	0	0
8:15 AM	0	0	26	0	0	0	0	232	6	1	145	0	410	0	0	0	0	0
8:30 AM	0	0	23	0	0	0	0	242	8	0	110	0	383	0	0	0	0	0
8:45 AM	0	0	28	0	0	0	1	257	7	0	104	0	397	0	0	0	0	0
9:00 AM	0	0	30	0	0	0	0	256	7	0	120	0	413	0	0	0	0	0
9:15 AM	1	0	36	0	0	0	1	258	7	0	114	0	417	1	0	0	0	1
9:30 AM	0	0	28	0	0	0	1	255	7	0	95	3	389	0	0	0	0	0
9:45 AM	0	0	19	0	0	0	1	243	6	1	91	0	361	0	0	0	0	0
VOLUMES	1	0	271	0	0	0	6	2,483	75	4	1,373	4	4,217	1	0	0	0	1
APPROACH %	0%	0%	100%	0%	0%	0%	0%	97%	3%	0%	99%	0%						
APP/DEPART	272	/	10	0	/	80	2,564	/	2,754	1,381	/	1,373	0					
BEGIN PEAK HR		8:45 AM																
VOLUMES	1	0	122	0	0	0	3	1,026	28	0	433	3	1,616					
APPROACH %	1%	0%	99%	0%	0%	0%	0%	97%	3%	0%	99%	1%						
PEAK HR FACTOR		0.831			0.000			0.993			0.908		0.969					
APP/DEPART	123	/	6	0	/	29	1,057	/	1,148	436	/	433	0					
PM																		
4:00 PM	0	0	16	0	0	0	1	311	29	2	124	4	487	0	0	0	0	0
4:15 PM	0	0	30	0	0	0	0	318	21	0	133	1	503	0	0	0	0	0
4:30 PM	0	0	13	0	0	0	1	345	23	2	133	0	517	0	0	0	0	0
4:45 PM	0	0	22	0	0	0	1	375	18	3	119	1	539	0	0	0	1	1
5:00 PM	0	0	23	0	0	0	1	392	23	2	134	0	575	0	0	0	1	1
5:15 PM	0	0	26	0	0	0	0	373	23	1	118	0	541	0	0	0	0	0
5:30 PM	0	0	22	0	0	0	0	377	24	0	145	0	568	0	0	0	0	0
5:45 PM	0	0	23	0	0	0	0	377	24	0	103	1	528	0	0	0	0	0
6:00 PM	0	0	28	0	0	0	0	251	13	2	104	0	398	0	0	0	0	0
6:15 PM	0	0	20	0	0	0	0	294	15	0	102	0	431	0	0	0	0	0
6:30 PM	0	0	23	0	0	0	0	298	14	0	107	0	442	0	0	0	0	0
6:45 PM	0	0	26	0	0	0	0	292	17	2	97	0	434	0	0	0	0	0
VOLUMES	0	0	272	0	0	0	4	4,003	244	14	1,419	7	5,963	0	0	0	2	2
APPROACH %	0%	0%	100%	0%	0%	0%	0%	94%	6%	1%	99%	0%						
APP/DEPART	272	/	11	0	/	256	4,251	/	4,277	1,440	/	1,419	0					
BEGIN PEAK HR		4:45 PM																
VOLUMES	0	0	93	0	0	0	2	1,517	88	6	516	1	2,223					
APPROACH %	0%	0%	100%	0%	0%	0%	0%	94%	5%	1%	99%	0%						
PEAK HR FACTOR		0.894			0.000			0.966			0.902		0.967					
APP/DEPART	93	/	3	0	/	92	1,607	/	1,612	523	/	516	0					



	PEDESTRIAN + BIKE CROSSINGS N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	PEDESTRIAN CROSSINGS N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	BICYCLE CROSSINGS NS	SS	ES	WS	TOTAL
AM															
7:00 AM	3	12	0	0	15	3	12	0	0	15	0	0	0	0	0
7:15 AM	3	6	0	0	9	2	6	0	0	8	1	0	0	0	1
7:30 AM	7	6	0	0	13	7	3	0	0	10	0	3	0	0	3
7:45 AM	13	2	0	0	15	13	2	0	0	15	0	0	0	0	0
8:00 AM	3	5	0	0	8	3	5	0	0	8	0	0	0	0	0
8:15 AM	14	6	1	0	21	14	6	1	0	21	0	0	0	0	0
8:30 AM	9	5	0	0	14	9	5	0	0	14	0	0	0	0	0
8:45 AM	14	6	0	2	22	14	6	0	2	22	0	0	0	0	0
9:00 AM	9	9	0	0	18	9	9	0	0	18	0	0	0	0	0
9:15 AM	16	13	0	0	29	14	13	0	0	27	2	0	0	0	2
9:30 AM	15	5	1	1	22	15	5	1	1	22	0	0	0	0	0
9:45 AM	18	12	1	0	31	18	12	0	0	30	0	0	1	0	1
TOTAL	124	87	3	3	217	121	84	2	3	210	3	3	1	0	7
AM BEGIN PEAK HR		8:45 AM				52	33	1	3	89					
PM															
4:00 PM	18	35	0	1	54	18	33	0	1	52	0	2	0	0	2
4:15 PM	24	22	0	0	46	24	19	0	0	43	0	3	0	0	3
4:30 PM	23	25	0	0	48	23	24	0	0	47	0	1	0	0	1
4:45 PM	24	33	0	0	57	24	33	0	0	57	0	0	0	0	0
5:00 PM	43	37	0	0	80	43	37	0	0	80	0	0	0	0	0
5:15 PM	24	34	0	1	59	24	33	0	0	57	0	1	0	1	2
5:30 PM	16	26	0	0	42	16	25	0	0	41	0	1	0	0	1
5:45 PM	9	16	0	0	25	9	16	0	0	25	0	0	0	0	0
6:00 PM	11	19	3	0	33	11	19	3	0	33	0	0	0	0	0
6:15 PM	15	11	0	0	26	15	9	0	0	24	0	2	0	0	2
6:30 PM	13	15	0	0	28	12	15	0	0	27	1	0	0	0	1
6:45 PM	13	7	0	0	20	12	7	0	0	19	1	0	0	0	1
TOTAL	233	280	3	2	518	231	270	3	1	505	2	10	0	1	13
PM BEGIN PEAK HR		4:45 PM				107	128	0	0	235					

INTERSECTION TURNING MOVEMENT COUNTS

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

DATE:	LOCATION:	Beverly Hills	PROJECT #:	SC3746
Tue, Nov 15, 22	NORTH & SOUTH:	Camden	LOCATION #:	5
	EAST & WEST:	Wilshire	CONTROL:	SIGNAL

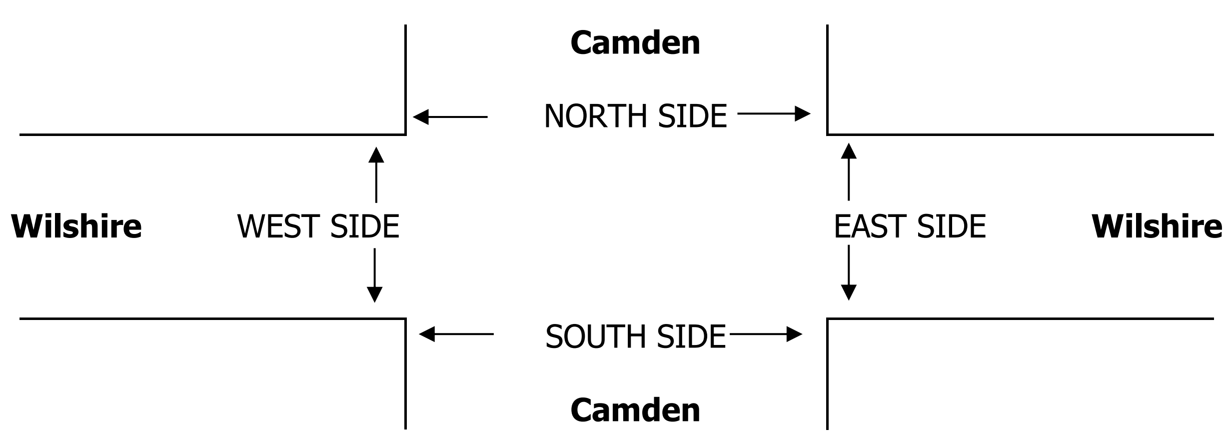
NOTES:

AM
PM
MD
OTHER
OTHER

▲ N
◄ W
E ►
S ▼

☑ Add U-Turns to Left Turns

	NORTHBOUND Camden			SOUTHBOUND Camden			EASTBOUND Wilshire			WESTBOUND Wilshire				U-TURNS				
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB	TTL
LANES:	X	X	X	X	X	X	1	X	X	X	X	1		0	0	0	0	
AM 7:00 AM	0	0	0	0	0	0	27	0	0	0	0	28	55	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	30	0	0	0	0	22	52	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	42	0	0	0	0	32	74	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	52	0	0	0	0	33	85	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	69	0	0	0	0	56	125	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	79	0	0	0	0	52	131	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	82	0	0	0	0	66	148	0	0	1	0	1
8:45 AM	0	0	0	0	0	0	100	0	0	0	0	67	167	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	117	0	0	0	0	65	182	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	84	0	0	0	0	69	153	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	78	0	0	0	0	51	129	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	83	0	0	0	0	54	137	0	0	0	0	0
VOLUMES	0	0	0	0	0	0	843	0	0	0	0	595	1,438	0	0	1	0	1
APPROACH %	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	100%						
APP/DEPART	0	/	1,437	0	/	0	843	/	0	595	/	1	0					
BEGIN PEAK HR		8:30 AM																
VOLUMES	0	0	0	0	0	0	383	0	0	0	0	267	650					
APPROACH %	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	100%						
PEAK HR FACTOR		0.000			0.000			0.818			0.967		0.893					
APP/DEPART	0	/	649	0	/	0	383	/	0	267	/	1	0					
PM 4:00 PM	0	0	0	0	0	0	19	0	0	0	0	22	41	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	43	0	0	0	0	31	74	0	0	1	0	1
4:30 PM	0	0	0	0	0	0	29	0	0	0	0	40	69	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	46	0	0	0	0	32	78	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	33	0	0	0	0	29	62	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	51	0	0	0	0	46	97	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	37	0	0	0	0	28	65	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	49	0	0	0	0	33	82	0	0	0	0	0
6:00 PM	0	0	0	0	0	0	41	0	0	0	0	30	71	0	0	0	0	0
6:15 PM	0	0	0	0	0	0	33	0	0	0	0	40	73	0	0	0	0	0
6:30 PM	0	0	0	0	0	0	39	0	0	0	0	24	63	0	0	0	0	0
6:45 PM	0	0	0	0	0	0	55	0	0	0	0	36	91	0	0	0	0	0
VOLUMES	0	0	0	0	0	0	475	0	0	0	0	391	866	0	0	1	0	1
APPROACH %	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	100%						
APP/DEPART	0	/	865	0	/	0	475	/	0	391	/	1	0					
BEGIN PEAK HR		5:15 PM																
VOLUMES	0	0	0	0	0	0	178	0	0	0	0	137	315					
APPROACH %	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	100%						
PEAK HR FACTOR		0.000			0.000			0.873			0.745		0.812					
APP/DEPART	0	/	315	0	/	0	178	/	0	137	/	0	0					



	PEDESTRIAN + BIKE CROSSINGS					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM 7:00 AM	7	0	0	0	7	7	0	0	0	7	0	0	0	0	0
7:15 AM	3	0	0	0	3	3	0	0	0	3	0	0	0	0	0
7:30 AM	23	0	0	0	23	23	0	0	0	23	0	0	0	0	0
7:45 AM	11	0	0	0	11	10	0	0	0	10	1	0	0	0	1
8:00 AM	8	0	0	0	8	8	0	0	0	8	0	0	0	0	0
8:15 AM	16	0	0	0	16	16	0	0	0	16	0	0	0	0	0
8:30 AM	9	0	0	0	9	9	0	0	0	9	0	0	0	0	0
8:45 AM	7	0	0	0	7	7	0	0	0	7	0	0	0	0	0
9:00 AM	18	0	0	0	18	18	0	0	0	18	0	0	0	0	0
9:15 AM	12	0	0	0	12	9	0	0	0	9	3	0	0	0	3
9:30 AM	20	0	0	0	20	20	0	0	0	20	0	0	0	0	0
9:45 AM	15	0	0	0	15	14	0	0	0	14	1	0	0	0	1
TOTAL	149	0	0	0	149	144	0	0	0	144	5	0	0	0	5
AM BEGIN PEAK HR			8:30 AM			43	0	0	0	43					
PM 4:00 PM	18	0	0	0	18	18	0	0	0	18	0	0	0	0	0
4:15 PM	14	0	0	0	14	14	0	0	0	14	0	0	0	0	0
4:30 PM	28	0	0	0	28	28	0	0	0	28	0	0	0	0	0
4:45 PM	24	0	0	0	24	24	0	0	0	24	0	0	0	0	0
5:00 PM	41	0	0	0	41	41	0	0	0	41	0	0	0	0	0
5:15 PM	30	0	0	0	30	30	0	0	0	30	0	0	0	0	0
5:30 PM	16	0	0	0	16	16	0	0	0	16	0	0	0	0	0
5:45 PM	19	0	0	0	19	19	0	0	0	19	0	0	0	0	0
6:00 PM	16	0	0	0	16	16	0	0	0	16	0	0	0	0	0
6:15 PM	25	0	0	0	25	25	0	0	0	25	0	0	0	0	0
6:30 PM	17	0	0	0	17	17	0	0	0	17	0	0	0	0	0
6:45 PM	13	0	0	0	13	12	0	0	0	12	1	0	0	0	1
TOTAL	261	0	0	0	261	260	0	0	0	260	1	0	0	0	1
PM BEGIN PEAK HR			5:15 PM			81	0	0	0	81					

INTERSECTION TURNING MOVEMENT COUNTS

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

DATE:	LOCATION:	Beverly Hills	PROJECT #:	SC3746
Tue, Nov 15, 22	NORTH & SOUTH:	Rodeo	LOCATION #:	6
	EAST & WEST:	Wilshire	CONTROL:	SIGNAL

NOTES:

AM
PM
MD
OTHER
OTHER

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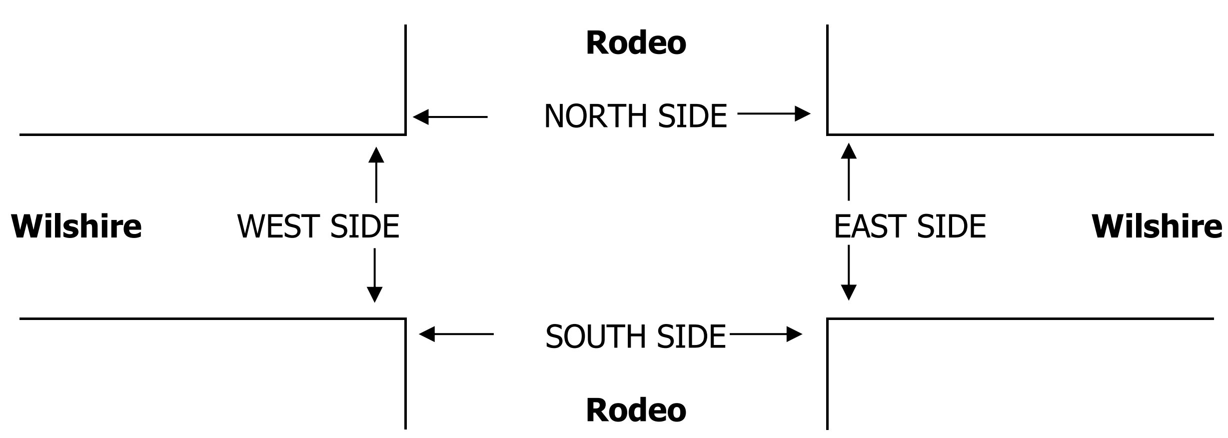
☑ Add U-Turns to Left Turns

		NORTHBOUND Rodeo			SOUTHBOUND Rodeo			EASTBOUND Wilshire			WESTBOUND Wilshire			
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	LANES:	1	0.5	0.5	1	1	1	1	3	0	X	3	0	
AM	7:00 AM	11	8	5	3	6	2	1	55	1	0	110	4	206
AM	7:15 AM	19	3	6	4	6	3	3	76	4	0	117	8	249
AM	7:30 AM	11	6	0	7	10	3	5	98	8	0	150	6	304
AM	7:45 AM	10	7	5	5	6	13	12	144	7	0	160	8	377
AM	8:00 AM	25	12	7	8	5	9	5	125	4	0	164	13	377
AM	8:15 AM	12	11	2	9	11	10	6	148	6	0	201	12	428
AM	8:30 AM	15	18	9	5	11	13	10	139	10	0	165	7	402
AM	8:45 AM	18	16	7	15	18	18	8	149	5	0	159	25	438
AM	9:00 AM	25	23	8	8	13	16	12	119	8	0	155	13	400
AM	9:15 AM	24	24	5	12	29	13	21	146	10	0	155	19	458
AM	9:30 AM	23	23	7	11	12	25	16	139	4	0	120	19	399
AM	9:45 AM	23	35	5	10	17	10	19	115	6	0	121	17	378
AM	VOLUMES	216	186	66	97	144	135	118	1,453	73	0	1,777	151	4,416
AM	APPROACH %	46%	40%	14%	26%	38%	36%	7%	88%	4%	0%	92%	8%	
AM	APP/DEPART	468	/	453	376	/	217	1,644	/	1,616	1,928	/	2,130	0
AM	BEGIN PEAK HR		8:30 AM											
AM	VOLUMES	82	81	29	40	71	60	51	553	33	0	634	64	1,698
AM	APPROACH %	43%	42%	15%	23%	42%	35%	8%	87%	5%	0%	91%	9%	
AM	PEAK HR FACTOR		0.857			0.792			0.900			0.948		0.927
AM	APP/DEPART	192	/	195	171	/	104	637	/	622	698	/	777	0
PM	4:00 PM	24	11	12	22	17	20	16	211	10	0	98	12	453
PM	4:15 PM	19	23	6	16	11	24	19	219	6	0	157	23	523
PM	4:30 PM	25	18	7	27	15	24	9	210	8	0	140	15	498
PM	4:45 PM	10	23	6	14	11	28	19	239	1	0	152	25	528
PM	5:00 PM	35	25	3	26	18	14	25	240	5	0	115	20	526
PM	5:15 PM	15	7	12	21	23	22	20	249	8	0	161	26	564
PM	5:30 PM	20	15	8	22	8	26	17	235	1	0	144	16	512
PM	5:45 PM	26	18	14	31	6	14	19	245	6	0	153	19	551
PM	6:00 PM	18	17	15	22	16	28	17	205	4	0	115	21	478
PM	6:15 PM	13	11	16	25	15	19	11	170	8	0	133	22	443
PM	6:30 PM	15	23	9	17	6	20	14	203	2	0	120	23	452
PM	6:45 PM	12	11	4	19	7	18	7	178	6	0	128	25	415
PM	VOLUMES	232	202	112	262	153	257	193	2,604	65	0	1,616	247	5,943
PM	APPROACH %	42%	37%	21%	39%	23%	38%	7%	91%	2%	0%	87%	13%	
PM	APP/DEPART	546	/	639	672	/	218	2,862	/	2,978	1,863	/	2,108	0
PM	BEGIN PEAK HR		5:00 PM											
PM	VOLUMES	96	65	37	100	55	76	81	969	20	0	573	81	2,153
PM	APPROACH %	48%	33%	19%	43%	24%	33%	8%	91%	2%	0%	88%	12%	
PM	PEAK HR FACTOR		0.786			0.875			0.966			0.874		0.954
PM	APP/DEPART	198	/	226	231	/	75	1,070	/	1,106	654	/	746	0

U-TURNS

	NB	SB	EB	WB	TTL
LANES	0	0	0	0	
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	1	0	1
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	1	0	1
9:00 AM	0	0	0	0	0
9:15 AM	0	0	0	0	0
9:30 AM	0	0	0	0	0
9:45 AM	0	0	0	0	0
VOLUMES	0	0	2	0	2
4:00 PM	0	0	1	0	1
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	1	0	1
6:00 PM	0	0	0	0	0
6:15 PM	0	0	0	0	0
6:30 PM	0	0	1	0	1
6:45 PM	0	0	0	0	0
VOLUMES	0	0	3	0	3



		PEDESTRIAN + BIKE CROSSINGS					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM	15	8	5	3	31	15	8	5	3	31	0	0	0	0	0
AM	7:15 AM	9	6	3	3	21	9	6	3	3	21	0	0	0	0	0
AM	7:30 AM	24	12	8	7	51	23	10	7	7	47	1	2	1	0	4
AM	7:45 AM	20	10	8	8	46	20	10	7	8	45	0	0	1	0	1
AM	8:00 AM	8	7	3	5	23	8	7	3	4	22	0	0	0	1	1
AM	8:15 AM	9	14	8	3	34	9	14	8	3	34	0	0	0	0	0
AM	8:30 AM	2	18	5	9	34	2	18	5	9	34	0	0	0	0	0
AM	8:45 AM	14	10	6	13	43	12	10	6	13	41	2	0	0	0	2
AM	9:00 AM	26	10	10	16	62	24	10	9	16	59	2	0	1	0	3
AM	9:15 AM	21	14	11	21	67	20	14	11	20	65	1	0	0	1	2
AM	9:30 AM	11	10	2	6	29	11	9	2	5	27	0	1	0	1	2
AM	9:45 AM	10	7	2	5	24	10	7	2	5	24	0	0	0	0	0
AM	TOTAL	169	126	71	99	465	163	123	68	96	450	6	3	3	3	15
	AM BEGIN PEAK HR			8:30 AM			58	52	31	58	199					
PM	4:00 PM	31	48	12	30	121	31	48	12	30	121	0	0	0	0	0
PM	4:15 PM	43	31	16	24	114	43	29	16	24	112	0	2	0	0	2
PM	4:30 PM	30	33	19	22	104	30	33	19	22	104	0	0	0	0	0
PM	4:45 PM	38	39	30	21	128	38	39	30	21	128	0	0	0	0	0
PM	5:00 PM	36	31	17	33	117	36	31	17	33	117	0	0	0	0	0
PM	5:15 PM	19	28	6	21	74	19	27	6	21	73	0	1	0	0	1
PM	5:30 PM	34	23	11	8	76	34	23	11	8	76	0	0	0	0	0
PM	5:45 PM	20	11	9	11	51	20	11	9	10	50	0	0	0	1	1
PM	6:00 PM	25	14	22	15	76	25	14	22	14	75	0	0	0	1	1
PM	6:15 PM	13	22	6	11	52	13	22	6	11	52	0	0	0	0	0
PM	6:30 PM	12	11	9	2	34	11	11	9	2	33	1	0	0	0	1
PM	6:45 PM	11	11	8	8	38	11	11	8	8	38	0	0	0	0	0
PM	TOTAL	312	302	165	206	985	311	299	165	204	979	1	3	0	2	6
	PM BEGIN PEAK HR			5:00 PM			109	92	43	72	316					

INTERSECTION TURNING MOVEMENT COUNTS

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

DATE:				
Wed, Nov 16, 22	LOCATION:	Beverly Hills	PROJECT #:	SC3746
	NORTH & SOUTH:	Beverly	LOCATION #:	7
	EAST & WEST:	Wilshire	CONTROL:	SIGNAL

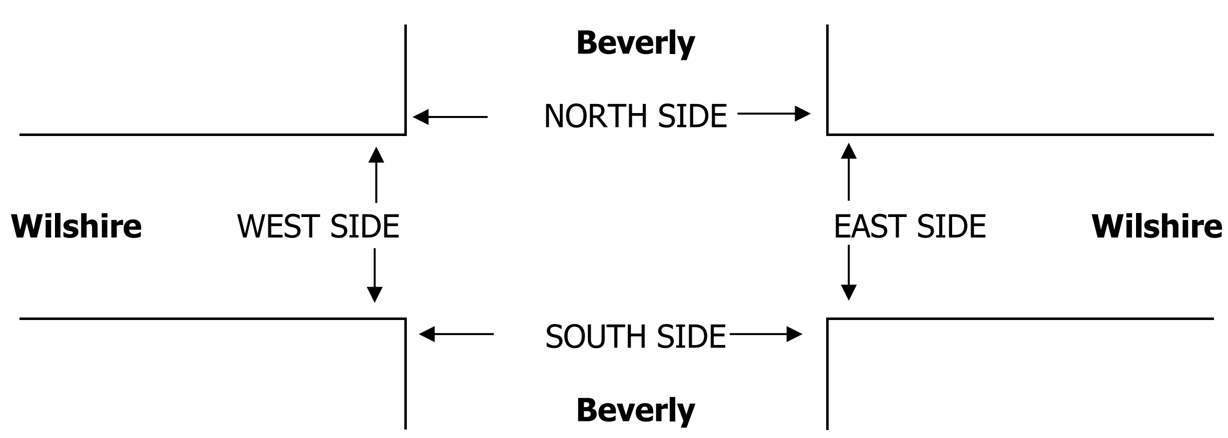
NOTES:

AM PM MD OTHER OTHER

▲ N ◄ W E ► S ▼

☑ Add U-Turns to Left Turns

	NORTHBOUND Beverly			SOUTHBOUND Beverly			EASTBOUND Wilshire			WESTBOUND Wilshire				U-TURNS				
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB	TTL
LANES:	1	2	1	X	2	1	1	2	1	1	3	0		0	0	0	0	
AM																		
7:00 AM	9	18	5	0	38	9	4	58	11	9	117	9	287	0	0	0	0	0
7:15 AM	11	55	7	0	45	8	6	65	9	11	121	11	349	0	0	0	0	0
7:30 AM	13	68	11	0	44	9	8	68	11	13	142	12	399	0	0	0	1	1
7:45 AM	12	71	12	0	55	5	5	99	12	13	145	13	442	0	0	0	0	0
8:00 AM	15	101	18	0	58	11	6	115	13	14	158	12	521	0	0	0	0	0
8:15 AM	14	117	15	0	88	12	4	145	17	15	152	11	590	0	0	0	0	0
8:30 AM	17	115	17	0	87	18	6	147	15	9	159	12	602	0	0	1	0	1
8:45 AM	18	118	18	0	91	15	8	162	14	8	157	15	624	0	0	0	0	0
9:00 AM	19	121	17	0	92	13	7	168	13	11	161	8	630	0	0	0	0	0
9:15 AM	21	117	19	0	93	14	5	172	18	15	162	12	648	0	0	0	0	0
9:30 AM	22	122	14	0	88	13	4	164	14	14	158	13	626	0	0	0	0	0
9:45 AM	23	119	15	0	85	11	2	162	11	15	155	15	613	0	0	0	0	0
VOLUMES	194	1,142	168	0	864	138	65	1,525	158	147	1,787	143	6,331	0	0	1	1	2
APPROACH %	13%	76%	11%	0%	86%	14%	4%	87%	9%	7%	86%	7%						
APP/DEPART	1,504	/	1,349	1,002	/	1,168	1,748	/	1,694	2,077	/	2,120	0					
BEGIN PEAK HR		8:45 AM																
VOLUMES	80	478	68	0	364	55	24	666	59	48	638	48	2,528					
APPROACH %	13%	76%	11%	0%	87%	13%	3%	89%	8%	7%	87%	7%						
PEAK HR FACTOR		0.991			0.979			0.960			0.971		0.975					
APP/DEPART	626	/	550	419	/	471	749	/	734	734	/	773	0					
PM																		
4:00 PM	21	78	25	0	145	21	4	198	19	11	115	18	655	0	0	0	0	0
4:15 PM	25	92	26	0	142	22	3	201	15	15	117	15	673	0	0	0	0	0
4:30 PM	23	98	23	0	132	28	5	205	14	14	131	16	689	0	0	0	0	0
4:45 PM	21	99	21	0	133	25	1	207	18	13	135	17	690	0	0	0	0	0
5:00 PM	25	111	28	0	134	23	2	211	19	12	141	15	721	0	0	0	0	0
5:15 PM	26	105	21	0	131	19	3	214	15	11	145	14	704	0	0	0	0	0
5:30 PM	27	101	22	0	145	18	2	215	14	14	144	15	717	0	0	0	0	0
5:45 PM	28	109	24	0	141	22	5	205	13	16	148	16	727	0	0	0	1	1
6:00 PM	22	105	25	0	155	25	4	202	15	12	144	14	723	0	0	0	0	0
6:15 PM	24	104	26	0	152	18	3	201	14	13	143	16	714	0	0	0	0	0
6:30 PM	26	101	23	0	148	17	4	203	13	14	141	18	708	0	0	0	0	0
6:45 PM	28	111	24	0	144	11	5	205	15	15	145	11	714	0	0	0	0	0
VOLUMES	296	1,214	288	0	1,702	249	41	2,467	184	160	1,649	185	8,435	0	0	0	1	1
APPROACH %	16%	68%	16%	0%	87%	13%	2%	92%	7%	8%	83%	9%						
APP/DEPART	1,798	/	1,440	1,951	/	2,045	2,692	/	2,756	1,994	/	2,194	0					
BEGIN PEAK HR		5:30 PM																
VOLUMES	101	419	97	0	593	83	14	823	56	55	579	61	2,881					
APPROACH %	16%	68%	16%	0%	88%	12%	2%	92%	6%	8%	83%	9%						
PEAK HR FACTOR		0.958			0.939			0.966			0.965		0.991					
APP/DEPART	617	/	494	676	/	703	893	/	921	695	/	763	0					



	PEDESTRIAN + BIKE CROSSINGS					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM															
7:00 AM	11	9	4	4	28	11	9	4	4	28	0	0	0	0	0
7:15 AM	8	10	5	5	28	8	10	5	5	28	0	0	0	0	0
7:30 AM	12	12	6	6	36	12	11	6	6	35	0	1	0	0	1
7:45 AM	12	16	7	7	42	11	15	7	7	40	1	1	0	0	2
8:00 AM	13	12	9	5	39	13	12	8	5	38	0	0	1	0	1
8:15 AM	11	14	5	5	35	10	13	5	4	32	1	1	0	1	3
8:30 AM	5	14	4	8	31	5	14	4	8	31	0	0	0	0	0
8:45 AM	8	12	3	11	34	7	12	3	11	33	1	0	0	0	1
9:00 AM	18	11	9	15	53	15	11	7	15	48	3	0	2	0	5
9:15 AM	19	10	9	18	56	17	10	8	18	53	2	0	1	0	3
9:30 AM	18	11	5	11	45	18	11	5	11	45	0	0	0	0	0
9:45 AM	14	12	3	13	42	14	12	3	12	41	0	0	0	1	1
TOTAL	149	143	69	108	469	141	140	65	106	452	8	3	4	0	17
AM BEGIN PEAK HR			8:45 AM			57	44	23	55	179					
PM															
4:00 PM	26	35	15	15	91	25	35	15	15	90	1	0	0	0	1
4:15 PM	28	32	13	15	88	28	31	13	14	86	0	1	0	1	2
4:30 PM	23	32	15	16	86	23	32	15	16	86	0	0	0	0	0
4:45 PM	31	34	18	18	101	31	33	18	18	100	0	1	0	0	1
5:00 PM	36	32	17	17	102	35	32	17	17	101	1	0	0	0	1
5:15 PM	14	35	19	16	84	14	33	19	16	82	0	2	0	0	2
5:30 PM	15	31	15	11	72	15	31	15	11	72	0	0	0	0	0
5:45 PM	21	16	16	12	65	21	15	16	12	64	0	1	0	0	1
6:00 PM	22	14	18	11	65	22	14	18	11	65	0	0	0	0	0
6:15 PM	25	16	11	14	66	25	16	11	13	65	0	0	0	1	1
6:30 PM	23	18	15	13	69	23	18	15	12	68	0	0	0	1	1
6:45 PM	21	15	11	11	58	21	15	11	11	58	0	0	0	0	0
TOTAL	285	310	183	169	947	283	305	183	166	937	2	5	0	3	10
PM BEGIN PEAK HR			5:30 PM			83	76	60	47	266					

INTERSECTION TURNING MOVEMENT COUNTS

T218

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

DATE:				
Tue, Nov 15, 22	LOCATION: Beverly Hills		PROJECT #:	SC3746
	NORTH & SOUTH: Bedford		LOCATION #:	8
	EAST & WEST: Charleville		CONTROL:	STOP ALL

NOTES:

AM
PM
MD
OTHER
OTHER

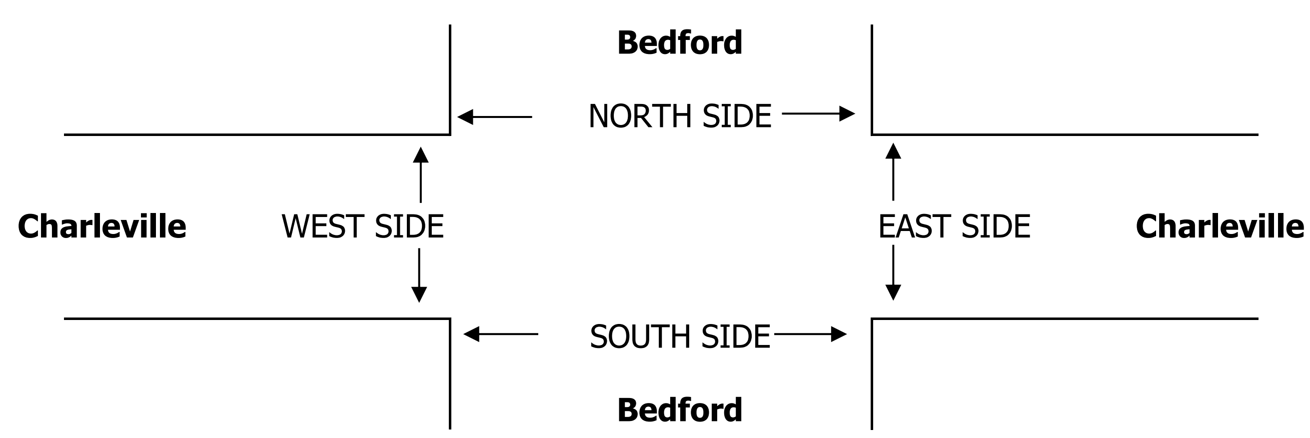
▲ N ◄ W E ► S ▼

☑ Add U-Turns to Left Turns

		NORTHBOUND Bedford			SOUTHBOUND Bedford			EASTBOUND Charleville			WESTBOUND Charleville			
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
AM	7:00 AM	1	3	0	0	6	4	3	10	0	1	14	0	42
	7:15 AM	0	7	0	2	6	4	1	9	0	2	9	4	44
	7:30 AM	2	6	2	2	8	3	3	10	0	1	24	1	62
	7:45 AM	1	9	0	2	9	7	2	24	1	3	50	3	111
	8:00 AM	4	12	1	1	7	8	1	33	0	2	84	5	158
	8:15 AM	3	16	3	1	14	4	3	54	3	2	62	2	167
	8:30 AM	1	8	1	2	11	6	4	34	3	0	34	6	110
	8:45 AM	3	12	1	4	7	5	3	21	5	1	38	4	104
	9:00 AM	4	16	2	9	13	9	4	18	4	2	33	12	126
	9:15 AM	2	15	3	3	13	9	3	21	1	5	35	5	115
	9:30 AM	2	8	1	4	11	5	3	25	0	0	30	10	99
	9:45 AM	2	17	0	2	10	7	6	31	1	2	38	5	121
	VOLUMES	25	129	14	32	115	71	36	290	18	21	451	57	1,259
	APPROACH %	15%	77%	8%	15%	53%	33%	10%	84%	5%	4%	85%	11%	
	APP/DEPART	168	/	221	218	/	151	344	/	340	529	/	547	0
	BEGIN PEAK HR		7:45 AM											
	VOLUMES	9	45	5	6	41	25	10	145	7	7	230	16	546
	APPROACH %	15%	76%	8%	8%	57%	35%	6%	90%	4%	3%	91%	6%	
	PEAK HR FACTOR		0.670			0.947			0.675			0.695		0.817
	APP/DEPART	59	/	70	72	/	56	162	/	156	253	/	264	0
PM	4:00 PM	2	2	5	3	30	10	2	35	0	1	41	2	133
	4:15 PM	5	10	3	6	35	17	1	36	0	2	36	3	154
	4:30 PM	4	9	4	6	40	9	4	38	1	6	38	1	160
	4:45 PM	4	8	4	5	31	11	3	35	1	1	40	8	151
	5:00 PM	3	9	2	12	30	11	4	65	4	1	42	4	187
	5:15 PM	1	6	3	12	35	13	2	72	1	4	38	3	190
	5:30 PM	0	4	5	7	41	18	2	68	3	4	36	3	191
	5:45 PM	1	7	3	7	26	5	2	81	1	0	25	2	160
	6:00 PM	2	7	1	5	30	9	2	34	2	3	33	8	136
	6:15 PM	0	3	0	6	23	7	3	25	0	2	27	4	100
	6:30 PM	1	6	0	5	20	4	2	26	2	0	24	4	94
	6:45 PM	1	3	3	0	25	6	1	36	1	0	21	3	100
	VOLUMES	24	74	33	74	366	120	28	551	16	24	401	45	1,756
	APPROACH %	18%	56%	25%	13%	65%	21%	5%	93%	3%	5%	85%	10%	
	APP/DEPART	131	/	148	560	/	406	595	/	658	470	/	544	0
	BEGIN PEAK HR		5:00 PM											
	VOLUMES	5	26	13	38	132	47	10	286	9	9	141	12	728
	APPROACH %	11%	59%	30%	18%	61%	22%	3%	94%	3%	6%	87%	7%	
	PEAK HR FACTOR		0.786			0.822			0.908			0.862		0.953
	APP/DEPART	44	/	48	217	/	150	305	/	337	162	/	193	0

U-TURNS

	NB	SB	EB	WB	TTL
LANES	0	0	0	0	
7:00 AM	0	0	0	1	1
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	1	0	1
8:00 AM	0	0	0	0	0
8:15 AM	1	0	0	0	1
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
9:00 AM	0	0	0	2	2
9:15 AM	0	0	0	1	1
9:30 AM	0	0	0	0	0
9:45 AM	0	0	0	0	0
AM VOLUMES	1	0	1	4	6
4:00 PM	0	0	0	0	0
4:15 PM	0	1	0	0	1
4:30 PM	0	0	0	1	1
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
6:00 PM	0	0	0	0	0
6:15 PM	0	0	0	0	0
6:30 PM	1	0	0	0	1
6:45 PM	0	0	0	0	0
PM VOLUMES	1	1	0	1	3



		PEDESTRIAN + BIKE CROSSINGS					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM	4	5	2	1	12	3	3	1	1	8	1	2	1	0	4
	7:15 AM	6	8	2	1	17	5	7	2	1	15	1	1	0	0	2
	7:30 AM	4	5	4	0	13	3	3	4	0	10	1	2	0	0	3
	7:45 AM	7	11	1	3	22	7	9	1	3	20	0	2	0	0	2
	8:00 AM	5	12	1	0	18	3	12	1	0	16	2	0	0	0	2
	8:15 AM	9	9	2	0	20	4	9	2	0	15	5	0	0	0	5
	8:30 AM	8	10	0	1	19	5	10	0	1	16	3	0	0	0	3
	8:45 AM	10	8	0	2	20	9	7	0	2	18	1	1	0	0	2
	9:00 AM	8	5	3	1	17	6	5	3	1	15	2	0	0	0	2
	9:15 AM	9	12	1	2	24	8	12	1	2	23	1	0	0	0	1
	9:30 AM	3	6	1	2	12	3	6	1	2	12	0	0	0	0	0
	9:45 AM	8	1	0	1	10	6	1	0	1	8	2	0	0	0	2
	TOTAL	81	92	17	14	204	62	84	16	14	176	19	8	1	0	28
	AM BEGIN PEAK HR			7:45 AM			19	40	4	4	67					
PM	4:00 PM	8	11	2	2	23	8	8	2	2	20	0	3	0	0	3
	4:15 PM	3	9	0	1	13	2	8	0	1	11	1	1	0	0	2
	4:30 PM	2	8	2	3	15	2	6	2	3	13	0	2	0	0	2
	4:45 PM	6	8	2	3	19	6	8	2	3	19	0	0	0	0	0
	5:00 PM	5	5	1	0	11	4	5	1	0	10	1	0	0	0	1
	5:15 PM	4	8	2	1	15	4	8	2	1	15	0	0	0	0	0
	5:30 PM	1	3	1	1	6	1	3	1	1	6	0	0	0	0	0
	5:45 PM	2	2	0	1	5	1	2	0	1	4	1	0	0	0	1
	6:00 PM	2	5	1	2	10	1	4	1	2	8	1	1	0	0	2
	6:15 PM	12	6	3	5	26	10	5	3	5	23	2	1	0	0	3
	6:30 PM	1	11	4	1	17	1	11	4	1	17	0	0	0	0	0
	6:45 PM	3	2	2	2	9	3	2	2	2	9	0	0	0	0	0
	TOTAL	49	78	20	22	169	43	70	20	22	155	6	8	0	0	14
	PM BEGIN PEAK HR			5:00 PM			10	18	4	3	35					

INTERSECTION TURNING MOVEMENT COUNTS

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

DATE:	LOCATION:	Beverly Hills	PROJECT #:	SC3746
Tue, Nov 15, 22	NORTH & SOUTH:	Peck	LOCATION #:	9
	EAST & WEST:	Charleville	CONTROL:	STOP ALL

NOTES:

AM PM MD OTHER OTHER

▲ N ◄ W E ► S ▼

☑ Add U-Turns to Left Turns

		NORTHBOUND Peck			SOUTHBOUND Peck			EASTBOUND Charleville			WESTBOUND Charleville			TOTAL
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
AM	7:00 AM	0	6	2	1	4	2	2	9	0	1	12	2	41
	7:15 AM	0	17	0	1	0	1	1	10	0	0	10	0	40
	7:30 AM	0	8	3	2	4	1	2	12	1	1	25	3	62
	7:45 AM	1	21	4	2	5	1	2	23	1	4	52	3	119
	8:00 AM	1	22	3	5	1	1	1	33	1	1	88	4	161
	8:15 AM	4	21	4	2	6	1	4	52	1	2	62	3	162
	8:30 AM	1	26	2	2	5	1	3	33	2	2	36	2	115
	8:45 AM	2	25	1	4	3	2	4	26	0	1	42	7	117
	9:00 AM	3	31	0	2	5	0	1	28	2	1	42	6	121
	9:15 AM	1	30	2	1	1	1	6	21	2	2	42	6	115
	9:30 AM	1	18	4	3	5	4	5	26	0	2	36	14	118
	9:45 AM	2	22	2	0	2	0	2	29	3	1	40	2	105
	VOLUMES	16	247	27	25	41	15	33	302	13	18	487	52	1,276
	APPROACH %	6%	85%	9%	31%	51%	19%	9%	87%	4%	3%	87%	9%	
	APP/DEPART	290	/	330	81	/	74	348	/	353	557	/	519	0
	BEGIN PEAK HR		7:45 AM											
	VOLUMES	7	90	13	11	17	4	10	141	5	9	238	12	557
	APPROACH %	6%	82%	12%	34%	53%	13%	6%	90%	3%	3%	92%	5%	
	PEAK HR FACTOR		0.948			0.889			0.684			0.696		0.860
	APP/DEPART	110	/	112	32	/	33	156	/	164	259	/	248	0
PM	4:00 PM	1	16	6	10	16	2	2	36	6	1	41	5	142
	4:15 PM	3	19	5	6	10	2	3	41	0	3	34	13	139
	4:30 PM	2	11	3	6	18	3	1	43	5	3	41	4	140
	4:45 PM	1	19	7	3	9	5	3	40	1	5	44	6	143
	5:00 PM	2	17	1	6	14	5	3	72	3	1	40	6	170
	5:15 PM	1	25	1	6	12	3	2	81	4	3	44	5	187
	5:30 PM	1	15	5	12	10	4	3	74	2	1	37	4	168
	5:45 PM	3	23	1	9	13	5	5	84	1	2	19	5	170
	6:00 PM	1	16	3	2	9	7	1	38	1	2	38	2	120
	6:15 PM	0	15	1	8	6	4	1	32	0	2	24	5	98
	6:30 PM	1	18	5	7	7	4	1	27	2	0	24	5	101
	6:45 PM	0	21	4	5	19	5	3	33	3	0	18	4	115
	VOLUMES	16	215	42	80	143	49	28	601	28	23	404	64	1,693
	APPROACH %	6%	79%	15%	29%	53%	18%	4%	91%	4%	5%	82%	13%	
	APP/DEPART	273	/	308	272	/	194	657	/	722	491	/	469	0
	BEGIN PEAK HR		5:00 PM											
	VOLUMES	7	80	8	33	49	17	13	311	10	7	140	20	695
	APPROACH %	7%	84%	8%	33%	49%	17%	4%	93%	3%	4%	84%	12%	
	PEAK HR FACTOR		0.880			0.917			0.928			0.803		0.929
	APP/DEPART	95	/	114	99	/	66	334	/	351	167	/	164	0

U-TURNS

	NB	SB	EB	WB	TTL
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	1	1	0	2
8:00 AM	0	0	0	0	0
8:15 AM	2	0	0	0	2
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
9:00 AM	0	0	0	0	0
9:15 AM	0	0	2	0	2
9:30 AM	0	0	0	0	0
9:45 AM	0	0	0	0	0
AM VOLUMES	2	1	3	0	6
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	1	0	0	1
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
6:00 PM	0	0	0	0	0
6:15 PM	0	0	0	0	0
6:30 PM	0	0	0	0	0
6:45 PM	0	0	0	0	0
PM VOLUMES	0	1	0	0	1

Peck

NORTH SIDE

Charleville WEST SIDE EAST SIDE Charleville

SOUTH SIDE

Peck

		PEDESTRIAN + BIKE CROSSINGS					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM	4	4	0	1	9	3	3	0	1	7	1	1	0	0	2
	7:15 AM	3	7	1	2	13	3	6	1	2	12	0	1	0	0	1
	7:30 AM	7	6	1	2	16	6	4	1	2	13	1	2	0	0	3
	7:45 AM	11	12	2	0	25	9	10	2	0	21	2	2	0	0	4
	8:00 AM	6	11	0	1	18	4	11	0	1	16	2	0	0	0	2
	8:15 AM	3	13	0	2	18	1	12	0	1	14	2	1	0	1	4
	8:30 AM	9	13	0	1	23	6	13	0	1	20	3	0	0	0	3
	8:45 AM	10	7	1	3	21	9	6	1	3	19	1	1	0	0	2
	9:00 AM	6	3	0	1	10	4	3	0	1	8	2	0	0	0	2
	9:15 AM	13	8	1	1	23	12	8	0	0	20	1	0	1	1	3
	9:30 AM	3	7	1	1	12	3	7	1	1	12	0	0	0	0	0
	9:45 AM	7	5	3	0	15	5	4	1	0	10	2	1	2	0	5
	TOTAL	82	96	10	15	203	65	87	7	13	172	17	9	3	2	31
	AM BEGIN PEAK HR			7:45 AM			20	46	2	3	71					
PM	4:00 PM	11	10	5	4	30	11	7	5	4	27	0	3	0	0	3
	4:15 PM	7	8	3	3	21	6	7	3	3	19	1	1	0	0	2
	4:30 PM	2	6	1	0	9	2	4	1	0	7	0	2	0	0	2
	4:45 PM	11	8	3	3	25	11	8	3	3	25	0	0	0	0	0
	5:00 PM	3	5	1	1	10	3	4	1	1	9	0	1	0	0	1
	5:15 PM	4	7	0	1	12	4	6	0	0	10	0	1	0	1	2
	5:30 PM	2	5	0	4	11	2	5	0	4	11	0	0	0	0	0
	5:45 PM	4	2	1	1	8	3	2	1	1	7	1	0	0	0	1
	6:00 PM	3	3	3	1	10	2	3	2	1	8	1	0	1	0	2
	6:15 PM	10	3	1	0	14	8	2	1	0	11	2	1	0	0	3
	6:30 PM	3	11	2	3	19	3	11	2	3	19	0	0	0	0	0
	6:45 PM	7	1	1	1	10	7	1	1	1	10	0	0	0	0	0
	TOTAL	67	69	21	22	179	62	60	20	21	163	5	9	1	1	16
	PM BEGIN PEAK HR			5:00 PM			12	17	2	6	37					

INTERSECTION TURNING MOVEMENT COUNTS

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

DATE: Tue, Nov 15, 22	LOCATION:	Beverly Hills	PROJECT #:	SC3746
	NORTH & SOUTH:	Camden	LOCATION #:	10
	EAST & WEST:	Charleville	CONTROL:	STOP ALL

NOTES:

AM PM MD OTHER OTHER

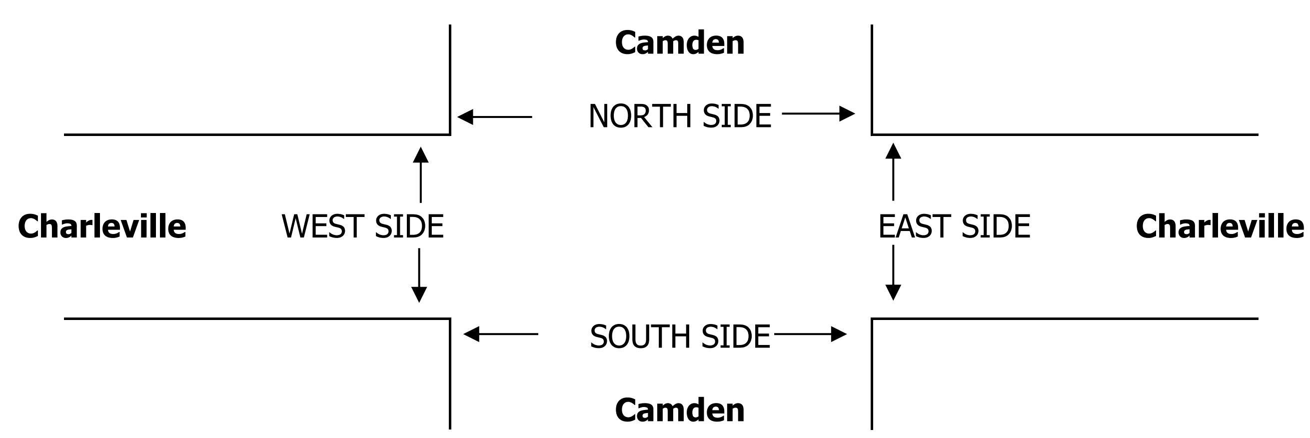
▲ N S ▼ ◄ W E ►

☑ Add U-Turns to Left Turns

	NORTHBOUND Camden			SOUTHBOUND Camden			EASTBOUND Charleville			WESTBOUND Charleville			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
AM													
7:00 AM	3	2	1	0	1	1	0	11	1	2	11	1	34
7:15 AM	1	6	2	2	1	0	1	9	2	0	12	2	38
7:30 AM	2	2	1	0	4	2	2	13	2	2	25	1	56
7:45 AM	3	6	3	0	3	2	0	26	1	4	59	0	107
8:00 AM	5	8	6	2	7	7	1	39	3	6	77	0	161
8:15 AM	1	6	4	1	8	6	0	57	2	4	62	3	154
8:30 AM	5	2	4	4	3	3	2	33	2	2	31	0	91
8:45 AM	8	7	4	2	6	0	2	28	1	3	39	3	103
9:00 AM	2	6	4	3	9	3	0	25	3	4	44	2	105
9:15 AM	4	6	8	3	13	1	0	25	1	5	47	6	119
9:30 AM	4	7	4	2	9	12	3	29	2	1	38	2	113
9:45 AM	1	9	5	3	12	3	1	27	3	2	37	4	107
VOLUMES	39	67	46	22	76	40	12	322	23	35	482	24	1,188
APPROACH %	26%	44%	30%	16%	55%	29%	3%	90%	6%	6%	89%	4%	
APP/DEPART	152	/	103	138	/	133	357	/	390	541	/	562	0
BEGIN PEAK HR		7:45 AM											
VOLUMES	14	22	17	7	21	18	3	155	8	16	229	3	513
APPROACH %	26%	42%	32%	15%	46%	39%	2%	93%	5%	6%	92%	1%	
PEAK HR FACTOR		0.697			0.719			0.703			0.747		0.797
APP/DEPART	53	/	28	46	/	45	166	/	179	248	/	261	0
PM													
4:00 PM	5	5	3	3	16	6	3	45	6	6	34	6	138
4:15 PM	0	4	3	9	14	7	1	40	6	5	40	2	131
4:30 PM	3	9	6	8	15	5	1	52	4	7	42	2	154
4:45 PM	6	4	1	7	24	6	1	46	2	3	44	2	146
5:00 PM	3	9	6	3	18	4	2	67	5	5	38	3	163
5:15 PM	6	4	5	1	22	4	3	81	8	2	44	3	183
5:30 PM	2	7	4	4	20	3	2	75	7	10	37	0	171
5:45 PM	5	7	10	6	18	2	2	85	9	5	20	2	171
6:00 PM	1	10	2	5	15	4	1	39	4	4	37	0	122
6:15 PM	3	6	3	5	17	4	2	39	2	11	26	0	118
6:30 PM	0	8	3	3	17	11	1	32	5	4	18	6	108
6:45 PM	0	2	3	3	14	3	3	34	4	5	23	0	94
VOLUMES	34	75	49	57	210	59	22	635	62	67	403	26	1,699
APPROACH %	22%	47%	31%	17%	64%	18%	3%	88%	9%	14%	81%	5%	
APP/DEPART	158	/	124	326	/	339	719	/	739	496	/	497	0
BEGIN PEAK HR		5:00 PM											
VOLUMES	16	27	25	14	78	13	9	308	29	22	139	8	688
APPROACH %	24%	40%	37%	13%	74%	12%	3%	89%	8%	13%	82%	5%	
PEAK HR FACTOR		0.773			0.972			0.901			0.862		0.940
APP/DEPART	68	/	44	105	/	129	346	/	347	169	/	168	0

U-TURNS

	NB	SB	EB	WB	TTL
LANES:	0	0	0	0	
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	1	0	1
9:00 AM	0	0	0	0	0
9:15 AM	0	0	0	0	0
9:30 AM	0	0	0	0	0
9:45 AM	0	1	0	1	2
VOLUMES	0	1	1	1	3
4:00 PM	0	0	0	0	0
4:15 PM	0	1	0	0	1
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
6:00 PM	0	0	0	0	0
6:15 PM	0	0	0	0	0
6:30 PM	0	1	0	0	1
6:45 PM	0	0	1	0	1
VOLUMES	0	2	1	0	3



	PEDESTRIAN + BIKE CROSSINGS					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM															
7:00 AM	5	3	1	2	11	3	2	1	2	8	2	1	0	0	3
7:15 AM	4	7	2	0	13	3	7	2	0	12	1	0	0	0	1
7:30 AM	9	5	1	2	17	8	2	1	2	13	1	3	0	0	4
7:45 AM	14	12	1	1	28	12	9	1	1	23	2	3	0	0	5
8:00 AM	5	12	0	6	23	4	12	0	6	22	1	0	0	0	1
8:15 AM	7	14	5	2	28	4	14	5	2	25	3	0	0	0	3
8:30 AM	8	11	2	7	28	6	11	2	6	25	2	0	0	1	3
8:45 AM	10	6	2	2	20	9	5	2	2	18	1	1	0	0	2
9:00 AM	6	7	1	3	17	4	7	1	3	15	2	0	0	0	2
9:15 AM	11	4	0	7	22	10	4	0	7	21	1	0	0	0	1
9:30 AM	6	9	1	0	16	6	9	1	0	16	0	0	0	0	0
9:45 AM	5	5	3	1	14	3	4	3	1	11	2	1	0	0	3
TOTAL	90	95	19	33	237	72	86	19	32	209	18	9	0	1	28
AM BEGIN PEAK HR			7:45 AM			26	46	8	15	95					
PM															
4:00 PM	13	17	0	5	35	13	14	0	5	32	0	3	0	0	3
4:15 PM	5	10	4	3	22	4	9	4	3	20	1	1	0	0	2
4:30 PM	3	10	3	3	19	3	8	3	3	17	0	2	0	0	2
4:45 PM	6	8	4	1	19	6	7	4	1	18	0	1	0	0	1
5:00 PM	9	3	0	4	16	8	3	0	3	14	1	0	0	1	2
5:15 PM	8	7	2	1	18	8	6	2	1	17	0	1	0	0	1
5:30 PM	4	4	2	3	13	4	4	2	3	13	0	0	0	0	0
5:45 PM	3	1	3	2	9	3	1	3	2	9	0	0	0	0	0
6:00 PM	2	6	3	2	13	1	6	3	2	12	1	0	0	0	1
6:15 PM	9	3	0	2	14	9	2	0	2	13	0	1	0	0	1
6:30 PM	0	9	0	2	11	0	9	0	2	11	0	0	0	0	0
6:45 PM	4	3	0	1	8	4	3	0	1	8	0	0	0	0	0
TOTAL	66	81	21	29	197	63	72	21	28	184	3	9	0	1	13
PM BEGIN PEAK HR			5:00 PM			23	14	7	9	53					

Appendix B:
LOS Worksheets

LOS Worksheets: Existing Conditions

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	794	49	0	448	0	223	0	85	70	0	54
Future Volume (veh/h)	0	794	49	0	448	0	223	0	85	70	0	54
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	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	0	1196	1196	0	1196	0	1148	0	1196	1244	0	1196
Adj Flow Rate, veh/h	0	882	47	0	498	0	248	0	26	78	0	17
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	2	2	0	2	0	2	0	2	2	0	2
Cap, veh/h	0	2069	110	0	2135	0	270	0	0	293	0	0
Arrive On Green	0.00	0.65	0.65	0.00	0.87	0.00	0.25	0.00	0.00	0.25	0.00	0.00
Sat Flow, veh/h	0	3272	168	0	3481	0	1094	248		1185	78	
Grp Volume(v), veh/h	0	606	323	0	498	0	248	52.7		78	30.8	
Grp Sat Flow(s),veh/h/ln	0	1088	1156	0	1088	0	1094	D		1185	C	
Q Serve(g_s), s	0.0	13.4	13.4	0.0	2.5	0.0	22.1			5.3		
Cycle Q Clear(g_c), s	0.0	13.4	13.4	0.0	2.5	0.0	22.1			5.3		
Prop In Lane	0.00		0.15	0.00		0.00	1.00			1.00		
Lane Grp Cap(c), veh/h	0	1423	755	0	2135	0	270			293		
V/C Ratio(X)	0.00	0.43	0.43	0.00	0.23	0.00	0.92			0.27		
Avail Cap(c_a), veh/h	0	1423	755	0	2135	0	442			479		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.33	1.00	1.00			1.00		
Upstream Filter(I)	0.00	1.00	1.00	0.00	0.94	0.00	1.00			1.00		
Uniform Delay (d), s/veh	0.0	8.3	8.3	0.0	2.4	0.0	36.6			30.3		
Incr Delay (d2), s/veh	0.0	0.9	1.8	0.0	0.2	0.0	16.1			0.5		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0		
%ile BackOfQ(50%),veh/ln	0.0	3.0	3.4	0.0	0.5	0.0	7.1			1.6		
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	9.2	10.1	0.0	2.7	0.0	52.7			30.8		
LnGrp LOS	A	A	B	A	A	A	D			C		
Approach Vol, veh/h		929			498							
Approach Delay, s/veh		9.5			2.7							
Approach LOS		A			A							
Timer - Assigned Phs		2	3			6	7					
Phs Duration (G+Y+Rc), s		70.7	29.3			70.7	29.3					
Change Period (Y+Rc), s		5.3	4.6			5.3	4.6					
Max Green Setting (Gmax), s		49.7	40.4			49.7	40.4					
Max Q Clear Time (g_c+I1), s		15.4	24.1			4.5	7.3					
Green Ext Time (p_c), s		13.8	0.7			7.5	0.2					
Intersection Summary												
HCM 6th Ctrl Delay			14.6									
HCM 6th LOS			B									

Movement	EBL2	EBT	EBR	WBL	WBT	WBR	NBR	SBR	SBR2
Lane Configurations									
Traffic Volume (vph)	190	694	51	21	418	106	95	87	197
Future Volume (vph)	190	694	51	21	418	106	95	87	197
Ideal Flow (vphpl)	1350	1350	1350	1350	1350	1350	1350	1350	1350
Lane Width	9	10	10	9	10	10	12	10	10
Total Lost time (s)	4.6	5.3		4.0	5.3		4.6	4.6	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.88	1.00
Frpb, ped/bikes	1.00	0.99		1.00	0.98		1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.99		1.00	0.97		0.86	0.85	0.85
Flt Protected	0.95	1.00		0.95	1.00		1.00	1.00	1.00
Satd. Flow (prot)	1018	2988		1018	2884		1030	1663	945
Flt Permitted	0.95	1.00		0.95	1.00		1.00	1.00	1.00
Satd. Flow (perm)	1018	2988		1018	2884		1030	1663	945
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	211	771	57	23	464	118	106	97	219
RTOR Reduction (vph)	0	7	0	0	0	0	0	0	0
Lane Group Flow (vph)	211	821	0	23	582	0	106	97	219
Confl. Peds. (#/hr)			24			64			
Confl. Bikes (#/hr)			3			3	3	3	
Turn Type	Prot	NA		Prot	NA		Prot	Prot	Free
Protected Phases	5	2		1	6		8	4	
Permitted Phases									Free
Actuated Green, G (s)	15.4	69.1		1.0	54.1		16.0	16.0	100.0
Effective Green, g (s)	15.4	69.1		1.0	54.1		16.0	16.0	100.0
Actuated g/C Ratio	0.15	0.69		0.01	0.54		0.16	0.16	1.00
Clearance Time (s)	4.6	5.3		4.0	5.3		4.6	4.6	
Vehicle Extension (s)	1.5	3.0		1.5	3.0		2.5	2.5	
Lane Grp Cap (vph)	156	2064		10	1560		164	266	945
v/s Ratio Prot	c0.21	c0.27		0.02	0.20		c0.10	0.06	
v/s Ratio Perm									0.23
v/c Ratio	1.35	0.40		2.30	0.37		0.65	0.36	0.23
Uniform Delay, d1	42.3	6.6		49.5	13.2		39.3	37.5	0.0
Progression Factor	0.81	0.47		0.72	0.98		1.00	1.00	1.00
Incremental Delay, d2	191.1	0.5		810.4	0.7		7.5	0.6	0.6
Delay (s)	225.2	3.6		846.1	13.7		46.9	38.1	0.6
Level of Service	F	A		F	B		D	D	A
Approach Delay (s)		48.6			45.3				
Approach LOS		D			D				

Intersection Summary			
HCM 2000 Control Delay	42.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	14.5
Intersection Capacity Utilization	51.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	765	25	8	439	0	27	0	38	241	77	42
Future Volume (veh/h)	0	765	25	8	439	0	27	0	38	241	77	42
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	0.99		1.00	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	0	1148	1148	1148	1148	0	1196	0	1196	1196	1196	1196
Adj Flow Rate, veh/h	0	850	26	9	488	0	30	0	42	268	86	6
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	2	2	2	2	0	2	0	2	2	2	2
Cap, veh/h	0	2253	69	351	2263	0	0	0	0	387	210	169
Arrive On Green	0.00	1.00	1.00	0.72	0.72	0.00	0.00	0.00	0.00	0.18	0.18	0.18
Sat Flow, veh/h	0	3224	95	386	3238	0		0		2210	1196	963
Grp Volume(v), veh/h	0	569	307	9	488	0		0.0		268	86	6
Grp Sat Flow(s),veh/h/ln	0	1045	1126	386	1045	0				1105	1196	963
Q Serve(g_s), s	0.0	0.0	0.0	0.7	5.1	0.0				11.4	6.4	0.5
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.7	5.1	0.0				11.4	6.4	0.5
Prop In Lane	0.00		0.08	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1508	813	351	2263	0				387	210	169
V/C Ratio(X)	0.00	0.38	0.38	0.03	0.22	0.00				0.69	0.41	0.04
Avail Cap(c_a), veh/h	0	1508	813	351	2263	0				575	311	250
HCM Platoon Ratio	1.00	2.00	2.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.91	0.91	1.00	1.00	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	4.0	4.6	0.0				38.7	36.7	34.2
Incr Delay (d2), s/veh	0.0	0.7	1.2	0.1	0.2	0.0				2.2	1.3	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
%ile BackOfQ(50%),veh/ln	0.0	0.1	0.3	0.1	1.0	0.0				3.2	2.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.7	1.2	4.1	4.8	0.0				40.9	37.9	34.3
LnGrp LOS	A	A	A	A	A	A				D	D	C
Approach Vol, veh/h		876			497						360	
Approach Delay, s/veh		0.9			4.8						40.1	
Approach LOS		A			A						D	
Timer - Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		78.5				78.5		21.5				
Change Period (Y+Rc), s		6.3				6.3		4.0				
Max Green Setting (Gmax), s		43.7				43.7		26.0				
Max Q Clear Time (g_c+I1), s		2.0				7.1		13.4				
Green Ext Time (p_c), s		13.8				7.3		1.2				
Intersection Summary												
HCM 6th Ctrl Delay			10.1									
HCM 6th LOS			B									

Notes

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

Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	3	1026	28	0	433	3	0	0	122	0	0	0
Future Vol, veh/h	3	1026	28	0	433	3	0	0	122	0	0	0
Conflicting Peds, #/hr	55	0	36	0	0	53	0	0	34	53	0	55
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	1140	31	0	481	3	0	0	136	0	0	0

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	539	0	0	-	-	0	-	-	656
Stage 1	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-
Critical Hdwy	5.34	-	-	-	-	-	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.12	-	-	-	-	-	-	-	3.92
Pot Cap-1 Maneuver	649	-	-	0	-	-	0	0	350
Stage 1	-	-	-	0	-	-	0	0	-
Stage 2	-	-	-	0	-	-	0	0	-
Platoon blocked, %		-	-		-	-			
Mov Cap-1 Maneuver	649	-	-	-	-	-	-	0	326
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	0	-
Stage 1	-	-	-	-	-	-	-	0	-
Stage 2	-	-	-	-	-	-	-	0	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	23.7
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBT	WBR
Capacity (veh/h)	326	649	-	-	-	-
HCM Lane V/C Ratio	0.416	0.005	-	-	-	-
HCM Control Delay (s)	23.7	10.6	0	-	-	-
HCM Lane LOS	C	B	A	-	-	-
HCM 95th %tile Q(veh)	2	0	-	-	-	-

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBR
Lane Configurations									
Traffic Volume (vph)	383	74	589	22	28	547	267	15	26
Future Volume (vph)	383	74	589	22	28	547	267	15	26
Ideal Flow (vphpl)	1350	1350	1350	1350	1350	1350	1350	1350	1350
Lane Width	12	9	10	9	9	9	9	9	15
Total Lost time (s)		4.6	5.3		4.6	5.3			4.6
Lane Util. Factor		1.00	0.91		1.00	0.91			1.00
Frpb, ped/bikes		1.00	1.00		1.00	0.95			1.00
Flpb, ped/bikes		1.00	1.00		1.00	1.00			1.00
Frt		1.00	0.99		1.00	0.95			0.86
Flt Protected		0.95	1.00		0.95	1.00			1.00
Satd. Flow (prot)		1018	3010		1018	2645			1133
Flt Permitted		0.95	1.00		0.95	1.00			1.00
Satd. Flow (perm)		1018	3010		1018	2645			1133
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	426	82	654	24	31	608	297	17	29
RTOR Reduction (vph)	0	0	3	0	0	2	0	0	23
Lane Group Flow (vph)	0	508	675	0	31	920	0	0	6
Confl. Peds. (#/hr)				32			54	54	
Confl. Bikes (#/hr)				2			8	8	
Turn Type	Prot	Prot	NA		Prot	NA			Perm
Protected Phases	5	5	2		1	6			
Permitted Phases									1
Actuated Green, G (s)		42.4	70.9		19.2	47.7			19.2
Effective Green, g (s)		42.4	70.9		19.2	47.7			19.2
Actuated g/C Ratio		0.42	0.71		0.19	0.48			0.19
Clearance Time (s)		4.6	5.3		4.6	5.3			4.6
Vehicle Extension (s)		2.5	5.0		2.5	5.0			2.5
Lane Grp Cap (vph)		431	2134		195	1261			217
v/s Ratio Prot		c0.50	0.22		0.03	c0.35			
v/s Ratio Perm									0.00
v/c Ratio		1.18	0.32		0.16	0.73			0.03
Uniform Delay, d1		28.8	5.5		33.7	21.0			32.8
Progression Factor		1.18	0.87		1.23	0.56			1.00
Incremental Delay, d2		100.5	0.4		0.3	3.4			0.0
Delay (s)		134.6	5.1		41.6	15.1			32.8
Level of Service		F	A		D	B			C
Approach Delay (s)			60.6			15.9			
Approach LOS			E			B			

Intersection Summary			
HCM 2000 Control Delay	40.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	9.9
Intersection Capacity Utilization	75.7%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	51	553	33	0	634	64	82	81	29	40	71	60
Future Volume (veh/h)	51	553	33	0	634	64	82	81	29	40	71	60
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		0.95	1.00		0.92	1.00		0.98	1.00		0.90
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	1148	1148	1196	0	1196	1196	1196	1196	1196	1148	1244	1196
Adj Flow Rate, veh/h	57	614	30	0	704	60	91	90	32	44	79	67
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	0	2	2	2	2	2	2	2	2
Cap, veh/h	298	1629	79	0	1624	137	145	107	38	221	252	185
Arrive On Green	1.00	1.00	1.00	0.00	1.00	1.00	0.13	0.13	0.13	0.20	0.20	0.20
Sat Flow, veh/h	423	3055	148	0	3152	257	1139	838	298	1094	1244	913
Grp Volume(v), veh/h	57	419	225	0	501	263	91	0	122	44	79	67
Grp Sat Flow(s),veh/h/ln	423	1045	1113	0	1088	1124	1139	0	1136	1094	1244	913
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	7.6	0.0	10.5	3.3	5.4	6.3
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	7.6	0.0	10.5	3.3	5.4	6.3
Prop In Lane	1.00		0.13	0.00		0.23	1.00		0.26	1.00		1.00
Lane Grp Cap(c), veh/h	298	1115	594	0	1161	600	145	0	145	221	252	185
V/C Ratio(X)	0.19	0.38	0.38	0.00	0.43	0.44	0.63	0.00	0.84	0.20	0.31	0.36
Avail Cap(c_a), veh/h	298	1115	594	0	1161	600	180	0	180	337	383	281
HCM Platoon Ratio	2.00	2.00	2.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.96	0.96	0.96	0.00	0.74	0.74	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	41.4	0.0	42.7	33.2	34.0	34.3
Incr Delay (d2), s/veh	1.4	0.9	1.8	0.0	0.9	1.7	4.6	0.0	24.6	0.4	0.7	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.1	0.3	0.0	0.1	0.3	2.3	0.0	3.9	0.9	1.7	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	1.4	0.9	1.8	0.0	0.9	1.7	46.0	0.0	67.3	33.6	34.7	35.5
LnGrp LOS	A	A	A	A	A	A	D	A	E	C	C	D
Approach Vol, veh/h		701			764			213			190	
Approach Delay, s/veh		1.2			1.2			58.2			34.7	
Approach LOS		A			A			E			C	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	58.6	16.9	58.6	24.4
Change Period (Y+Rc), s	5.3	* 4.2	5.3	4.2
Max Green Setting (Gmax), s	39.7	* 16	39.7	30.8
Max Q Clear Time (g_c+I1), s	2.0	12.5	2.0	8.3
Green Ext Time (p_c), s	11.0	0.3	11.4	0.8

Intersection Summary	
HCM 6th Ctrl Delay	11.1
HCM 6th LOS	B

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	24	666	59	48	638	48	80	478	68	0	364	55
Future Volume (veh/h)	24	666	59	48	638	48	80	478	68	0	364	55
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.96	0.99		0.95	1.00		0.97	1.00		0.92
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	1148	1148	1148	1148	1196	1196	1148	1148	1148	0	1148	1148
Adj Flow Rate, veh/h	27	740	55	53	709	44	89	531	29	0	404	17
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	0	2	2
Cap, veh/h	213	1265	93	258	1393	86	85	842	364	0	559	230
Arrive On Green	0.04	0.85	0.85	0.04	0.44	0.44	0.08	0.39	0.39	0.00	0.26	0.26
Sat Flow, veh/h	1094	2968	219	1094	3132	193	1094	2182	942	0	2239	898
Grp Volume(v), veh/h	27	520	275	53	491	262	89	531	29	0	404	17
Grp Sat Flow(s),veh/h/ln	1094	1045	1097	1094	1088	1148	1094	1091	942	0	1091	898
Q Serve(g_s), s	1.4	7.3	7.4	2.7	16.2	16.4	7.8	19.7	1.9	0.0	16.9	1.4
Cycle Q Clear(g_c), s	1.4	7.3	7.4	2.7	16.2	16.4	7.8	19.7	1.9	0.0	16.9	1.4
Prop In Lane	1.00		0.20	1.00		0.17	1.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	213	891	468	258	968	511	85	842	364	0	559	230
V/C Ratio(X)	0.13	0.58	0.59	0.21	0.51	0.51	1.04	0.63	0.08	0.00	0.72	0.07
Avail Cap(c_a), veh/h	274	891	468	299	968	511	85	934	403	0	650	268
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)	0.89	0.89	0.89	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	16.6	4.8	4.8	15.5	19.9	20.0	46.1	24.9	19.4	0.0	34.0	28.2
Incr Delay (d2), s/veh	0.1	2.5	4.8	0.1	1.9	3.6	109.8	1.5	0.1	0.0	3.9	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	1.2	1.6	0.7	4.2	4.8	4.7	5.2	1.3	0.0	4.8	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.7	7.2	9.6	15.6	21.8	23.6	155.9	26.4	19.6	0.0	37.8	28.4
LnGrp LOS	B	A	A	B	C	C	F	C	B	A	D	C
Approach Vol, veh/h		822			806			649			421	
Approach Delay, s/veh		8.3			22.0			43.8			37.5	
Approach LOS		A			C			D			D	

Timer - Assigned Phs	1	2		4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.3	47.9		43.8	6.4	49.8	13.0	30.8
Change Period (Y+Rc), s	4.6	5.3		5.2	4.6	5.3	5.2	5.2
Max Green Setting (Gmax), s	7.4	34.7		42.8	7.4	34.7	7.8	29.8
Max Q Clear Time (g_c+I1), s	4.7	9.4		21.7	3.4	18.4	9.8	18.9
Green Ext Time (p_c), s	0.0	10.1		5.2	0.0	7.5	0.0	2.7

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

Notes

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

Intersection	
Intersection Delay, s/veh	9.8
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	145	7	7	230	16	9	45	5	6	41	25
Future Vol, veh/h	10	145	7	7	230	16	9	45	5	6	41	25
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	13	181	9	9	288	20	11	56	6	8	51	31
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.4	10.6	8.9	8.8
HCM LOS	A	B	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	15%	6%	3%	8%
Vol Thru, %	76%	90%	91%	57%
Vol Right, %	8%	4%	6%	35%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	59	162	253	72
LT Vol	9	10	7	6
Through Vol	45	145	230	41
RT Vol	5	7	16	25
Lane Flow Rate	74	202	316	90
Geometry Grp	1	1	1	1
Degree of Util (X)	0.107	0.264	0.4	0.126
Departure Headway (Hd)	5.229	4.696	4.554	5.035
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	681	761	787	707
Service Time	3.297	2.747	2.599	3.1
HCM Lane V/C Ratio	0.109	0.265	0.402	0.127
HCM Control Delay	8.9	9.4	10.6	8.8
HCM Lane LOS	A	A	B	A
HCM 95th-tile Q	0.4	1.1	1.9	0.4

Intersection	
Intersection Delay, s/veh	10.1
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥			✥			✥	
Traffic Vol, veh/h	10	141	5	9	238	12	7	90	13	11	17	4
Future Vol, veh/h	10	141	5	9	238	12	7	90	13	11	17	4
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	13	176	6	11	298	15	9	113	16	14	21	5
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.5	10.9	9.5	8.8
HCM LOS	A	B	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	6%	6%	3%	34%
Vol Thru, %	82%	90%	92%	53%
Vol Right, %	12%	3%	5%	12%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	110	156	259	32
LT Vol	7	10	9	11
Through Vol	90	141	238	17
RT Vol	13	5	12	4
Lane Flow Rate	138	195	324	40
Geometry Grp	1	1	1	1
Degree of Util (X)	0.196	0.258	0.414	0.059
Departure Headway (Hd)	5.124	4.76	4.603	5.331
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	696	751	780	666
Service Time	3.191	2.815	2.651	3.412
HCM Lane V/C Ratio	0.198	0.26	0.415	0.06
HCM Control Delay	9.5	9.5	10.9	8.8
HCM Lane LOS	A	A	B	A
HCM 95th-tile Q	0.7	1	2	0.2

Intersection	
Intersection Delay, s/veh	9.6
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			✣			✣	
Traffic Vol, veh/h	3	155	8	16	229	3	14	22	17	7	21	18
Future Vol, veh/h	3	155	8	16	229	3	14	22	17	7	21	18
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	194	10	20	286	4	18	28	21	9	26	23
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.2	10.3	8.6	8.5
HCM LOS	A	B	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	26%	2%	6%	15%
Vol Thru, %	42%	93%	92%	46%
Vol Right, %	32%	5%	1%	39%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	53	166	248	46
LT Vol	14	3	16	7
Through Vol	22	155	229	21
RT Vol	17	8	3	18
Lane Flow Rate	66	208	310	58
Geometry Grp	1	1	1	1
Degree of Util (X)	0.093	0.263	0.386	0.08
Departure Headway (Hd)	5.04	4.558	4.48	4.99
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	708	786	803	715
Service Time	3.092	2.596	2.514	3.042
HCM Lane V/C Ratio	0.093	0.265	0.386	0.081
HCM Control Delay	8.6	9.2	10.3	8.5
HCM Lane LOS	A	A	B	A
HCM 95th-tile Q	0.3	1.1	1.8	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1106	103	0	741	0	282	0	49	134	0	67
Future Volume (veh/h)	0	1106	103	0	741	0	282	0	49	134	0	67
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.92	1.00		1.00	1.00		1.00	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	0	1683	1683	0	1683	0	1616	0	1683	1751	0	1683
Adj Flow Rate, veh/h	0	1229	105	0	823	0	313	0	28	149	0	16
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	2	2	0	2	0	2	0	2	2	0	2
Cap, veh/h	0	2885	246	0	3100	0	349	0	0	378	0	0
Arrive On Green	0.00	0.67	0.67	0.00	1.00	0.00	0.23	0.00	0.00	0.23	0.00	0.00
Sat Flow, veh/h	0	4429	365	0	4898	0	1539	313		1667	149	
Grp Volume(v), veh/h	0	880	454	0	823	0	313	46.0		149	33.5	
Grp Sat Flow(s),veh/h/ln	0	1532	1579	0	1532	0	1539	D		1667	C	
Q Serve(g_s), s	0.0	13.1	13.1	0.0	0.0	0.0	19.7			7.6		
Cycle Q Clear(g_c), s	0.0	13.1	13.1	0.0	0.0	0.0	19.7			7.6		
Prop In Lane	0.00		0.23	0.00		0.00	1.00			1.00		
Lane Grp Cap(c), veh/h	0	2066	1065	0	3100	0	349			378		
V/C Ratio(X)	0.00	0.43	0.43	0.00	0.27	0.00	0.90			0.39		
Avail Cap(c_a), veh/h	0	2066	1065	0	3100	0	622			674		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	1.00	1.00			1.00		
Upstream Filter(I)	0.00	1.00	1.00	0.00	0.83	0.00	1.00			1.00		
Uniform Delay (d), s/veh	0.0	7.4	7.4	0.0	0.0	0.0	37.6			32.9		
Incr Delay (d2), s/veh	0.0	0.6	1.2	0.0	0.2	0.0	8.5			0.7		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0		
%ile BackOfQ(50%),veh/ln	0.0	4.0	4.3	0.0	0.0	0.0	8.2			3.1		
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	8.1	8.7	0.0	0.2	0.0	46.0			33.5		
LnGrp LOS	A	A	A	A	A	A	D			C		
Approach Vol, veh/h		1334			823							
Approach Delay, s/veh		8.3			0.2							
Approach LOS		A			A							

Timer - Assigned Phs		2	3			6	7					
Phs Duration (G+Y+Rc), s		72.8	27.2			72.8	27.2					
Change Period (Y+Rc), s		5.3	4.6			5.3	4.6					
Max Green Setting (Gmax), s		49.7	40.4			49.7	40.4					
Max Q Clear Time (g_c+I1), s		15.1	21.7			2.0	9.6					
Green Ext Time (p_c), s		21.2	0.9			13.9	0.4					

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

Movement	EBL2	EBT	EBR	WBL	WBT	WBR	NBR	SBR	SBR2
Lane Configurations									
Traffic Volume (vph)	105	1105	65	55	514	40	81	232	192
Future Volume (vph)	105	1105	65	55	514	40	81	232	192
Ideal Flow (vphpl)	1350	1350	1350	1350	1350	1350	1350	1350	1350
Lane Width	9	10	10	9	10	10	12	10	10
Total Lost time (s)	4.6	5.3		4.0	5.3		4.6	4.6	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.88	1.00
Frpb, ped/bikes	1.00	0.98		1.00	0.99		1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.99		1.00	0.99		0.86	0.85	0.85
Flt Protected	0.95	1.00		0.95	1.00		1.00	1.00	1.00
Satd. Flow (prot)	1018	2963		1018	2976		1030	1663	945
Flt Permitted	0.95	1.00		0.95	1.00		1.00	1.00	1.00
Satd. Flow (perm)	1018	2963		1018	2976		1030	1663	945
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	117	1228	72	61	571	44	90	258	213
RTOR Reduction (vph)	0	6	0	0	0	0	0	0	0
Lane Group Flow (vph)	117	1294	0	61	615	0	90	258	213
Confl. Peds. (#/hr)			115			83			
Confl. Bikes (#/hr)			6			6	6	6	
Turn Type	Prot	NA		Prot	NA		Prot	Prot	Free
Protected Phases	5	2		1	6		8	4	
Permitted Phases									Free
Actuated Green, G (s)	15.4	66.6		1.0	51.6		18.5	18.5	100.0
Effective Green, g (s)	15.4	66.6		1.0	51.6		18.5	18.5	100.0
Actuated g/C Ratio	0.15	0.67		0.01	0.52		0.18	0.18	1.00
Clearance Time (s)	4.6	5.3		4.0	5.3		4.6	4.6	
Vehicle Extension (s)	1.5	3.0		1.5	3.0		2.5	2.5	
Lane Grp Cap (vph)	156	1973		10	1535		190	307	945
v/s Ratio Prot	c0.11	c0.44		c0.06	0.21		0.09	c0.16	
v/s Ratio Perm									0.23
v/c Ratio	0.75	0.66		6.10	0.40		0.47	0.84	0.23
Uniform Delay, d1	40.5	9.9		49.5	14.8		36.4	39.3	0.0
Progression Factor	0.66	0.47		0.73	0.74		1.00	1.00	1.00
Incremental Delay, d2	10.8	1.1		2484.7	0.7		1.4	18.1	0.6
Delay (s)	37.7	5.8		2520.7	11.7		37.8	57.4	0.6
Level of Service	D	A		F	B		D	E	A
Approach Delay (s)		8.4			238.1				
Approach LOS		A			F				

Intersection Summary			
HCM 2000 Control Delay	72.0	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	14.5
Intersection Capacity Utilization	52.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1169	18	19	500	0	32	0	53	385	215	78
Future Volume (veh/h)	0	1169	18	19	500	0	32	0	53	385	215	78
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.88	0.98		1.00	1.00		1.00	1.00		0.93
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	0	1616	1616	1616	1616	0	1683	0	1683	1683	1683	1683
Adj Flow Rate, veh/h	0	1299	19	21	556	0	36	0	59	428	239	17
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	2	2	2	2	0	2	0	2	2	2	2
Cap, veh/h	0	3074	45	316	3034	0	0	0	0	651	352	277
Arrive On Green	0.00	1.00	1.00	0.69	0.69	0.00	0.00	0.00	0.00	0.21	0.21	0.21
Sat Flow, veh/h	0	4615	65	354	4557	0		0		3110	1683	1326
Grp Volume(v), veh/h	0	855	463	21	556	0		0.0		428	239	17
Grp Sat Flow(s),veh/h/ln	0	1471	1594	354	1471	0				1555	1683	1326
Q Serve(g_s), s	0.0	0.0	0.0	2.0	4.5	0.0				12.6	13.1	1.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	2.0	4.5	0.0				12.6	13.1	1.0
Prop In Lane	0.00		0.04	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2023	1096	316	3034	0				651	352	277
V/C Ratio(X)	0.00	0.42	0.42	0.07	0.18	0.00				0.66	0.68	0.06
Avail Cap(c_a), veh/h	0	2023	1096	316	3034	0				809	438	345
HCM Platoon Ratio	1.00	2.00	2.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.72	0.72	1.00	1.00	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	5.2	5.6	0.0				36.3	36.4	31.7
Incr Delay (d2), s/veh	0.0	0.5	0.9	0.4	0.1	0.0				1.4	3.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.1	0.3	0.2	1.3	0.0				4.9	5.7	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.5	0.9	5.6	5.7	0.0				37.6	39.5	31.8
LnGrp LOS	A	A	A	A	A	A				D	D	C
Approach Vol, veh/h		1318			577						684	
Approach Delay, s/veh		0.6			5.7						38.1	
Approach LOS		A			A						D	

Timer - Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		75.1				75.1		24.9				
Change Period (Y+Rc), s		6.3				6.3		4.0				
Max Green Setting (Gmax), s		43.7				43.7		26.0				
Max Q Clear Time (g_c+I1), s		2.0				6.5		15.1				
Green Ext Time (p_c), s		23.2				8.9		2.5				

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

Notes

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

Intersection	
Int Delay, s/veh	4.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	1517	88	0	516	1	0	0	93	0	0	0
Future Vol, veh/h	2	1517	88	0	516	1	0	0	93	0	0	0
Conflicting Peds, #/hr	107	0	128	0	0	107	0	0	128	107	0	107
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	1686	98	0	573	1	0	0	103	0	0	0

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	681	0	0	-	-	0	-	-	1148
Stage 1	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-
Critical Hdwy	5.34	-	-	-	-	-	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.12	-	-	-	-	-	-	-	3.92
Pot Cap-1 Maneuver	556	-	-	0	-	-	0	0	165
Stage 1	-	-	-	0	-	-	0	0	-
Stage 2	-	-	-	0	-	-	0	0	-
Platoon blocked, %		-	-		-	-			
Mov Cap-1 Maneuver	556	-	-	-	-	-	-	0	126
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	0	-
Stage 1	-	-	-	-	-	-	-	0	-
Stage 2	-	-	-	-	-	-	-	0	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	103.5
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBT	WBR
Capacity (veh/h)	126	556	-	-	-	-
HCM Lane V/C Ratio	0.82	0.004	-	-	-	-
HCM Control Delay (s)	103.5	11.5	0	-	-	-
HCM Lane LOS	F	B	A	-	-	-
HCM 95th %tile Q(veh)	5	0	-	-	-	-

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBR
Lane Configurations									
Traffic Volume (vph)	178	327	1026	76	47	515	137	48	44
Future Volume (vph)	178	327	1026	76	47	515	137	48	44
Ideal Flow (vphpl)	1350	1350	1350	1350	1350	1350	1350	1350	1350
Lane Width	12	9	10	9	9	9	9	9	15
Total Lost time (s)		4.6	5.3		4.6	5.3			4.6
Lane Util. Factor		1.00	0.91		1.00	0.91			1.00
Frpb, ped/bikes		1.00	0.98		1.00	0.92			1.00
Flpb, ped/bikes		1.00	1.00		1.00	1.00			1.00
Frt		1.00	0.99		1.00	0.96			0.86
Flt Protected		0.95	1.00		0.95	1.00			1.00
Satd. Flow (prot)		1018	2951		1018	2588			1133
Flt Permitted		0.95	1.00		0.95	1.00			1.00
Satd. Flow (perm)		1018	2951		1018	2588			1133
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	198	363	1140	84	52	572	152	53	49
RTOR Reduction (vph)	0	0	6	0	0	8	0	0	39
Lane Group Flow (vph)	0	561	1218	0	52	769	0	0	10
Confl. Peds. (#/hr)				124			127	127	
Confl. Bikes (#/hr)				8			2	2	
Turn Type	Prot	Prot	NA		Prot	NA			Perm
Protected Phases	5	5	2		1	6			
Permitted Phases									1
Actuated Green, G (s)		42.4	70.6		19.5	47.7			19.5
Effective Green, g (s)		42.4	70.6		19.5	47.7			19.5
Actuated g/C Ratio		0.42	0.71		0.20	0.48			0.20
Clearance Time (s)		4.6	5.3		4.6	5.3			4.6
Vehicle Extension (s)		2.5	5.0		2.5	5.0			2.5
Lane Grp Cap (vph)		431	2083		198	1234			220
v/s Ratio Prot		c0.55	0.41		0.05	c0.30			
v/s Ratio Perm									0.01
v/c Ratio		1.30	0.58		0.26	0.62			0.04
Uniform Delay, d1		28.8	7.4		34.2	19.5			32.7
Progression Factor		1.15	1.07		1.23	0.59			1.00
Incremental Delay, d2		145.7	0.7		0.5	2.1			0.1
Delay (s)		178.8	8.6		42.6	13.5			32.7
Level of Service		F	A		D	B			C
Approach Delay (s)			62.1			15.4			
Approach LOS			E			B			

Intersection Summary			
HCM 2000 Control Delay	47.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	9.9
Intersection Capacity Utilization	75.8%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	81	969	20	0	573	81	96	65	37	100	55	76
Future Volume (veh/h)	81	969	20	0	573	81	96	65	37	100	55	76
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.96		0.93	1.00		0.88	1.00		0.98	1.00		0.89
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	1616	1616	1683	0	1683	1683	1683	1683	1683	1616	1751	1683
Adj Flow Rate, veh/h	90	1077	20	0	637	72	107	72	41	111	61	84
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	0	2	2	2	2	2	2	2	2
Cap, veh/h	411	2449	45	0	2273	252	152	95	54	335	382	276
Arrive On Green	1.00	1.00	1.00	0.00	1.00	1.00	0.10	0.10	0.10	0.22	0.22	0.22
Sat Flow, veh/h	616	4452	83	0	4284	459	1603	999	569	1539	1751	1267
Grp Volume(v), veh/h	90	711	386	0	469	240	107	0	113	111	61	84
Grp Sat Flow(s),veh/h/ln	616	1471	1594	0	1532	1528	1603	0	1568	1539	1751	1267
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	6.5	0.0	7.0	6.1	2.8	5.6
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	6.5	0.0	7.0	6.1	2.8	5.6
Prop In Lane	1.00		0.05	0.00		0.30	1.00		0.36	1.00		1.00
Lane Grp Cap(c), veh/h	411	1618	877	0	1685	840	152	0	149	335	382	276
V/C Ratio(X)	0.22	0.44	0.44	0.00	0.28	0.29	0.70	0.00	0.76	0.33	0.16	0.30
Avail Cap(c_a), veh/h	411	1618	877	0	1685	840	253	0	248	474	539	390
HCM Platoon Ratio	2.00	2.00	2.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.81	0.81	0.81	0.00	0.72	0.72	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	43.9	0.0	44.1	33.0	31.7	32.8
Incr Delay (d2), s/veh	1.0	0.7	1.3	0.0	0.3	0.6	5.8	0.0	7.7	0.6	0.2	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.2	0.3	0.0	0.1	0.1	2.8	0.0	3.1	2.3	1.2	1.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	1.0	0.7	1.3	0.0	0.3	0.6	49.7	0.0	51.8	33.5	31.9	33.4
LnGrp LOS	A	A	A	A	A	A	D	A	D	C	C	C
Approach Vol, veh/h		1187			709			220			256	
Approach Delay, s/veh		0.9			0.4			50.8			33.1	
Approach LOS		A			A			D			C	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		60.3		13.7		60.3		26.0				
Change Period (Y+Rc), s		5.3		* 4.2		5.3		4.2				
Max Green Setting (Gmax), s		39.7		* 16		39.7		30.8				
Max Q Clear Time (g_c+I1), s		2.0		9.0		2.0		8.1				
Green Ext Time (p_c), s		19.6		0.5		10.5		0.9				
Intersection Summary												
HCM 6th Ctrl Delay			8.9									
HCM 6th LOS			A									

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	823	56	55	579	61	101	419	97	0	593	83
Future Volume (veh/h)	14	823	56	55	579	61	101	419	97	0	593	83
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		0.93	0.99		0.93	1.00		0.94	1.00		0.93
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	1616	1616	1616	1616	1683	1683	1616	1616	1616	0	1616	1616
Adj Flow Rate, veh/h	16	914	54	61	643	55	112	466	41	0	659	25
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	0	2	2
Cap, veh/h	301	1747	103	297	1870	158	120	1234	518	0	835	348
Arrive On Green	0.02	0.82	0.82	0.04	0.44	0.44	0.08	0.40	0.40	0.00	0.27	0.27
Sat Flow, veh/h	1539	4241	250	1539	4287	363	1539	3070	1289	0	3151	1278
Grp Volume(v), veh/h	16	633	335	61	457	241	112	466	41	0	659	25
Grp Sat Flow(s),veh/h/ln	1539	1471	1549	1539	1532	1586	1539	1535	1289	0	1535	1278
Q Serve(g_s), s	0.6	6.6	6.7	2.3	9.9	10.1	7.2	10.7	2.0	0.0	19.9	1.5
Cycle Q Clear(g_c), s	0.6	6.6	6.7	2.3	9.9	10.1	7.2	10.7	2.0	0.0	19.9	1.5
Prop In Lane	1.00		0.16	1.00		0.23	1.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	301	1212	638	297	1337	692	120	1234	518	0	835	348
V/C Ratio(X)	0.05	0.52	0.52	0.21	0.34	0.35	0.93	0.38	0.08	0.00	0.79	0.07
Avail Cap(c_a), veh/h	399	1212	638	357	1337	692	120	1314	552	0	915	381
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)	0.56	0.56	0.56	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	16.9	5.8	5.8	16.2	18.7	18.7	45.8	21.1	18.5	0.0	33.7	27.0
Incr Delay (d2), s/veh	0.0	0.9	1.7	0.1	0.7	1.4	62.0	0.3	0.1	0.0	4.7	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	1.5	1.7	0.8	3.6	3.9	4.8	3.9	1.8	0.0	7.9	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.0	6.7	7.5	16.3	19.4	20.1	107.8	21.4	18.6	0.0	38.5	27.2
LnGrp LOS	B	A	A	B	B	C	F	C	B	A	D	C
Approach Vol, veh/h		984			759			619			684	
Approach Delay, s/veh		7.1			19.4			36.8			38.0	
Approach LOS		A			B			D			D	

Timer - Assigned Phs	1	2		4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.1	46.5		45.4	5.7	48.9	13.0	32.4
Change Period (Y+Rc), s	4.6	5.3		5.2	4.6	5.3	5.2	5.2
Max Green Setting (Gmax), s	7.4	34.7		42.8	7.4	34.7	7.8	29.8
Max Q Clear Time (g_c+I1), s	4.3	8.7		12.7	2.6	12.1	9.2	21.9
Green Ext Time (p_c), s	0.0	12.7		5.2	0.0	8.3	0.0	3.6

Intersection Summary	
HCM 6th Ctrl Delay	23.1
HCM 6th LOS	C

Notes

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

Intersection	
Intersection Delay, s/veh	11.3
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			✣			✣	
Traffic Vol, veh/h	10	286	9	9	141	12	5	26	13	38	132	47
Future Vol, veh/h	10	286	9	9	141	12	5	26	13	38	132	47
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	318	10	10	157	13	6	29	14	42	147	52
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	12.4	10	9	11.1
HCM LOS	B	A	A	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	11%	3%	6%	18%
Vol Thru, %	59%	94%	87%	61%
Vol Right, %	30%	3%	7%	22%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	44	305	162	217
LT Vol	5	10	9	38
Through Vol	26	286	141	132
RT Vol	13	9	12	47
Lane Flow Rate	49	339	180	241
Geometry Grp	1	1	1	1
Degree of Util (X)	0.075	0.472	0.259	0.352
Departure Headway (Hd)	5.532	5.012	5.182	5.251
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	647	722	693	685
Service Time	3.572	3.012	3.212	3.282
HCM Lane V/C Ratio	0.076	0.47	0.26	0.352
HCM Control Delay	9	12.4	10	11.1
HCM Lane LOS	A	B	A	B
HCM 95th-tile Q	0.2	2.5	1	1.6

Intersection	
Intersection Delay, s/veh	10.9
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			✣			✣	
Traffic Vol, veh/h	13	311	10	7	140	20	7	80	8	33	49	17
Future Vol, veh/h	13	311	10	7	140	20	7	80	8	33	49	17
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	14	346	11	8	156	22	8	89	9	37	54	19
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	12.3	9.6	9.5	9.6
HCM LOS	B	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	7%	4%	4%	33%
Vol Thru, %	84%	93%	84%	49%
Vol Right, %	8%	3%	12%	17%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	95	334	167	99
LT Vol	7	13	7	33
Through Vol	80	311	140	49
RT Vol	8	10	20	17
Lane Flow Rate	106	371	186	110
Geometry Grp	1	1	1	1
Degree of Util (X)	0.16	0.486	0.252	0.167
Departure Headway (Hd)	5.469	4.719	4.885	5.463
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	660	757	726	661
Service Time	3.473	2.799	2.979	3.463
HCM Lane V/C Ratio	0.161	0.49	0.256	0.166
HCM Control Delay	9.5	12.3	9.6	9.6
HCM Lane LOS	A	B	A	A
HCM 95th-tile Q	0.6	2.7	1	0.6

Intersection	
Intersection Delay, s/veh	10.8
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	9	308	29	22	139	8	16	27	25	14	78	13
Future Vol, veh/h	9	308	29	22	139	8	16	27	25	14	78	13
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	10	342	32	24	154	9	18	30	28	16	87	14
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	12.1	9.6	9	9.5
HCM LOS	B	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	24%	3%	13%	13%
Vol Thru, %	40%	89%	82%	74%
Vol Right, %	37%	8%	5%	12%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	68	346	169	105
LT Vol	16	9	22	14
Through Vol	27	308	139	78
RT Vol	25	29	8	13
Lane Flow Rate	76	384	188	117
Geometry Grp	1	1	1	1
Degree of Util (X)	0.11	0.493	0.254	0.172
Departure Headway (Hd)	5.264	4.617	4.879	5.319
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	673	777	730	667
Service Time	3.356	2.676	2.952	3.405
HCM Lane V/C Ratio	0.113	0.494	0.258	0.175
HCM Control Delay	9	12.1	9.6	9.5
HCM Lane LOS	A	B	A	A
HCM 95th-tile Q	0.4	2.8	1	0.6

LOS Worksheets: Baseline Conditions

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	798	49	0	450	0	223	0	85	70	0	54
Future Volume (veh/h)	0	798	49	0	450	0	223	0	85	70	0	54
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	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	0	1196	1196	0	1196	0	1148	0	1196	1244	0	1196
Adj Flow Rate, veh/h	0	887	47	0	500	0	248	0	26	78	0	17
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	2	2	0	2	0	2	0	2	2	0	2
Cap, veh/h	0	2069	109	0	2135	0	270	0	0	293	0	0
Arrive On Green	0.00	0.65	0.65	0.00	0.87	0.00	0.25	0.00	0.00	0.25	0.00	0.00
Sat Flow, veh/h	0	3273	167	0	3481	0	1094	248		1185	78	
Grp Volume(v), veh/h	0	609	325	0	500	0	248	52.7		78	30.8	
Grp Sat Flow(s),veh/h/ln	0	1088	1156	0	1088	0	1094	D		1185	C	
Q Serve(g_s), s	0.0	13.5	13.5	0.0	2.5	0.0	22.1			5.3		
Cycle Q Clear(g_c), s	0.0	13.5	13.5	0.0	2.5	0.0	22.1			5.3		
Prop In Lane	0.00		0.14	0.00		0.00	1.00			1.00		
Lane Grp Cap(c), veh/h	0	1423	756	0	2135	0	270			293		
V/C Ratio(X)	0.00	0.43	0.43	0.00	0.23	0.00	0.92			0.27		
Avail Cap(c_a), veh/h	0	1423	756	0	2135	0	442			479		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.33	1.00	1.00			1.00		
Upstream Filter(I)	0.00	1.00	1.00	0.00	0.94	0.00	1.00			1.00		
Uniform Delay (d), s/veh	0.0	8.3	8.3	0.0	2.4	0.0	36.6			30.3		
Incr Delay (d2), s/veh	0.0	0.9	1.8	0.0	0.2	0.0	16.1			0.5		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0		
%ile BackOfQ(50%),veh/ln	0.0	3.0	3.4	0.0	0.5	0.0	7.1			1.6		
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	9.3	10.1	0.0	2.7	0.0	52.7			30.8		
LnGrp LOS	A	A	B	A	A	A	D			C		
Approach Vol, veh/h		934			500							
Approach Delay, s/veh		9.6			2.7							
Approach LOS		A			A							

Timer - Assigned Phs		2	3			6	7					
Phs Duration (G+Y+Rc), s		70.7	29.3			70.7	29.3					
Change Period (Y+Rc), s		5.3	4.6			5.3	4.6					
Max Green Setting (Gmax), s		49.7	40.4			49.7	40.4					
Max Q Clear Time (g_c+I1), s		15.5	24.1			4.5	7.3					
Green Ext Time (p_c), s		13.9	0.7			7.5	0.2					

Intersection Summary			
HCM 6th Ctrl Delay			14.6
HCM 6th LOS			B

Movement	EBL2	EBT	EBR	WBL	WBT	WBR	NBR	SBR	SBR2
Lane Configurations									
Traffic Volume (vph)	190	698	51	21	420	106	95	87	197
Future Volume (vph)	190	698	51	21	420	106	95	87	197
Ideal Flow (vphpl)	1350	1350	1350	1350	1350	1350	1350	1350	1350
Lane Width	9	10	10	9	10	10	12	10	10
Total Lost time (s)	4.6	5.3		4.0	5.3		4.6	4.6	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.88	1.00
Frpb, ped/bikes	1.00	0.99		1.00	0.98		1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.99		1.00	0.97		0.86	0.85	0.85
Flt Protected	0.95	1.00		0.95	1.00		1.00	1.00	1.00
Satd. Flow (prot)	1018	2989		1018	2885		1030	1663	945
Flt Permitted	0.95	1.00		0.95	1.00		1.00	1.00	1.00
Satd. Flow (perm)	1018	2989		1018	2885		1030	1663	945
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	211	776	57	23	467	118	106	97	219
RTOR Reduction (vph)	0	7	0	0	0	0	0	0	0
Lane Group Flow (vph)	211	826	0	23	585	0	106	97	219
Confl. Peds. (#/hr)			24			64			
Confl. Bikes (#/hr)			3			3	3	3	
Turn Type	Prot	NA		Prot	NA		Prot	Prot	Free
Protected Phases	5	2		1	6		8	4	
Permitted Phases									Free
Actuated Green, G (s)	15.4	69.1		1.0	54.1		16.0	16.0	100.0
Effective Green, g (s)	15.4	69.1		1.0	54.1		16.0	16.0	100.0
Actuated g/C Ratio	0.15	0.69		0.01	0.54		0.16	0.16	1.00
Clearance Time (s)	4.6	5.3		4.0	5.3		4.6	4.6	
Vehicle Extension (s)	1.5	3.0		1.5	3.0		2.5	2.5	
Lane Grp Cap (vph)	156	2065		10	1560		164	266	945
v/s Ratio Prot	c0.21	c0.28		0.02	0.20		c0.10	0.06	
v/s Ratio Perm									0.23
v/c Ratio	1.35	0.40		2.30	0.38		0.65	0.36	0.23
Uniform Delay, d1	42.3	6.6		49.5	13.2		39.3	37.5	0.0
Progression Factor	0.80	0.47		0.73	0.99		1.00	1.00	1.00
Incremental Delay, d2	191.1	0.5		810.4	0.7		7.5	0.6	0.6
Delay (s)	225.1	3.6		846.4	13.7		46.9	38.1	0.6
Level of Service	F	A		F	B		D	D	A
Approach Delay (s)		48.4			45.2				
Approach LOS		D			D				

Intersection Summary			
HCM 2000 Control Delay	41.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	14.5
Intersection Capacity Utilization	51.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	769	25	8	439	0	29	0	38	242	77	42
Future Volume (veh/h)	0	769	25	8	439	0	29	0	38	242	77	42
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	0.99		1.00	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	0	1148	1148	1148	1148	0	1196	0	1196	1196	1196	1196
Adj Flow Rate, veh/h	0	854	26	9	488	0	32	0	42	269	86	6
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	2	2	2	2	0	2	0	2	2	2	2
Cap, veh/h	0	2252	68	350	2262	0	0	0	0	388	210	169
Arrive On Green	0.00	1.00	1.00	0.72	0.72	0.00	0.00	0.00	0.00	0.18	0.18	0.18
Sat Flow, veh/h	0	3225	95	385	3238	0		0		2210	1196	963
Grp Volume(v), veh/h	0	571	309	9	488	0		0.0		269	86	6
Grp Sat Flow(s),veh/h/ln	0	1045	1126	385	1045	0				1105	1196	963
Q Serve(g_s), s	0.0	0.0	0.0	0.7	5.1	0.0				11.4	6.4	0.5
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.7	5.1	0.0				11.4	6.4	0.5
Prop In Lane	0.00		0.08	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1508	813	350	2262	0				388	210	169
V/C Ratio(X)	0.00	0.38	0.38	0.03	0.22	0.00				0.69	0.41	0.04
Avail Cap(c_a), veh/h	0	1508	813	350	2262	0				575	311	250
HCM Platoon Ratio	1.00	2.00	2.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.91	0.91	1.00	1.00	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	4.0	4.6	0.0				38.7	36.6	34.2
Incr Delay (d2), s/veh	0.0	0.7	1.2	0.1	0.2	0.0				2.2	1.3	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
%ile BackOfQ(50%),veh/ln	0.0	0.1	0.3	0.1	1.0	0.0				3.2	1.9	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.7	1.2	4.1	4.8	0.0				40.9	37.9	34.3
LnGrp LOS	A	A	A	A	A	A				D	D	C
Approach Vol, veh/h		880			497						361	
Approach Delay, s/veh		0.9			4.8						40.1	
Approach LOS		A			A						D	
Timer - Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		78.4				78.4		21.6				
Change Period (Y+Rc), s		6.3				6.3		4.0				
Max Green Setting (Gmax), s		43.7				43.7		26.0				
Max Q Clear Time (g_c+I1), s		2.0				7.1		13.4				
Green Ext Time (p_c), s		13.9				7.3		1.2				
Intersection Summary												
HCM 6th Ctrl Delay			10.1									
HCM 6th LOS			B									

Notes

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

Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	3	1031	28	0	433	3	0	0	122	0	0	0
Future Vol, veh/h	3	1031	28	0	433	3	0	0	122	0	0	0
Conflicting Peds, #/hr	55	0	36	0	0	53	0	0	34	53	0	55
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	1146	31	0	481	3	0	0	136	0	0	0

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	539	0	0	-	-	0	-	-	659
Stage 1	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-
Critical Hdwy	5.34	-	-	-	-	-	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.12	-	-	-	-	-	-	-	3.92
Pot Cap-1 Maneuver	649	-	-	0	-	-	0	0	348
Stage 1	-	-	-	0	-	-	0	0	-
Stage 2	-	-	-	0	-	-	0	0	-
Platoon blocked, %		-	-		-	-			
Mov Cap-1 Maneuver	649	-	-	-	-	-	-	0	324
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	0	-
Stage 1	-	-	-	-	-	-	-	0	-
Stage 2	-	-	-	-	-	-	-	0	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	23.9
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBT	WBR
Capacity (veh/h)	324	649	-	-	-	-
HCM Lane V/C Ratio	0.418	0.005	-	-	-	-
HCM Control Delay (s)	23.9	10.6	0	-	-	-
HCM Lane LOS	C	B	A	-	-	-
HCM 95th %tile Q(veh)	2	0	-	-	-	-

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBR
Lane Configurations									
Traffic Volume (vph)	383	74	589	27	34	547	267	15	29
Future Volume (vph)	383	74	589	27	34	547	267	15	29
Ideal Flow (vphpl)	1350	1350	1350	1350	1350	1350	1350	1350	1350
Lane Width	12	9	10	9	9	9	9	9	15
Total Lost time (s)		4.6	5.3		4.6	5.3			4.6
Lane Util. Factor		1.00	0.91		1.00	0.91			1.00
Frpb, ped/bikes		1.00	1.00		1.00	0.95			1.00
Flpb, ped/bikes		1.00	1.00		1.00	1.00			1.00
Frt		1.00	0.99		1.00	0.95			0.86
Flt Protected		0.95	1.00		0.95	1.00			1.00
Satd. Flow (prot)		1018	3004		1018	2645			1133
Flt Permitted		0.95	1.00		0.95	1.00			1.00
Satd. Flow (perm)		1018	3004		1018	2645			1133
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	426	82	654	30	38	608	297	17	32
RTOR Reduction (vph)	0	0	4	0	0	2	0	0	26
Lane Group Flow (vph)	0	508	680	0	38	920	0	0	6
Confl. Peds. (#/hr)				32			54	54	
Confl. Bikes (#/hr)				2			8	8	
Turn Type	Prot	Prot	NA		Prot	NA			Perm
Protected Phases	5	5	2		1	6			
Permitted Phases									1
Actuated Green, G (s)		42.4	70.7		19.4	47.7			19.4
Effective Green, g (s)		42.4	70.7		19.4	47.7			19.4
Actuated g/C Ratio		0.42	0.71		0.19	0.48			0.19
Clearance Time (s)		4.6	5.3		4.6	5.3			4.6
Vehicle Extension (s)		2.5	5.0		2.5	5.0			2.5
Lane Grp Cap (vph)		431	2123		197	1261			219
v/s Ratio Prot		c0.50	0.23		0.04	c0.35			
v/s Ratio Perm									0.01
v/c Ratio		1.18	0.32		0.19	0.73			0.03
Uniform Delay, d1		28.8	5.6		33.7	21.0			32.7
Progression Factor		1.18	0.88		1.23	0.55			1.00
Incremental Delay, d2		100.5	0.4		0.3	3.4			0.0
Delay (s)		134.6	5.2		41.8	15.0			32.7
Level of Service		F	A		D	B			C
Approach Delay (s)			60.4			16.0			
Approach LOS			E			B			

Intersection Summary			
HCM 2000 Control Delay	40.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	9.9
Intersection Capacity Utilization	75.7%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	52	555	33	0	639	64	82	81	29	40	71	61
Future Volume (veh/h)	52	555	33	0	639	64	82	81	29	40	71	61
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		0.95	1.00		0.92	1.00		0.98	1.00		0.90
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	1148	1148	1196	0	1196	1196	1196	1196	1196	1148	1244	1196
Adj Flow Rate, veh/h	58	617	30	0	710	60	91	90	32	44	79	68
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	0	2	2	2	2	2	2	2	2
Cap, veh/h	296	1629	79	0	1624	136	145	107	38	222	252	185
Arrive On Green	1.00	1.00	1.00	0.00	1.00	1.00	0.13	0.13	0.13	0.20	0.20	0.20
Sat Flow, veh/h	421	3056	148	0	3154	255	1139	838	298	1094	1244	913
Grp Volume(v), veh/h	58	421	226	0	505	265	91	0	122	44	79	68
Grp Sat Flow(s),veh/h/ln	421	1045	1113	0	1088	1125	1139	0	1136	1094	1244	913
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	7.6	0.0	10.5	3.3	5.4	6.4
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	7.6	0.0	10.5	3.3	5.4	6.4
Prop In Lane	1.00		0.13	0.00		0.23	1.00		0.26	1.00		1.00
Lane Grp Cap(c), veh/h	296	1114	593	0	1160	600	145	0	145	222	252	185
V/C Ratio(X)	0.20	0.38	0.38	0.00	0.44	0.44	0.63	0.00	0.84	0.20	0.31	0.37
Avail Cap(c_a), veh/h	296	1114	593	0	1160	600	180	0	180	337	383	281
HCM Platoon Ratio	2.00	2.00	2.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.96	0.96	0.96	0.00	0.74	0.74	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	41.4	0.0	42.7	33.1	33.9	34.3
Incr Delay (d2), s/veh	1.4	0.9	1.8	0.0	0.9	1.7	4.6	0.0	24.6	0.4	0.7	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.1	0.3	0.0	0.1	0.3	2.3	0.0	3.9	0.9	1.7	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	1.4	0.9	1.8	0.0	0.9	1.7	46.0	0.0	67.3	33.6	34.6	35.6
LnGrp LOS	A	A	A	A	A	A	D	A	E	C	C	D
Approach Vol, veh/h		705			770			213			191	
Approach Delay, s/veh		1.2			1.2			58.2			34.7	
Approach LOS		A			A			E			C	

Timer - Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		58.6		16.9		58.6		24.5
Change Period (Y+Rc), s		5.3		* 4.2		5.3		4.2
Max Green Setting (Gmax), s		39.7		* 16		39.7		30.8
Max Q Clear Time (g_c+I1), s		2.0		12.5		2.0		8.4
Green Ext Time (p_c), s		11.1		0.3		11.5		0.8

Intersection Summary	
HCM 6th Ctrl Delay	11.1
HCM 6th LOS	B

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	24	668	59	48	643	48	80	478	68	0	364	55
Future Volume (veh/h)	24	668	59	48	643	48	80	478	68	0	364	55
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.96	0.99		0.95	1.00		0.97	1.00		0.92
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	1148	1148	1148	1148	1196	1196	1148	1148	1148	0	1148	1148
Adj Flow Rate, veh/h	27	742	55	53	714	44	89	531	29	0	404	17
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	0	2	2
Cap, veh/h	212	1265	93	258	1394	85	85	842	364	0	559	230
Arrive On Green	0.04	0.85	0.85	0.04	0.44	0.44	0.08	0.39	0.39	0.00	0.26	0.26
Sat Flow, veh/h	1094	2968	219	1094	3134	192	1094	2182	942	0	2239	898
Grp Volume(v), veh/h	27	521	276	53	495	263	89	531	29	0	404	17
Grp Sat Flow(s),veh/h/ln	1094	1045	1097	1094	1088	1149	1094	1091	942	0	1091	898
Q Serve(g_s), s	1.4	7.3	7.5	2.7	16.3	16.5	7.8	19.7	1.9	0.0	16.9	1.4
Cycle Q Clear(g_c), s	1.4	7.3	7.5	2.7	16.3	16.5	7.8	19.7	1.9	0.0	16.9	1.4
Prop In Lane	1.00		0.20	1.00		0.17	1.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	212	891	468	258	968	511	85	842	364	0	559	230
V/C Ratio(X)	0.13	0.58	0.59	0.21	0.51	0.52	1.04	0.63	0.08	0.00	0.72	0.07
Avail Cap(c_a), veh/h	273	891	468	299	968	511	85	934	403	0	650	268
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)	0.89	0.89	0.89	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	16.7	4.8	4.8	15.5	19.9	20.0	46.1	24.9	19.4	0.0	34.0	28.2
Incr Delay (d2), s/veh	0.1	2.5	4.8	0.1	1.9	3.7	109.8	1.5	0.1	0.0	3.9	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	1.2	1.6	0.7	4.3	4.8	4.7	5.2	1.3	0.0	4.8	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.8	7.3	9.6	15.6	21.9	23.7	155.9	26.4	19.6	0.0	37.8	28.4
LnGrp LOS	B	A	A	B	C	C	F	C	B	A	D	C
Approach Vol, veh/h		824			811			649			421	
Approach Delay, s/veh		8.4			22.0			43.8			37.5	
Approach LOS		A			C			D			D	

Timer - Assigned Phs	1	2		4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.3	47.9		43.8	6.4	49.8	13.0	30.8
Change Period (Y+Rc), s	4.6	5.3		5.2	4.6	5.3	5.2	5.2
Max Green Setting (Gmax), s	7.4	34.7		42.8	7.4	34.7	7.8	29.8
Max Q Clear Time (g_c+I1), s	4.7	9.5		21.7	3.4	18.5	9.8	18.9
Green Ext Time (p_c), s	0.0	10.1		5.2	0.0	7.5	0.0	2.7

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

Notes

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

Intersection	
Intersection Delay, s/veh	9.9
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	146	7	7	230	18	9	45	5	6	41	25
Future Vol, veh/h	10	146	7	7	230	18	9	45	5	6	41	25
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	13	183	9	9	288	23	11	56	6	8	51	31
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.5	10.7	8.9	8.8
HCM LOS	A	B	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	15%	6%	3%	8%
Vol Thru, %	76%	90%	90%	57%
Vol Right, %	8%	4%	7%	35%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	59	163	255	72
LT Vol	9	10	7	6
Through Vol	45	146	230	41
RT Vol	5	7	18	25
Lane Flow Rate	74	204	319	90
Geometry Grp	1	1	1	1
Degree of Util (X)	0.107	0.266	0.403	0.126
Departure Headway (Hd)	5.236	4.699	4.551	5.042
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	679	760	787	706
Service Time	3.306	2.75	2.596	3.109
HCM Lane V/C Ratio	0.109	0.268	0.405	0.127
HCM Control Delay	8.9	9.5	10.7	8.8
HCM Lane LOS	A	A	B	A
HCM 95th-tile Q	0.4	1.1	2	0.4

Intersection	
Intersection Delay, s/veh	10.1
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			✣			✣	
Traffic Vol, veh/h	10	142	5	9	240	12	7	90	13	11	17	4
Future Vol, veh/h	10	142	5	9	240	12	7	90	13	11	17	4
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	13	178	6	11	300	15	9	113	16	14	21	5
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.5	10.9	9.5	8.8
HCM LOS	A	B	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	6%	6%	3%	34%
Vol Thru, %	82%	90%	92%	53%
Vol Right, %	12%	3%	5%	12%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	110	157	261	32
LT Vol	7	10	9	11
Through Vol	90	142	240	17
RT Vol	13	5	12	4
Lane Flow Rate	138	196	326	40
Geometry Grp	1	1	1	1
Degree of Util (X)	0.196	0.26	0.417	0.059
Departure Headway (Hd)	5.133	4.763	4.605	5.34
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	694	750	780	664
Service Time	3.2	2.818	2.653	3.422
HCM Lane V/C Ratio	0.199	0.261	0.418	0.06
HCM Control Delay	9.5	9.5	10.9	8.8
HCM Lane LOS	A	A	B	A
HCM 95th-tile Q	0.7	1	2.1	0.2

Intersection	
Intersection Delay, s/veh	9.7
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			✣			✣	
Traffic Vol, veh/h	4	155	8	16	229	4	14	23	17	8	21	20
Future Vol, veh/h	4	155	8	16	229	4	14	23	17	8	21	20
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	194	10	20	286	5	18	29	21	10	26	25
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.3	10.4	8.6	8.5
HCM LOS	A	B	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	26%	2%	6%	16%
Vol Thru, %	43%	93%	92%	43%
Vol Right, %	31%	5%	2%	41%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	54	167	249	49
LT Vol	14	4	16	8
Through Vol	23	155	229	21
RT Vol	17	8	4	20
Lane Flow Rate	68	209	311	61
Geometry Grp	1	1	1	1
Degree of Util (X)	0.095	0.265	0.389	0.085
Departure Headway (Hd)	5.056	4.576	4.494	4.992
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	705	783	800	714
Service Time	3.11	2.615	2.528	3.046
HCM Lane V/C Ratio	0.096	0.267	0.389	0.085
HCM Control Delay	8.6	9.3	10.4	8.5
HCM Lane LOS	A	A	B	A
HCM 95th-tile Q	0.3	1.1	1.9	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1113	103	0	754	0	282	0	49	134	0	67
Future Volume (veh/h)	0	1113	103	0	754	0	282	0	49	134	0	67
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.92	1.00		1.00	1.00		1.00	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	0	1683	1683	0	1683	0	1616	0	1683	1751	0	1683
Adj Flow Rate, veh/h	0	1237	105	0	838	0	313	0	28	149	0	16
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	2	2	0	2	0	2	0	2	2	0	2
Cap, veh/h	0	2887	245	0	3100	0	349	0	0	378	0	0
Arrive On Green	0.00	0.67	0.67	0.00	1.00	0.00	0.23	0.00	0.00	0.23	0.00	0.00
Sat Flow, veh/h	0	4432	363	0	4898	0	1539	313		1667	149	
Grp Volume(v), veh/h	0	885	457	0	838	0	313	46.0		149	33.5	
Grp Sat Flow(s),veh/h/ln	0	1532	1580	0	1532	0	1539	D		1667	C	
Q Serve(g_s), s	0.0	13.2	13.2	0.0	0.0	0.0	19.7			7.6		
Cycle Q Clear(g_c), s	0.0	13.2	13.2	0.0	0.0	0.0	19.7			7.6		
Prop In Lane	0.00		0.23	0.00		0.00	1.00			1.00		
Lane Grp Cap(c), veh/h	0	2066	1066	0	3100	0	349			378		
V/C Ratio(X)	0.00	0.43	0.43	0.00	0.27	0.00	0.90			0.39		
Avail Cap(c_a), veh/h	0	2066	1066	0	3100	0	622			674		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	1.00	1.00			1.00		
Upstream Filter(I)	0.00	1.00	1.00	0.00	0.83	0.00	1.00			1.00		
Uniform Delay (d), s/veh	0.0	7.5	7.5	0.0	0.0	0.0	37.6			32.9		
Incr Delay (d2), s/veh	0.0	0.7	1.3	0.0	0.2	0.0	8.5			0.7		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0		
%ile BackOfQ(50%),veh/ln	0.0	4.0	4.3	0.0	0.1	0.0	8.2			3.1		
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	8.1	8.7	0.0	0.2	0.0	46.0			33.5		
LnGrp LOS	A	A	A	A	A	A	D			C		
Approach Vol, veh/h		1342			838							
Approach Delay, s/veh		8.3			0.2							
Approach LOS		A			A							
Timer - Assigned Phs		2	3			6	7					
Phs Duration (G+Y+Rc), s		72.8	27.2			72.8	27.2					
Change Period (Y+Rc), s		5.3	4.6			5.3	4.6					
Max Green Setting (Gmax), s		49.7	40.4			49.7	40.4					
Max Q Clear Time (g_c+I1), s		15.2	21.7			2.0	9.6					
Green Ext Time (p_c), s		21.3	0.9			14.2	0.4					
Intersection Summary												
HCM 6th Ctrl Delay			11.6									
HCM 6th LOS			B									

Movement	EBL2	EBT	EBR	WBL	WBT	WBR	NBR	SBR	SBR2
Lane Configurations									
Traffic Volume (vph)	105	1112	65	55	527	40	81	232	192
Future Volume (vph)	105	1112	65	55	527	40	81	232	192
Ideal Flow (vphpl)	1350	1350	1350	1350	1350	1350	1350	1350	1350
Lane Width	9	10	10	9	10	10	12	10	10
Total Lost time (s)	4.6	5.3		4.0	5.3		4.6	4.6	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.88	1.00
Frpb, ped/bikes	1.00	0.98		1.00	0.99		1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.99		1.00	0.99		0.86	0.85	0.85
Flt Protected	0.95	1.00		0.95	1.00		1.00	1.00	1.00
Satd. Flow (prot)	1018	2964		1018	2977		1030	1663	945
Flt Permitted	0.95	1.00		0.95	1.00		1.00	1.00	1.00
Satd. Flow (perm)	1018	2964		1018	2977		1030	1663	945
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	117	1236	72	61	586	44	90	258	213
RTOR Reduction (vph)	0	6	0	0	0	0	0	0	0
Lane Group Flow (vph)	117	1302	0	61	630	0	90	258	213
Confl. Peds. (#/hr)			115			83			
Confl. Bikes (#/hr)			6			6	6	6	
Turn Type	Prot	NA		Prot	NA		Prot	Prot	Free
Protected Phases	5	2		1	6		8	4	
Permitted Phases									Free
Actuated Green, G (s)	15.4	66.6		1.0	51.6		18.5	18.5	100.0
Effective Green, g (s)	15.4	66.6		1.0	51.6		18.5	18.5	100.0
Actuated g/C Ratio	0.15	0.67		0.01	0.52		0.18	0.18	1.00
Clearance Time (s)	4.6	5.3		4.0	5.3		4.6	4.6	
Vehicle Extension (s)	1.5	3.0		1.5	3.0		2.5	2.5	
Lane Grp Cap (vph)	156	1974		10	1536		190	307	945
v/s Ratio Prot	c0.11	c0.44		c0.06	0.21		0.09	c0.16	
v/s Ratio Perm									0.23
v/c Ratio	0.75	0.66		6.10	0.41		0.47	0.84	0.23
Uniform Delay, d1	40.5	9.9		49.5	14.9		36.4	39.3	0.0
Progression Factor	0.66	0.47		0.75	0.75		1.00	1.00	1.00
Incremental Delay, d2	10.7	1.1		2484.5	0.8		1.4	18.1	0.6
Delay (s)	37.5	5.8		2521.4	12.0		37.8	57.4	0.6
Level of Service	D	A		F	B		D	E	A
Approach Delay (s)		8.4			233.5				
Approach LOS		A			F				

Intersection Summary			
HCM 2000 Control Delay	71.6	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	14.5
Intersection Capacity Utilization	52.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1176	18	19	500	0	45	0	53	387	215	78
Future Volume (veh/h)	0	1176	18	19	500	0	45	0	53	387	215	78
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.88	0.98		1.00	1.00		1.00	1.00		0.93
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	0	1616	1616	1616	1616	0	1683	0	1683	1683	1683	1683
Adj Flow Rate, veh/h	0	1307	19	21	556	0	50	0	59	430	239	17
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	2	2	2	2	0	2	0	2	2	2	2
Cap, veh/h	0	3074	45	314	3034	0	0	0	0	651	352	278
Arrive On Green	0.00	1.00	1.00	0.69	0.69	0.00	0.00	0.00	0.00	0.21	0.21	0.21
Sat Flow, veh/h	0	4616	65	352	4557	0		0		3110	1683	1326
Grp Volume(v), veh/h	0	860	466	21	556	0		0.0		430	239	17
Grp Sat Flow(s),veh/h/ln	0	1471	1594	352	1471	0				1555	1683	1326
Q Serve(g_s), s	0.0	0.0	0.0	2.0	4.5	0.0				12.7	13.1	1.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	2.0	4.5	0.0				12.7	13.1	1.0
Prop In Lane	0.00		0.04	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2023	1096	314	3034	0				651	352	278
V/C Ratio(X)	0.00	0.43	0.43	0.07	0.18	0.00				0.66	0.68	0.06
Avail Cap(c_a), veh/h	0	2023	1096	314	3034	0				809	438	345
HCM Platoon Ratio	1.00	2.00	2.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.71	0.71	1.00	1.00	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	5.2	5.6	0.0				36.3	36.4	31.7
Incr Delay (d2), s/veh	0.0	0.5	0.9	0.4	0.1	0.0				1.4	3.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.1	0.3	0.2	1.3	0.0				4.9	5.7	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.5	0.9	5.6	5.7	0.0				37.7	39.5	31.8
LnGrp LOS	A	A	A	A	A	A				D	D	C
Approach Vol, veh/h		1326			577						686	
Approach Delay, s/veh		0.6			5.7						38.2	
Approach LOS		A			A						D	
Timer - Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		75.1				75.1		24.9				
Change Period (Y+Rc), s		6.3				6.3		4.0				
Max Green Setting (Gmax), s		43.7				43.7		26.0				
Max Q Clear Time (g_c+I1), s		2.0				6.5		15.1				
Green Ext Time (p_c), s		23.4				8.9		2.5				

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

Notes

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

Intersection	
Int Delay, s/veh	4.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	1526	88	0	516	1	0	0	93	0	0	0
Future Vol, veh/h	2	1526	88	0	516	1	0	0	93	0	0	0
Conflicting Peds, #/hr	107	0	128	0	0	107	0	0	128	107	0	107
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	1696	98	0	573	1	0	0	103	0	0	0

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	681	0	0	-	-	0	-	-	1153
Stage 1	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-
Critical Hdwy	5.34	-	-	-	-	-	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.12	-	-	-	-	-	-	-	3.92
Pot Cap-1 Maneuver	556	-	-	0	-	-	0	0	164
Stage 1	-	-	-	0	-	-	0	0	-
Stage 2	-	-	-	0	-	-	0	0	-
Platoon blocked, %		-	-		-	-			
Mov Cap-1 Maneuver	556	-	-	-	-	-	-	0	125
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	0	-
Stage 1	-	-	-	-	-	-	-	0	-
Stage 2	-	-	-	-	-	-	-	0	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	105.4
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBT	WBR
Capacity (veh/h)	125	556	-	-	-	-
HCM Lane V/C Ratio	0.827	0.004	-	-	-	-
HCM Control Delay (s)	105.4	11.5	0	-	-	-
HCM Lane LOS	F	B	A	-	-	-
HCM 95th %tile Q(veh)	5	0	-	-	-	-

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBR
Lane Configurations									
Traffic Volume (vph)	178	327	1026	85	56	515	137	48	67
Future Volume (vph)	178	327	1026	85	56	515	137	48	67
Ideal Flow (vphpl)	1350	1350	1350	1350	1350	1350	1350	1350	1350
Lane Width	12	9	10	9	9	9	9	9	15
Total Lost time (s)		4.6	5.3		4.6	5.3			4.6
Lane Util. Factor		1.00	0.91		1.00	0.91			1.00
Frpb, ped/bikes		1.00	0.98		1.00	0.92			1.00
Flpb, ped/bikes		1.00	1.00		1.00	1.00			1.00
Frt		1.00	0.99		1.00	0.96			0.86
Flt Protected		0.95	1.00		0.95	1.00			1.00
Satd. Flow (prot)		1018	2942		1018	2588			1133
Flt Permitted		0.95	1.00		0.95	1.00			1.00
Satd. Flow (perm)		1018	2942		1018	2588			1133
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	198	363	1140	94	62	572	152	53	74
RTOR Reduction (vph)	0	0	7	0	0	8	0	0	59
Lane Group Flow (vph)	0	561	1227	0	62	769	0	0	15
Confl. Peds. (#/hr)				124			127	127	
Confl. Bikes (#/hr)				8			2	2	
Turn Type	Prot	Prot	NA		Prot	NA			Perm
Protected Phases	5	5	2		1	6			
Permitted Phases									1
Actuated Green, G (s)		42.4	70.4		19.7	47.7			19.7
Effective Green, g (s)		42.4	70.4		19.7	47.7			19.7
Actuated g/C Ratio		0.42	0.70		0.20	0.48			0.20
Clearance Time (s)		4.6	5.3		4.6	5.3			4.6
Vehicle Extension (s)		2.5	5.0		2.5	5.0			2.5
Lane Grp Cap (vph)		431	2071		200	1234			223
v/s Ratio Prot		c0.55	c0.42		0.06	0.30			
v/s Ratio Perm									0.01
v/c Ratio		1.30	0.59		0.31	0.62			0.07
Uniform Delay, d1		28.8	7.5		34.3	19.5			32.7
Progression Factor		1.15	1.07		1.23	0.59			1.00
Incremental Delay, d2		145.6	0.7		0.6	2.1			0.1
Delay (s)		178.7	8.8		42.8	13.5			32.8
Level of Service		F	A		D	B			C
Approach Delay (s)			61.9			15.6			
Approach LOS			E			B			

Intersection Summary			
HCM 2000 Control Delay	46.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	9.9
Intersection Capacity Utilization	75.8%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	87	986	20	0	581	81	96	65	37	100	55	77
Future Volume (veh/h)	87	986	20	0	581	81	96	65	37	100	55	77
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.96		0.93	1.00		0.88	1.00		0.98	1.00		0.89
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	1616	1616	1683	0	1683	1683	1683	1683	1683	1616	1751	1683
Adj Flow Rate, veh/h	97	1096	20	0	646	72	107	72	41	111	61	86
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	0	2	2	2	2	2	2	2	2
Cap, veh/h	408	2450	45	0	2277	249	152	95	54	335	382	276
Arrive On Green	1.00	1.00	1.00	0.00	1.00	1.00	0.10	0.10	0.10	0.22	0.22	0.22
Sat Flow, veh/h	611	4454	81	0	4291	453	1603	999	569	1539	1751	1267
Grp Volume(v), veh/h	97	724	392	0	475	243	107	0	113	111	61	86
Grp Sat Flow(s),veh/h/ln	611	1471	1594	0	1532	1530	1603	0	1568	1539	1751	1267
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	6.5	0.0	7.0	6.1	2.8	5.7
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	6.5	0.0	7.0	6.1	2.8	5.7
Prop In Lane	1.00		0.05	0.00		0.30	1.00		0.36	1.00		1.00
Lane Grp Cap(c), veh/h	408	1618	877	0	1685	841	152	0	149	335	382	276
V/C Ratio(X)	0.24	0.45	0.45	0.00	0.28	0.29	0.70	0.00	0.76	0.33	0.16	0.31
Avail Cap(c_a), veh/h	408	1618	877	0	1685	841	253	0	248	474	539	390
HCM Platoon Ratio	2.00	2.00	2.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.81	0.81	0.81	0.00	0.71	0.71	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	43.9	0.0	44.1	33.0	31.7	32.8
Incr Delay (d2), s/veh	1.1	0.7	1.3	0.0	0.3	0.6	5.8	0.0	7.7	0.6	0.2	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.2	0.3	0.0	0.1	0.1	2.8	0.0	3.1	2.3	1.2	1.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	1.1	0.7	1.3	0.0	0.3	0.6	49.7	0.0	51.8	33.5	31.9	33.4
LnGrp LOS	A	A	A	A	A	A	D	A	D	C	C	C
Approach Vol, veh/h		1213			718			220			258	
Approach Delay, s/veh		1.0			0.4			50.8			33.1	
Approach LOS		A			A			D			C	

Timer - Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		60.3		13.7		60.3		26.0
Change Period (Y+Rc), s		5.3		* 4.2		5.3		4.2
Max Green Setting (Gmax), s		39.7		* 16		39.7		30.8
Max Q Clear Time (g_c+I1), s		2.0		9.0		2.0		8.1
Green Ext Time (p_c), s		20.1		0.5		10.6		1.0

Intersection Summary	
HCM 6th Ctrl Delay	8.8
HCM 6th LOS	A

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	840	56	55	587	61	101	419	97	0	593	83
Future Volume (veh/h)	14	840	56	55	587	61	101	419	97	0	593	83
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		0.93	0.99		0.93	1.00		0.94	1.00		0.93
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	1616	1616	1616	1616	1683	1683	1616	1616	1616	0	1616	1616
Adj Flow Rate, veh/h	16	933	54	61	652	55	112	466	41	0	659	25
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	0	2	2
Cap, veh/h	299	1750	101	293	1873	156	120	1234	518	0	835	348
Arrive On Green	0.02	0.82	0.82	0.04	0.44	0.44	0.08	0.40	0.40	0.00	0.27	0.27
Sat Flow, veh/h	1539	4247	245	1539	4292	358	1539	3070	1289	0	3151	1278
Grp Volume(v), veh/h	16	645	342	61	463	244	112	466	41	0	659	25
Grp Sat Flow(s),veh/h/ln	1539	1471	1551	1539	1532	1587	1539	1535	1289	0	1535	1278
Q Serve(g_s), s	0.6	6.9	6.9	2.3	10.0	10.2	7.2	10.7	2.0	0.0	19.9	1.5
Cycle Q Clear(g_c), s	0.6	6.9	6.9	2.3	10.0	10.2	7.2	10.7	2.0	0.0	19.9	1.5
Prop In Lane	1.00		0.16	1.00		0.23	1.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	299	1212	639	293	1337	692	120	1234	518	0	835	348
V/C Ratio(X)	0.05	0.53	0.53	0.21	0.35	0.35	0.93	0.38	0.08	0.00	0.79	0.07
Avail Cap(c_a), veh/h	396	1212	639	353	1337	692	120	1314	552	0	915	381
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)	0.53	0.53	0.53	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	17.0	5.8	5.8	16.2	18.7	18.8	45.8	21.1	18.5	0.0	33.7	27.0
Incr Delay (d2), s/veh	0.0	0.9	1.7	0.1	0.7	1.4	62.0	0.3	0.1	0.0	4.7	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	1.5	1.8	0.8	3.6	3.9	4.8	3.9	1.8	0.0	7.9	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.0	6.7	7.5	16.3	19.4	20.2	107.8	21.4	18.6	0.0	38.5	27.2
LnGrp LOS	B	A	A	B	B	C	F	C	B	A	D	C
Approach Vol, veh/h		1003			768			619			684	
Approach Delay, s/veh		7.1			19.4			36.8			38.0	
Approach LOS		A			B			D			D	

Timer - Assigned Phs	1	2		4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.1	46.5		45.4	5.7	48.9	13.0	32.4
Change Period (Y+Rc), s	4.6	5.3		5.2	4.6	5.3	5.2	5.2
Max Green Setting (Gmax), s	7.4	34.7		42.8	7.4	34.7	7.8	29.8
Max Q Clear Time (g_c+I1), s	4.3	8.9		12.7	2.6	12.2	9.2	21.9
Green Ext Time (p_c), s	0.0	12.9		5.2	0.0	8.4	0.0	3.6

Intersection Summary		
HCM 6th Ctrl Delay		23.1
HCM 6th LOS		C

Notes

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

Intersection	
Intersection Delay, s/veh	11.4
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	287	9	9	143	25	5	26	13	38	132	47
Future Vol, veh/h	10	287	9	9	143	25	5	26	13	38	132	47
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	319	10	10	159	28	6	29	14	42	147	52
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	12.5	10.2	9.1	11.2
HCM LOS	B	B	A	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	11%	3%	5%	18%
Vol Thru, %	59%	94%	81%	61%
Vol Right, %	30%	3%	14%	22%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	44	306	177	217
LT Vol	5	10	9	38
Through Vol	26	287	143	132
RT Vol	13	9	25	47
Lane Flow Rate	49	340	197	241
Geometry Grp	1	1	1	1
Degree of Util (X)	0.076	0.476	0.282	0.355
Departure Headway (Hd)	5.586	5.044	5.153	5.297
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	640	717	698	680
Service Time	3.629	3.044	3.183	3.329
HCM Lane V/C Ratio	0.077	0.474	0.282	0.354
HCM Control Delay	9.1	12.5	10.2	11.2
HCM Lane LOS	A	B	B	B
HCM 95th-tile Q	0.2	2.6	1.2	1.6

Intersection	
Intersection Delay, s/veh	11
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥			✥			✥	
Traffic Vol, veh/h	13	312	10	7	155	20	7	80	8	33	49	17
Future Vol, veh/h	13	312	10	7	155	20	7	80	8	33	49	17
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	14	347	11	8	172	22	8	89	9	37	54	19
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	12.4	9.9	9.6	9.6
HCM LOS	B	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	7%	4%	4%	33%
Vol Thru, %	84%	93%	85%	49%
Vol Right, %	8%	3%	11%	17%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	95	335	182	99
LT Vol	7	13	7	33
Through Vol	80	312	155	49
RT Vol	8	10	20	17
Lane Flow Rate	106	372	202	110
Geometry Grp	1	1	1	1
Degree of Util (X)	0.162	0.491	0.275	0.168
Departure Headway (Hd)	5.52	4.745	4.898	5.512
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	653	752	724	655
Service Time	3.524	2.828	2.996	3.516
HCM Lane V/C Ratio	0.162	0.495	0.279	0.168
HCM Control Delay	9.6	12.4	9.9	9.6
HCM Lane LOS	A	B	A	A
HCM 95th-tile Q	0.6	2.7	1.1	0.6

Intersection	
Intersection Delay, s/veh	11
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			✣			✣	
Traffic Vol, veh/h	10	308	29	22	139	10	16	28	25	18	80	28
Future Vol, veh/h	10	308	29	22	139	10	16	28	25	18	80	28
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	342	32	24	154	11	18	31	28	20	89	31
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	12.5	9.8	9.1	9.8
HCM LOS	B	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	23%	3%	13%	14%
Vol Thru, %	41%	89%	81%	63%
Vol Right, %	36%	8%	6%	22%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	69	347	171	126
LT Vol	16	10	22	18
Through Vol	28	308	139	80
RT Vol	25	29	10	28
Lane Flow Rate	77	386	190	140
Geometry Grp	1	1	1	1
Degree of Util (X)	0.116	0.502	0.261	0.205
Departure Headway (Hd)	5.431	4.688	4.949	5.283
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	664	763	718	671
Service Time	3.431	2.762	3.037	3.383
HCM Lane V/C Ratio	0.116	0.506	0.265	0.209
HCM Control Delay	9.1	12.5	9.8	9.8
HCM Lane LOS	A	B	A	A
HCM 95th-tile Q	0.4	2.9	1	0.8

LOS Worksheets: Baseline Plus Conceptual Plan Conditions

FEHR PEERS

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	859	49	0	477	0	223	0	85	70	0	54
Future Volume (veh/h)	0	859	49	0	477	0	223	0	85	70	0	54
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	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	0	1196	1196	0	1196	0	1148	0	1196	1244	0	1196
Adj Flow Rate, veh/h	0	954	47	0	530	0	248	0	26	78	0	17
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	2	2	0	2	0	2	0	2	2	0	2
Cap, veh/h	0	2078	102	0	2135	0	270	0	0	293	0	0
Arrive On Green	0.00	0.65	0.65	0.00	0.87	0.00	0.25	0.00	0.00	0.25	0.00	0.00
Sat Flow, veh/h	0	3287	156	0	3481	0	1094	248		1185	78	
Grp Volume(v), veh/h	0	653	348	0	530	0	248	52.7		78	30.8	
Grp Sat Flow(s),veh/h/ln	0	1088	1158	0	1088	0	1094	D		1185	C	
Q Serve(g_s), s	0.0	14.8	14.9	0.0	2.7	0.0	22.1			5.3		
Cycle Q Clear(g_c), s	0.0	14.8	14.9	0.0	2.7	0.0	22.1			5.3		
Prop In Lane	0.00		0.13	0.00		0.00	1.00			1.00		
Lane Grp Cap(c), veh/h	0	1423	757	0	2135	0	270			293		
V/C Ratio(X)	0.00	0.46	0.46	0.00	0.25	0.00	0.92			0.27		
Avail Cap(c_a), veh/h	0	1423	757	0	2135	0	442			479		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.33	1.00	1.00			1.00		
Upstream Filter(I)	0.00	1.00	1.00	0.00	0.93	0.00	1.00			1.00		
Uniform Delay (d), s/veh	0.0	8.6	8.6	0.0	2.4	0.0	36.6			30.3		
Incr Delay (d2), s/veh	0.0	1.1	2.0	0.0	0.3	0.0	16.1			0.5		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0		
%ile BackOfQ(50%),veh/ln	0.0	3.4	3.8	0.0	0.5	0.0	7.1			1.6		
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	9.6	10.6	0.0	2.7	0.0	52.7			30.8		
LnGrp LOS	A	A	B	A	A	A	D			C		
Approach Vol, veh/h		1001			530							
Approach Delay, s/veh		10.0			2.7							
Approach LOS		A			A							

Timer - Assigned Phs		2	3			6	7					
Phs Duration (G+Y+Rc), s		70.7	29.3			70.7	29.3					
Change Period (Y+Rc), s		5.3	4.6			5.3	4.6					
Max Green Setting (Gmax), s		49.7	40.4			49.7	40.4					
Max Q Clear Time (g_c+I1), s		16.9	24.1			4.7	7.3					
Green Ext Time (p_c), s		14.8	0.7			8.0	0.2					

Intersection Summary			
HCM 6th Ctrl Delay			14.5
HCM 6th LOS			B

Movement	EBL2	EBT	EBR	WBL	WBT	WBR	NBR	SBR	SBR2
Lane Configurations									
Traffic Volume (vph)	190	759	51	21	447	110	93	87	197
Future Volume (vph)	190	759	51	21	447	110	93	87	197
Ideal Flow (vphpl)	1350	1350	1350	1350	1350	1350	1350	1350	1350
Lane Width	9	10	10	9	10	10	12	10	10
Total Lost time (s)	4.6	5.3		4.0	5.3		4.6	4.6	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.88	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.98		1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.99		1.00	0.97		0.86	0.85	0.85
Flt Protected	0.95	1.00		0.95	1.00		1.00	1.00	1.00
Satd. Flow (prot)	1018	2992		1018	2888		1030	1663	945
Flt Permitted	0.95	1.00		0.95	1.00		1.00	1.00	1.00
Satd. Flow (perm)	1018	2992		1018	2888		1030	1663	945
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	211	843	57	23	497	122	103	97	219
RTOR Reduction (vph)	0	6	0	0	0	0	0	0	0
Lane Group Flow (vph)	211	894	0	23	619	0	103	97	219
Confl. Peds. (#/hr)			24			64			
Confl. Bikes (#/hr)			3			3	3	3	
Turn Type	Prot	NA		Prot	NA		Prot	Prot	Free
Protected Phases	5	2		1	6		8	4	
Permitted Phases									Free
Actuated Green, G (s)	15.4	70.7		1.0	55.7		14.4	14.4	100.0
Effective Green, g (s)	15.4	70.7		1.0	55.7		14.4	14.4	100.0
Actuated g/C Ratio	0.15	0.71		0.01	0.56		0.14	0.14	1.00
Clearance Time (s)	4.6	5.3		4.0	5.3		4.6	4.6	
Vehicle Extension (s)	1.5	3.0		1.5	3.0		2.5	2.5	
Lane Grp Cap (vph)	156	2115		10	1608		148	239	945
v/s Ratio Prot	c0.21	c0.30		0.02	0.21		c0.10	0.06	
v/s Ratio Perm									0.23
v/c Ratio	1.35	0.42		2.30	0.38		0.70	0.41	0.23
Uniform Delay, d1	42.3	6.1		49.5	12.5		40.7	38.9	0.0
Progression Factor	0.79	0.45		0.74	1.08		1.00	1.00	1.00
Incremental Delay, d2	190.3	0.5		809.4	0.7		12.3	0.8	0.6
Delay (s)	223.8	3.3		845.9	14.1		53.0	39.7	0.6
Level of Service	F	A		F	B		D	D	A
Approach Delay (s)		45.2			43.9				
Approach LOS		D			D				

Intersection Summary			
HCM 2000 Control Delay	40.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	14.5
Intersection Capacity Utilization	51.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	798	55	49	439	0	60	0	43	247	82	42
Future Volume (veh/h)	0	798	55	49	439	0	60	0	43	247	82	42
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	0.99		1.00	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	0	1148	1148	1148	1148	0	1196	0	1196	1196	1196	1196
Adj Flow Rate, veh/h	0	887	59	54	488	0	67	0	48	274	91	6
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	2	2	2	2	0	2	0	2	2	2	2
Cap, veh/h	0	2155	143	332	2256	0	0	0	0	392	212	171
Arrive On Green	0.00	1.00	1.00	0.72	0.72	0.00	0.00	0.00	0.00	0.18	0.18	0.18
Sat Flow, veh/h	0	3097	198	362	3238	0		0		2210	1196	964
Grp Volume(v), veh/h	0	618	328	54	488	0		0.0		274	91	6
Grp Sat Flow(s),veh/h/ln	0	1045	1103	362	1045	0				1105	1196	964
Q Serve(g_s), s	0.0	0.0	0.0	4.9	5.2	0.0				11.6	6.8	0.5
Cycle Q Clear(g_c), s	0.0	0.0	0.0	4.9	5.2	0.0				11.6	6.8	0.5
Prop In Lane	0.00		0.18	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1504	794	332	2256	0				392	212	171
V/C Ratio(X)	0.00	0.41	0.41	0.16	0.22	0.00				0.70	0.43	0.04
Avail Cap(c_a), veh/h	0	1504	794	332	2256	0				575	311	251
HCM Platoon Ratio	1.00	2.00	2.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.90	0.90	1.00	1.00	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	4.6	4.7	0.0				38.6	36.6	34.0
Incr Delay (d2), s/veh	0.0	0.7	1.4	1.0	0.2	0.0				2.3	1.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.2	0.3	0.4	1.0	0.0				3.3	2.1	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.7	1.4	5.7	4.9	0.0				40.9	38.0	34.1
LnGrp LOS	A	A	A	A	A	A				D	D	C
Approach Vol, veh/h		946			542						371	
Approach Delay, s/veh		1.0			5.0						40.1	
Approach LOS		A			A						D	

Timer - Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		78.3				78.3		21.7
Change Period (Y+Rc), s		6.3				6.3		4.0
Max Green Setting (Gmax), s		43.7				43.7		26.0
Max Q Clear Time (g_c+I1), s		2.0				7.2		13.6
Green Ext Time (p_c), s		15.3				8.9		1.2

Intersection Summary	
HCM 6th Ctrl Delay	9.9
HCM 6th LOS	A

Notes

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

Intersection												
Int Delay, s/veh	2.2											
Movement	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Lane Configurations												
Traffic Vol, veh/h	3	1070	28	0	474	3	0	0	135	0	0	0
Future Vol, veh/h	3	1070	28	0	474	3	0	0	135	0	0	0
Conflicting Peds, #/hr	55	0	36	0	0	53	0	0	34	53	0	55
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	1189	31	0	527	3	0	0	150	0	0	0

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	585	0	0	-	-	0	-	-	680
Stage 1	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-
Critical Hdwy	5.34	-	-	-	-	-	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.12	-	-	-	-	-	-	-	3.92
Pot Cap-1 Maneuver	618	-	-	0	-	-	0	0	337
Stage 1	-	-	-	0	-	-	0	0	-
Stage 2	-	-	-	0	-	-	0	0	-
Platoon blocked, %		-	-		-	-			
Mov Cap-1 Maneuver	618	-	-	-	-	-	-	0	314
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	0	-
Stage 1	-	-	-	-	-	-	-	0	-
Stage 2	-	-	-	-	-	-	-	0	-

Approach	EB	WB	NB
HCM Control Delay, s	0.1	0	26.5
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBT	WBR
Capacity (veh/h)	314	618	-	-	-	-
HCM Lane V/C Ratio	0.478	0.005	-	-	-	-
HCM Control Delay (s)	26.5	10.9	0.1	-	-	-
HCM Lane LOS	D	B	A	-	-	-
HCM 95th %tile Q(veh)	2.5	0	-	-	-	-

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBR
Lane Configurations									
Traffic Volume (vph)	383	77	602	63	84	588	267	15	53
Future Volume (vph)	383	77	602	63	84	588	267	15	53
Ideal Flow (vphpl)	1350	1350	1350	1350	1350	1350	1350	1350	1350
Lane Width	12	9	10	9	9	9	9	9	15
Total Lost time (s)		4.6	5.3		4.6	5.3			4.6
Lane Util. Factor		1.00	0.91		1.00	0.91			1.00
Frpb, ped/bikes		1.00	0.99		1.00	0.95			1.00
Flpb, ped/bikes		1.00	1.00		1.00	1.00			1.00
Frt		1.00	0.99		1.00	0.95			0.86
Flt Protected		0.95	1.00		0.95	1.00			1.00
Satd. Flow (prot)		1018	2969		1018	2658			1133
Flt Permitted		0.95	1.00		0.95	1.00			1.00
Satd. Flow (perm)		1018	2969		1018	2658			1133
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	426	86	669	70	93	653	297	17	59
RTOR Reduction (vph)	0	0	9	0	0	2	0	0	47
Lane Group Flow (vph)	0	512	730	0	93	965	0	0	12
Confl. Peds. (#/hr)				32			54	54	
Confl. Bikes (#/hr)				2			8	8	
Turn Type	Prot	Prot	NA		Prot	NA			Perm
Protected Phases	5	5	2		1	6			
Permitted Phases									1
Actuated Green, G (s)		42.4	69.9		20.2	47.7			20.2
Effective Green, g (s)		42.4	69.9		20.2	47.7			20.2
Actuated g/C Ratio		0.42	0.70		0.20	0.48			0.20
Clearance Time (s)		4.6	5.3		4.6	5.3			4.6
Vehicle Extension (s)		2.5	5.0		2.5	5.0			2.5
Lane Grp Cap (vph)		431	2075		205	1267			228
v/s Ratio Prot		c0.50	0.25		0.09	c0.36			
v/s Ratio Perm									0.01
v/c Ratio		1.19	0.35		0.45	0.76			0.05
Uniform Delay, d1		28.8	6.0		35.1	21.5			32.2
Progression Factor		1.20	0.95		1.21	0.57			1.00
Incremental Delay, d2		103.7	0.4		1.0	3.8			0.1
Delay (s)		138.4	6.1		43.3	16.1			32.2
Level of Service		F	A		D	B			C
Approach Delay (s)			60.3			18.5			
Approach LOS			E			B			

Intersection Summary			
HCM 2000 Control Delay	40.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	9.9
Intersection Capacity Utilization	77.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	58	586	33	0	710	64	82	81	29	40	71	80
Future Volume (veh/h)	58	586	33	0	710	64	82	81	29	40	71	80
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		0.95	1.00		0.92	1.00		0.98	1.00		0.90
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	1148	1148	1196	0	1196	1196	1196	1196	1196	1148	1244	1196
Adj Flow Rate, veh/h	64	651	30	0	789	60	91	90	32	44	79	89
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	0	2	2	2	2	2	2	2	2
Cap, veh/h	277	1605	74	0	1610	122	145	107	38	232	264	194
Arrive On Green	1.00	1.00	1.00	0.00	1.00	1.00	0.13	0.13	0.13	0.21	0.21	0.21
Sat Flow, veh/h	392	3064	140	0	3183	232	1139	838	298	1094	1244	917
Grp Volume(v), veh/h	64	443	238	0	557	292	91	0	122	44	79	89
Grp Sat Flow(s),veh/h/ln	392	1045	1115	0	1088	1131	1139	0	1136	1094	1244	917
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	7.6	0.0	10.5	3.3	5.3	8.5
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	7.6	0.0	10.5	3.3	5.3	8.5
Prop In Lane	1.00		0.13	0.00		0.21	1.00		0.26	1.00		1.00
Lane Grp Cap(c), veh/h	277	1094	584	0	1140	592	145	0	145	232	264	194
V/C Ratio(X)	0.23	0.40	0.41	0.00	0.49	0.49	0.63	0.00	0.84	0.19	0.30	0.46
Avail Cap(c_a), veh/h	277	1094	584	0	1140	592	180	0	180	337	383	282
HCM Platoon Ratio	2.00	2.00	2.00	1.00	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	0.00	0.68	0.68	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	41.4	0.0	42.7	32.3	33.2	34.4
Incr Delay (d2), s/veh	1.8	1.1	2.0	0.0	1.0	2.0	4.6	0.0	24.6	0.4	0.6	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.2	0.3	0.0	0.2	0.3	2.3	0.0	3.9	0.9	1.7	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	1.8	1.1	2.0	0.0	1.0	2.0	46.0	0.0	67.3	32.7	33.8	36.1
LnGrp LOS	A	A	A	A	A	A	D	A	E	C	C	D
Approach Vol, veh/h		745			849			213			212	
Approach Delay, s/veh		1.4			1.4			58.2			34.5	
Approach LOS		A			A			E			C	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		57.7		16.9		57.7		25.4				
Change Period (Y+Rc), s		5.3		* 4.2		5.3		4.2				
Max Green Setting (Gmax), s		39.7		* 16		39.7		30.8				
Max Q Clear Time (g_c+I1), s		2.0		12.5		2.0		10.5				
Green Ext Time (p_c), s		12.1		0.3		12.9		0.8				
Intersection Summary												
HCM 6th Ctrl Delay			10.9									
HCM 6th LOS			B									

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	24	699	59	48	713	48	80	478	68	0	364	56
Future Volume (veh/h)	24	699	59	48	713	48	80	478	68	0	364	56
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.96	0.99		0.95	1.00		0.97	1.00		0.92
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	1148	1148	1148	1148	1196	1196	1148	1148	1148	0	1148	1148
Adj Flow Rate, veh/h	27	777	55	53	792	44	89	531	29	0	404	18
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	0	2	2
Cap, veh/h	195	1270	89	251	1404	78	85	842	364	0	559	230
Arrive On Green	0.04	0.85	0.85	0.04	0.44	0.44	0.08	0.39	0.39	0.00	0.26	0.26
Sat Flow, veh/h	1094	2979	210	1094	3155	175	1094	2182	942	0	2239	898
Grp Volume(v), veh/h	27	544	288	53	545	291	89	531	29	0	404	18
Grp Sat Flow(s),veh/h/ln	1094	1045	1099	1094	1088	1153	1094	1091	942	0	1091	898
Q Serve(g_s), s	1.4	8.0	8.1	2.7	18.6	18.7	7.8	19.7	1.9	0.0	16.9	1.5
Cycle Q Clear(g_c), s	1.4	8.0	8.1	2.7	18.6	18.7	7.8	19.7	1.9	0.0	16.9	1.5
Prop In Lane	1.00		0.19	1.00		0.15	1.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	195	891	469	251	968	513	85	842	364	0	559	230
V/C Ratio(X)	0.14	0.61	0.62	0.21	0.56	0.57	1.04	0.63	0.08	0.00	0.72	0.08
Avail Cap(c_a), veh/h	256	891	469	292	968	513	85	934	403	0	650	268
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)	0.87	0.87	0.87	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	17.0	4.8	4.8	15.5	20.6	20.6	46.1	24.9	19.4	0.0	34.0	28.2
Incr Delay (d2), s/veh	0.1	2.7	5.2	0.2	2.4	4.5	109.8	1.5	0.1	0.0	3.9	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	1.3	1.7	0.7	4.9	5.5	4.7	5.2	1.3	0.0	4.8	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.1	7.5	10.0	15.7	22.9	25.1	155.9	26.4	19.6	0.0	37.8	28.4
LnGrp LOS	B	A	B	B	C	C	F	C	B	A	D	C
Approach Vol, veh/h		859			889			649			422	
Approach Delay, s/veh		8.7			23.2			43.8			37.4	
Approach LOS		A			C			D			D	

Timer - Assigned Phs	1	2	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.3	47.9	43.8	6.4	49.8	13.0	30.8
Change Period (Y+Rc), s	4.6	5.3	5.2	4.6	5.3	5.2	5.2
Max Green Setting (Gmax), s	7.4	34.7	42.8	7.4	34.7	7.8	29.8
Max Q Clear Time (g_c+I1), s	4.7	10.1	21.7	3.4	20.7	9.8	18.9
Green Ext Time (p_c), s	0.0	10.5	5.2	0.0	7.4	0.0	2.7

Intersection Summary	
HCM 6th Ctrl Delay	25.7
HCM 6th LOS	C

Notes

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

Intersection	
Intersection Delay, s/veh	10
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥			✥			✥	
Traffic Vol, veh/h	15	149	7	7	232	16	9	50	5	5	43	28
Future Vol, veh/h	15	149	7	7	232	16	9	50	5	5	43	28
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	19	186	9	9	290	20	11	63	6	6	54	35
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.7	10.8	9.1	8.9
HCM LOS	A	B	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	14%	9%	3%	7%
Vol Thru, %	78%	87%	91%	57%
Vol Right, %	8%	4%	6%	37%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	64	171	255	76
LT Vol	9	15	7	5
Through Vol	50	149	232	43
RT Vol	5	7	16	28
Lane Flow Rate	80	214	319	95
Geometry Grp	1	1	1	1
Degree of Util (X)	0.117	0.281	0.407	0.134
Departure Headway (Hd)	5.275	4.741	4.601	5.065
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	674	755	778	702
Service Time	3.351	2.798	2.652	3.139
HCM Lane V/C Ratio	0.119	0.283	0.41	0.135
HCM Control Delay	9.1	9.7	10.8	8.9
HCM Lane LOS	A	A	B	A
HCM 95th-tile Q	0.4	1.2	2	0.5

Intersection	
Intersection Delay, s/veh	10.3
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			✣			✣	
Traffic Vol, veh/h	9	145	5	9	241	23	6	92	13	16	18	4
Future Vol, veh/h	9	145	5	9	241	23	6	92	13	16	18	4
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	181	6	11	301	29	8	115	16	20	23	5
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.6	11.2	9.6	8.9
HCM LOS	A	B	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	5%	6%	3%	42%
Vol Thru, %	83%	91%	88%	47%
Vol Right, %	12%	3%	8%	11%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	111	159	273	38
LT Vol	6	9	9	16
Through Vol	92	145	241	18
RT Vol	13	5	23	4
Lane Flow Rate	139	199	341	48
Geometry Grp	1	1	1	1
Degree of Util (X)	0.2	0.265	0.437	0.071
Departure Headway (Hd)	5.185	4.807	4.614	5.413
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	687	741	778	655
Service Time	3.259	2.87	2.667	3.502
HCM Lane V/C Ratio	0.202	0.269	0.438	0.073
HCM Control Delay	9.6	9.6	11.2	8.9
HCM Lane LOS	A	A	B	A
HCM 95th-tile Q	0.7	1.1	2.2	0.2

Intersection	
Intersection Delay, s/veh	10.1
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			✣			✣	
Traffic Vol, veh/h	9	158	8	16	239	14	14	27	17	13	23	22
Future Vol, veh/h	9	158	8	16	239	14	14	27	17	13	23	22
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	198	10	20	299	18	18	34	21	16	29	28
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.6	10.9	8.8	8.8
HCM LOS	A	B	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	24%	5%	6%	22%
Vol Thru, %	47%	90%	89%	40%
Vol Right, %	29%	5%	5%	38%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	58	175	269	58
LT Vol	14	9	16	13
Through Vol	27	158	239	23
RT Vol	17	8	14	22
Lane Flow Rate	72	219	336	72
Geometry Grp	1	1	1	1
Degree of Util (X)	0.104	0.283	0.424	0.103
Departure Headway (Hd)	5.169	4.664	4.536	5.115
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	689	768	790	696
Service Time	3.237	2.711	2.577	3.183
HCM Lane V/C Ratio	0.104	0.285	0.425	0.103
HCM Control Delay	8.8	9.6	10.9	8.8
HCM Lane LOS	A	A	B	A
HCM 95th-tile Q	0.3	1.2	2.1	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1159	103	0	817	0	282	0	49	134	0	67
Future Volume (veh/h)	0	1159	103	0	817	0	282	0	49	134	0	67
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.92	1.00		1.00	1.00		1.00	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	0	1683	1683	0	1683	0	1616	0	1683	1751	0	1683
Adj Flow Rate, veh/h	0	1288	105	0	908	0	313	0	28	149	0	16
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	2	2	0	2	0	2	0	2	2	0	2
Cap, veh/h	0	2898	236	0	3100	0	349	0	0	378	0	0
Arrive On Green	0.00	0.67	0.67	0.00	1.00	0.00	0.23	0.00	0.00	0.23	0.00	0.00
Sat Flow, veh/h	0	4449	350	0	4898	0	1539	313		1667	149	
Grp Volume(v), veh/h	0	918	475	0	908	0	313	46.0		149	33.5	
Grp Sat Flow(s),veh/h/ln	0	1532	1584	0	1532	0	1539	D		1667	C	
Q Serve(g_s), s	0.0	13.9	13.9	0.0	0.0	0.0	19.7			7.6		
Cycle Q Clear(g_c), s	0.0	13.9	13.9	0.0	0.0	0.0	19.7			7.6		
Prop In Lane	0.00		0.22	0.00		0.00	1.00			1.00		
Lane Grp Cap(c), veh/h	0	2066	1068	0	3100	0	349			378		
V/C Ratio(X)	0.00	0.44	0.44	0.00	0.29	0.00	0.90			0.39		
Avail Cap(c_a), veh/h	0	2066	1068	0	3100	0	622			674		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	1.00	1.00			1.00		
Upstream Filter(I)	0.00	1.00	1.00	0.00	0.80	0.00	1.00			1.00		
Uniform Delay (d), s/veh	0.0	7.6	7.6	0.0	0.0	0.0	37.6			32.9		
Incr Delay (d2), s/veh	0.0	0.7	1.3	0.0	0.2	0.0	8.5			0.7		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0		
%ile BackOfQ(50%),veh/ln	0.0	4.2	4.6	0.0	0.1	0.0	8.2			3.1		
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	8.3	8.9	0.0	0.2	0.0	46.0			33.5		
LnGrp LOS	A	A	A	A	A	A	D			C		
Approach Vol, veh/h		1393			908							
Approach Delay, s/veh		8.5			0.2							
Approach LOS		A			A							

Timer - Assigned Phs		2	3			6	7		
Phs Duration (G+Y+Rc), s		72.8	27.2			72.8	27.2		
Change Period (Y+Rc), s		5.3	4.6			5.3	4.6		
Max Green Setting (Gmax), s		49.7	40.4			49.7	40.4		
Max Q Clear Time (g_c+I1), s		15.9	21.7			2.0	9.6		
Green Ext Time (p_c), s		21.8	0.9			15.8	0.4		

Intersection Summary		
HCM 6th Ctrl Delay		11.4
HCM 6th LOS		B

HCM Signalized Intersection Capacity Analysis
2: Roxbury Dr & Wilshire Blvd & Brighton Wy

06/16/2023

Movement	EBL2	EBT	EBR	WBL	WBT	WBR	NBR	SBR	SBR2
Lane Configurations									
Traffic Volume (vph)	105	1158	65	55	590	49	66	232	192
Future Volume (vph)	105	1158	65	55	590	49	66	232	192
Ideal Flow (vphpl)	1350	1350	1350	1350	1350	1350	1350	1350	1350
Lane Width	9	10	10	9	10	10	12	10	10
Total Lost time (s)	4.6	5.3		4.0	5.3		4.6	4.6	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.88	1.00
Frpb, ped/bikes	1.00	0.99		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	0.99		1.00	0.99		0.86	0.85	0.85
Flt Protected	0.95	1.00		0.95	1.00		1.00	1.00	1.00
Satd. Flow (prot)	1018	2967		1018	2972		1030	1663	945
Flt Permitted	0.95	1.00		0.95	1.00		1.00	1.00	1.00
Satd. Flow (perm)	1018	2967		1018	2972		1030	1663	945
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	117	1287	72	61	656	54	73	258	213
RTOR Reduction (vph)	0	6	0	0	0	0	0	0	0
Lane Group Flow (vph)	117	1353	0	61	710	0	73	258	213
Confl. Peds. (#/hr)			115			83			
Confl. Bikes (#/hr)			6			6	6	6	
Turn Type	Prot	NA		Prot	NA		Prot	Prot	Free
Protected Phases	5	2		1	6		8	4	
Permitted Phases									Free
Actuated Green, G (s)	15.4	66.6		1.0	51.6		18.5	18.5	100.0
Effective Green, g (s)	15.4	66.6		1.0	51.6		18.5	18.5	100.0
Actuated g/C Ratio	0.15	0.67		0.01	0.52		0.18	0.18	1.00
Clearance Time (s)	4.6	5.3		4.0	5.3		4.6	4.6	
Vehicle Extension (s)	1.5	3.0		1.5	3.0		2.5	2.5	
Lane Grp Cap (vph)	156	1976		10	1533		190	307	945
v/s Ratio Prot	c0.11	c0.46		c0.06	0.24		0.07	c0.16	
v/s Ratio Perm									0.23
v/c Ratio	0.75	0.68		6.10	0.46		0.38	0.84	0.23
Uniform Delay, d1	40.5	10.3		49.5	15.4		35.8	39.3	0.0
Progression Factor	0.65	0.45		0.85	0.84		1.00	1.00	1.00
Incremental Delay, d2	10.1	1.2		2475.4	0.9		0.9	18.1	0.6
Delay (s)	36.5	5.8		2517.4	13.9		36.7	57.4	0.6
Level of Service	D	A		F	B		D	E	A
Approach Delay (s)		8.2			212.0				
Approach LOS		A			F				

Intersection Summary			
HCM 2000 Control Delay	69.2	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	14.5
Intersection Capacity Utilization	53.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1182	43	50	500	0	117	0	57	389	218	78
Future Volume (veh/h)	0	1182	43	50	500	0	117	0	57	389	218	78
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.88	0.99		1.00	1.00		1.00	1.00		0.93
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	0	1616	1616	1616	1616	0	1683	0	1683	1683	1683	1683
Adj Flow Rate, veh/h	0	1313	47	56	556	0	130	0	63	432	242	17
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	2	2	2	2	0	2	0	2	2	2	2
Cap, veh/h	0	2986	107	306	3029	0	0	0	0	654	354	279
Arrive On Green	0.00	1.00	1.00	0.69	0.69	0.00	0.00	0.00	0.00	0.21	0.21	0.21
Sat Flow, veh/h	0	4494	156	341	4557	0		0		3110	1683	1327
Grp Volume(v), veh/h	0	888	472	56	556	0		0.0		432	242	17
Grp Sat Flow(s),veh/h/ln	0	1471	1563	341	1471	0				1555	1683	1327
Q Serve(g_s), s	0.0	0.0	0.0	6.2	4.5	0.0				12.7	13.3	1.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	6.2	4.5	0.0				12.7	13.3	1.0
Prop In Lane	0.00		0.10	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2020	1074	306	3029	0				654	354	279
V/C Ratio(X)	0.00	0.44	0.44	0.18	0.18	0.00				0.66	0.68	0.06
Avail Cap(c_a), veh/h	0	2020	1074	306	3029	0				809	438	345
HCM Platoon Ratio	1.00	2.00	2.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.69	0.69	1.00	1.00	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	5.9	5.6	0.0				36.2	36.4	31.6
Incr Delay (d2), s/veh	0.0	0.5	0.9	1.3	0.1	0.0				1.4	3.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.1	0.3	0.5	1.3	0.0				5.0	5.8	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.5	0.9	7.2	5.8	0.0				37.6	39.6	31.7
LnGrp LOS	A	A	A	A	A	A				D	D	C
Approach Vol, veh/h		1360			612						691	
Approach Delay, s/veh		0.6			5.9						38.2	
Approach LOS		A			A						D	

Timer - Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		75.0				75.0		25.0				
Change Period (Y+Rc), s		6.3				6.3		4.0				
Max Green Setting (Gmax), s		43.7				43.7		26.0				
Max Q Clear Time (g_c+I1), s		2.0				8.2		15.3				
Green Ext Time (p_c), s		24.2				10.1		2.5				

Intersection Summary		
HCM 6th Ctrl Delay		11.6
HCM 6th LOS		B

Notes

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

Intersection	
Int Delay, s/veh	16.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	1536	90	0	547	1	0	0	146	0	0	0
Future Vol, veh/h	2	1536	90	0	547	1	0	0	146	0	0	0
Conflicting Peds, #/hr	107	0	128	0	0	107	0	0	128	107	0	107
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	1707	100	0	608	1	0	0	162	0	0	0

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	716	0	0	-	-	0	-	-	1160
Stage 1	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-
Critical Hdwy	5.34	-	-	-	-	-	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.12	-	-	-	-	-	-	-	3.92
Pot Cap-1 Maneuver	535	-	-	0	-	-	0	0	~ 162
Stage 1	-	-	-	0	-	-	0	0	-
Stage 2	-	-	-	0	-	-	0	0	-
Platoon blocked, %		-	-		-	-			
Mov Cap-1 Maneuver	535	-	-	-	-	-	-	0	~ 123
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	0	-
Stage 1	-	-	-	-	-	-	-	0	-
Stage 2	-	-	-	-	-	-	-	0	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	256.1
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBT	WBR
Capacity (veh/h)	123	535	-	-	-	-
HCM Lane V/C Ratio	1.319	0.004	-	-	-	-
HCM Control Delay (s)	256.1	11.8	0	-	-	-
HCM Lane LOS	F	B	A	-	-	-
HCM 95th %tile Q(veh)	10.6	0	-	-	-	-

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

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBR
Lane Configurations									
Traffic Volume (vph)	178	331	1064	106	95	546	137	48	106
Future Volume (vph)	178	331	1064	106	95	546	137	48	106
Ideal Flow (vphpl)	1350	1350	1350	1350	1350	1350	1350	1350	1350
Lane Width	12	9	10	9	9	9	9	9	15
Total Lost time (s)		4.6	5.3		4.6	5.3			4.6
Lane Util. Factor		1.00	0.91		1.00	0.91			1.00
Frpb, ped/bikes		1.00	0.98		1.00	0.92			1.00
Flpb, ped/bikes		1.00	1.00		1.00	1.00			1.00
Frt		1.00	0.99		1.00	0.96			0.86
Flt Protected		0.95	1.00		0.95	1.00			1.00
Satd. Flow (prot)		1018	2924		1018	2602			1133
Flt Permitted		0.95	1.00		0.95	1.00			1.00
Satd. Flow (perm)		1018	2924		1018	2602			1133
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	198	368	1182	118	106	607	152	53	118
RTOR Reduction (vph)	0	0	9	0	0	8	0	0	59
Lane Group Flow (vph)	0	566	1291	0	106	804	0	0	60
Confl. Peds. (#/hr)				124			127	127	
Confl. Bikes (#/hr)				8			2	2	
Turn Type	Prot	Prot	NA		Prot	NA			Perm
Protected Phases	5	5	2		1	6			
Permitted Phases									1
Actuated Green, G (s)		42.4	68.1		22.0	47.7			22.0
Effective Green, g (s)		42.4	68.1		22.0	47.7			22.0
Actuated g/C Ratio		0.42	0.68		0.22	0.48			0.22
Clearance Time (s)		4.6	5.3		4.6	5.3			4.6
Vehicle Extension (s)		2.5	5.0		2.5	5.0			2.5
Lane Grp Cap (vph)		431	1991		223	1241			249
v/s Ratio Prot		c0.56	c0.44		0.10	0.31			
v/s Ratio Perm									0.05
v/c Ratio		1.31	0.65		0.48	0.65			0.24
Uniform Delay, d1		28.8	9.1		34.0	19.8			32.1
Progression Factor		1.20	1.10		1.20	0.59			1.00
Incremental Delay, d2		149.1	0.8		1.0	2.2			0.4
Delay (s)		183.6	10.8		41.9	13.9			32.5
Level of Service		F	B		D	B			C
Approach Delay (s)			63.2			17.1			
Approach LOS			E			B			

Intersection Summary			
HCM 2000 Control Delay	47.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	9.9
Intersection Capacity Utilization	77.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	101	1049	20	0	636	81	96	65	37	100	55	92
Future Volume (veh/h)	101	1049	20	0	636	81	96	65	37	100	55	92
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.97		0.93	1.00		0.88	1.00		0.98	1.00		0.89
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	1616	1616	1683	0	1683	1683	1683	1683	1683	1616	1751	1683
Adj Flow Rate, veh/h	112	1166	20	0	707	72	107	72	41	111	61	102
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	0	2	2	2	2	2	2	2	2
Cap, veh/h	389	2440	42	0	2289	230	152	95	54	340	387	280
Arrive On Green	1.00	1.00	1.00	0.00	1.00	1.00	0.10	0.10	0.10	0.22	0.22	0.22
Sat Flow, veh/h	579	4460	76	0	4335	420	1603	999	569	1539	1751	1269
Grp Volume(v), veh/h	112	769	417	0	515	264	107	0	113	111	61	102
Grp Sat Flow(s),veh/h/ln	579	1471	1595	0	1532	1540	1603	0	1568	1539	1751	1269
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	6.5	0.0	7.0	6.1	2.8	6.8
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	6.5	0.0	7.0	6.1	2.8	6.8
Prop In Lane	1.00		0.05	0.00		0.27	1.00		0.36	1.00		1.00
Lane Grp Cap(c), veh/h	389	1609	873	0	1676	843	152	0	149	340	387	280
V/C Ratio(X)	0.29	0.48	0.48	0.00	0.31	0.31	0.70	0.00	0.76	0.33	0.16	0.36
Avail Cap(c_a), veh/h	389	1609	873	0	1676	843	253	0	248	474	539	391
HCM Platoon Ratio	2.00	2.00	2.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.74	0.74	0.74	0.00	0.68	0.68	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	43.9	0.0	44.1	32.7	31.5	33.0
Incr Delay (d2), s/veh	1.4	0.8	1.4	0.0	0.3	0.7	5.8	0.0	7.7	0.6	0.2	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.2	0.3	0.0	0.1	0.2	2.8	0.0	3.1	2.3	1.2	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	1.4	0.8	1.4	0.0	0.3	0.7	49.7	0.0	51.8	33.3	31.6	33.8
LnGrp LOS	A	A	A	A	A	A	D	A	D	C	C	C
Approach Vol, veh/h		1298			779			220			274	
Approach Delay, s/veh		1.0			0.4			50.8			33.1	
Approach LOS		A			A			D			C	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		60.0		13.7		60.0		26.3				
Change Period (Y+Rc), s		5.3		* 4.2		5.3		4.2				
Max Green Setting (Gmax), s		39.7		* 16		39.7		30.8				
Max Q Clear Time (g_c+I1), s		2.0		9.0		2.0		8.8				
Green Ext Time (p_c), s		21.9		0.5		11.7		1.0				
Intersection Summary												
HCM 6th Ctrl Delay			8.5									
HCM 6th LOS			A									

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	903	56	55	640	61	101	419	97	0	593	85
Future Volume (veh/h)	14	903	56	55	640	61	101	419	97	0	593	85
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		0.93	0.99		0.93	1.00		0.94	1.00		0.93
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	1616	1616	1616	1616	1683	1683	1616	1616	1616	0	1616	1616
Adj Flow Rate, veh/h	16	1003	54	61	711	55	112	466	41	0	659	27
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	0	2	2
Cap, veh/h	282	1758	94	278	1887	145	120	1234	518	0	835	348
Arrive On Green	0.02	0.82	0.82	0.04	0.44	0.44	0.08	0.40	0.40	0.00	0.27	0.27
Sat Flow, veh/h	1539	4267	229	1539	4326	332	1539	3070	1289	0	3151	1278
Grp Volume(v), veh/h	16	691	366	61	502	264	112	466	41	0	659	27
Grp Sat Flow(s),veh/h/ln	1539	1471	1555	1539	1532	1594	1539	1535	1289	0	1535	1278
Q Serve(g_s), s	0.6	7.8	7.8	2.3	11.0	11.2	7.2	10.7	2.0	0.0	19.9	1.6
Cycle Q Clear(g_c), s	0.6	7.8	7.8	2.3	11.0	11.2	7.2	10.7	2.0	0.0	19.9	1.6
Prop In Lane	1.00		0.15	1.00		0.21	1.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	282	1212	641	278	1337	695	120	1234	518	0	835	348
V/C Ratio(X)	0.06	0.57	0.57	0.22	0.38	0.38	0.93	0.38	0.08	0.00	0.79	0.08
Avail Cap(c_a), veh/h	379	1212	641	338	1337	695	120	1314	552	0	915	381
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)	0.45	0.45	0.45	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	17.0	5.9	5.9	16.3	19.0	19.0	45.8	21.1	18.5	0.0	33.7	27.1
Incr Delay (d2), s/veh	0.0	0.9	1.7	0.1	0.8	1.6	62.0	0.3	0.1	0.0	4.7	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	1.6	1.9	0.8	4.0	4.3	4.8	3.9	1.8	0.0	7.9	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.1	6.7	7.5	16.4	19.8	20.6	107.8	21.4	18.6	0.0	38.5	27.2
LnGrp LOS	B	A	A	B	B	C	F	C	B	A	D	C
Approach Vol, veh/h		1073			827			619			686	
Approach Delay, s/veh		7.2			19.8			36.8			38.0	
Approach LOS		A			B			D			D	

Timer - Assigned Phs	1	2		4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.1	46.5		45.4	5.7	48.9	13.0	32.4
Change Period (Y+Rc), s	4.6	5.3		5.2	4.6	5.3	5.2	5.2
Max Green Setting (Gmax), s	7.4	34.7		42.8	7.4	34.7	7.8	29.8
Max Q Clear Time (g_c+I1), s	4.3	9.8		12.7	2.6	13.2	9.2	21.9
Green Ext Time (p_c), s	0.0	13.5		5.2	0.0	8.9	0.0	3.6

Intersection Summary	
HCM 6th Ctrl Delay	22.8
HCM 6th LOS	C

Notes

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

Intersection	
Intersection Delay, s/veh	11.6
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	14	286	9	9	148	22	5	30	13	33	139	53
Future Vol, veh/h	14	286	9	9	148	22	5	30	13	33	139	53
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	16	318	10	10	164	24	6	33	14	37	154	59
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	12.8	10.4	9.2	11.4
HCM LOS	B	B	A	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	10%	5%	5%	15%
Vol Thru, %	62%	93%	83%	62%
Vol Right, %	27%	3%	12%	24%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	48	309	179	225
LT Vol	5	14	9	33
Through Vol	30	286	148	139
RT Vol	13	9	22	53
Lane Flow Rate	53	343	199	250
Geometry Grp	1	1	1	1
Degree of Util (X)	0.084	0.486	0.288	0.369
Departure Headway (Hd)	5.646	5.098	5.215	5.315
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	633	711	688	677
Service Time	3.692	3.098	3.252	3.351
HCM Lane V/C Ratio	0.084	0.482	0.289	0.369
HCM Control Delay	9.2	12.8	10.4	11.4
HCM Lane LOS	A	B	B	B
HCM 95th-tile Q	0.3	2.7	1.2	1.7

Intersection	
Intersection Delay, s/veh	11.3
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	14	309	6	7	157	30	6	83	8	48	51	18
Future Vol, veh/h	14	309	6	7	157	30	6	83	8	48	51	18
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	16	343	7	8	174	33	7	92	9	53	57	20
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	12.8	10.3	9.8	10
HCM LOS	B	B	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	6%	4%	4%	41%
Vol Thru, %	86%	94%	81%	44%
Vol Right, %	8%	2%	15%	15%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	97	329	194	117
LT Vol	6	14	7	48
Through Vol	83	309	157	51
RT Vol	8	6	30	18
Lane Flow Rate	108	366	216	130
Geometry Grp	1	1	1	1
Degree of Util (X)	0.168	0.501	0.303	0.202
Departure Headway (Hd)	5.598	4.938	5.054	5.582
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	640	735	713	642
Service Time	3.636	2.945	3.064	3.618
HCM Lane V/C Ratio	0.169	0.498	0.303	0.202
HCM Control Delay	9.8	12.8	10.3	10
HCM Lane LOS	A	B	B	A
HCM 95th-tile Q	0.6	2.8	1.3	0.8

Intersection	
Intersection Delay, s/veh	11.7
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥			✥			✥	
Traffic Vol, veh/h	13	317	29	22	147	16	16	30	25	27	84	32
Future Vol, veh/h	13	317	29	22	147	16	16	30	25	27	84	32
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	14	352	32	24	163	18	18	33	28	30	93	36
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	13.5	10.3	9.4	10.3
HCM LOS	B	B	A	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	23%	4%	12%	19%
Vol Thru, %	42%	88%	79%	59%
Vol Right, %	35%	8%	9%	22%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	71	359	185	143
LT Vol	16	13	22	27
Through Vol	30	317	147	84
RT Vol	25	29	16	32
Lane Flow Rate	79	399	206	159
Geometry Grp	1	1	1	1
Degree of Util (X)	0.122	0.541	0.292	0.242
Departure Headway (Hd)	5.576	4.884	5.121	5.49
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	642	742	703	655
Service Time	3.615	2.884	3.151	3.525
HCM Lane V/C Ratio	0.123	0.538	0.293	0.243
HCM Control Delay	9.4	13.5	10.3	10.3
HCM Lane LOS	A	B	B	B
HCM 95th-tile Q	0.4	3.3	1.2	0.9

LOS Worksheets: Baseline Plus Conceptual Plan Conditions with Via Closure

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	859	49	0	477	0	223	0	85	70	0	54
Future Volume (veh/h)	0	859	49	0	477	0	223	0	85	70	0	54
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	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	0	1196	1196	0	1196	0	1148	0	1196	1244	0	1196
Adj Flow Rate, veh/h	0	954	47	0	530	0	248	0	26	78	0	17
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	2	2	0	2	0	2	0	2	2	0	2
Cap, veh/h	0	2078	102	0	2135	0	270	0	0	293	0	0
Arrive On Green	0.00	0.65	0.65	0.00	0.87	0.00	0.25	0.00	0.00	0.25	0.00	0.00
Sat Flow, veh/h	0	3287	156	0	3481	0	1094	248		1185	78	
Grp Volume(v), veh/h	0	653	348	0	530	0	248	52.7		78	30.8	
Grp Sat Flow(s),veh/h/ln	0	1088	1158	0	1088	0	1094	D		1185	C	
Q Serve(g_s), s	0.0	14.8	14.9	0.0	2.7	0.0	22.1			5.3		
Cycle Q Clear(g_c), s	0.0	14.8	14.9	0.0	2.7	0.0	22.1			5.3		
Prop In Lane	0.00		0.13	0.00		0.00	1.00			1.00		
Lane Grp Cap(c), veh/h	0	1423	757	0	2135	0	270			293		
V/C Ratio(X)	0.00	0.46	0.46	0.00	0.25	0.00	0.92			0.27		
Avail Cap(c_a), veh/h	0	1423	757	0	2135	0	442			479		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.33	1.00	1.00			1.00		
Upstream Filter(I)	0.00	1.00	1.00	0.00	0.93	0.00	1.00			1.00		
Uniform Delay (d), s/veh	0.0	8.6	8.6	0.0	2.4	0.0	36.6			30.3		
Incr Delay (d2), s/veh	0.0	1.1	2.0	0.0	0.3	0.0	16.1			0.5		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0		
%ile BackOfQ(50%),veh/ln	0.0	3.4	3.8	0.0	0.5	0.0	7.1			1.6		
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	9.6	10.6	0.0	2.7	0.0	52.7			30.8		
LnGrp LOS	A	A	B	A	A	A	D			C		
Approach Vol, veh/h		1001			530							
Approach Delay, s/veh		10.0			2.7							
Approach LOS		A			A							
Timer - Assigned Phs		2	3			6	7					
Phs Duration (G+Y+Rc), s		70.7	29.3			70.7	29.3					
Change Period (Y+Rc), s		5.3	4.6			5.3	4.6					
Max Green Setting (Gmax), s		49.7	40.4			49.7	40.4					
Max Q Clear Time (g_c+I1), s		16.9	24.1			4.7	7.3					
Green Ext Time (p_c), s		14.8	0.7			8.0	0.2					
Intersection Summary												
HCM 6th Ctrl Delay			14.5									
HCM 6th LOS			B									

Movement	EBL2	EBT	EBR	WBL	WBT	WBR	NBR	SBR	SBR2
Lane Configurations									
Traffic Volume (vph)	190	759	51	21	447	110	93	87	197
Future Volume (vph)	190	759	51	21	447	110	93	87	197
Ideal Flow (vphpl)	1350	1350	1350	1350	1350	1350	1350	1350	1350
Lane Width	9	10	10	9	10	10	12	10	10
Total Lost time (s)	4.6	5.3		4.0	5.3		4.6	4.6	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.88	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.98		1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.99		1.00	0.97		0.86	0.85	0.85
Flt Protected	0.95	1.00		0.95	1.00		1.00	1.00	1.00
Satd. Flow (prot)	1018	2992		1018	2888		1030	1663	945
Flt Permitted	0.95	1.00		0.95	1.00		1.00	1.00	1.00
Satd. Flow (perm)	1018	2992		1018	2888		1030	1663	945
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	211	843	57	23	497	122	103	97	219
RTOR Reduction (vph)	0	6	0	0	0	0	0	0	0
Lane Group Flow (vph)	211	894	0	23	619	0	103	97	219
Confl. Peds. (#/hr)			24			64			
Confl. Bikes (#/hr)			3			3	3	3	
Turn Type	Prot	NA		Prot	NA		Prot	Prot	Free
Protected Phases	5	2		1	6		8	4	
Permitted Phases									Free
Actuated Green, G (s)	15.4	70.7		1.0	55.7		14.4	14.4	100.0
Effective Green, g (s)	15.4	70.7		1.0	55.7		14.4	14.4	100.0
Actuated g/C Ratio	0.15	0.71		0.01	0.56		0.14	0.14	1.00
Clearance Time (s)	4.6	5.3		4.0	5.3		4.6	4.6	
Vehicle Extension (s)	1.5	3.0		1.5	3.0		2.5	2.5	
Lane Grp Cap (vph)	156	2115		10	1608		148	239	945
v/s Ratio Prot	c0.21	c0.30		0.02	0.21		c0.10	0.06	
v/s Ratio Perm									0.23
v/c Ratio	1.35	0.42		2.30	0.38		0.70	0.41	0.23
Uniform Delay, d1	42.3	6.1		49.5	12.5		40.7	38.9	0.0
Progression Factor	0.79	0.45		0.75	1.08		1.00	1.00	1.00
Incremental Delay, d2	190.3	0.5		809.4	0.7		12.3	0.8	0.6
Delay (s)	223.8	3.3		846.3	14.1		53.0	39.7	0.6
Level of Service	F	A		F	B		D	D	A
Approach Delay (s)		45.2			43.9				
Approach LOS		D			D				

Intersection Summary			
HCM 2000 Control Delay	40.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	14.5
Intersection Capacity Utilization	51.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	798	55	49	439	0	60	0	53	247	82	42
Future Volume (veh/h)	0	798	55	49	439	0	60	0	53	247	82	42
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	0.99		1.00	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	0	1148	1148	1148	1148	0	1196	0	1196	1196	1196	1196
Adj Flow Rate, veh/h	0	887	59	54	488	0	67	0	59	274	91	6
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	2	2	2	2	0	2	0	2	2	2	2
Cap, veh/h	0	2155	143	332	2256	0	0	0	0	392	212	171
Arrive On Green	0.00	1.00	1.00	0.72	0.72	0.00	0.00	0.00	0.00	0.18	0.18	0.18
Sat Flow, veh/h	0	3097	198	362	3238	0		0		2210	1196	964
Grp Volume(v), veh/h	0	618	328	54	488	0		0.0		274	91	6
Grp Sat Flow(s),veh/h/ln	0	1045	1103	362	1045	0				1105	1196	964
Q Serve(g_s), s	0.0	0.0	0.0	4.9	5.2	0.0				11.6	6.8	0.5
Cycle Q Clear(g_c), s	0.0	0.0	0.0	4.9	5.2	0.0				11.6	6.8	0.5
Prop In Lane	0.00		0.18	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1504	794	332	2256	0				392	212	171
V/C Ratio(X)	0.00	0.41	0.41	0.16	0.22	0.00				0.70	0.43	0.04
Avail Cap(c_a), veh/h	0	1504	794	332	2256	0				575	311	251
HCM Platoon Ratio	1.00	2.00	2.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.90	0.90	1.00	1.00	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	4.6	4.7	0.0				38.6	36.6	34.0
Incr Delay (d2), s/veh	0.0	0.7	1.4	1.0	0.2	0.0				2.3	1.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.2	0.3	0.4	1.0	0.0				3.3	2.1	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.7	1.4	5.7	4.9	0.0				40.9	38.0	34.1
LnGrp LOS	A	A	A	A	A	A				D	D	C
Approach Vol, veh/h		946			542						371	
Approach Delay, s/veh		1.0			5.0						40.1	
Approach LOS		A			A						D	

Timer - Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		78.3				78.3		21.7				
Change Period (Y+Rc), s		6.3				6.3		4.0				
Max Green Setting (Gmax), s		43.7				43.7		26.0				
Max Q Clear Time (g_c+I1), s		2.0				7.2		13.6				
Green Ext Time (p_c), s		15.3				8.9		1.2				

Intersection Summary		
HCM 6th Ctrl Delay		9.9
HCM 6th LOS		A

Notes

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

Intersection	
Int Delay, s/veh	1.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	3	1080	28	0	474	3	0	0	125	0	0	0
Future Vol, veh/h	3	1080	28	0	474	3	0	0	125	0	0	0
Conflicting Peds, #/hr	55	0	36	0	0	53	0	0	34	53	0	55
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	1200	31	0	527	3	0	0	139	0	0	0

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	585	0	0	-	-	0	-	-	686
Stage 1	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-
Critical Hdwy	5.34	-	-	-	-	-	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.12	-	-	-	-	-	-	-	3.92
Pot Cap-1 Maneuver	618	-	-	0	-	-	0	0	334
Stage 1	-	-	-	0	-	-	0	0	-
Stage 2	-	-	-	0	-	-	0	0	-
Platoon blocked, %		-	-		-	-			
Mov Cap-1 Maneuver	618	-	-	-	-	-	-	0	311
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	0	-
Stage 1	-	-	-	-	-	-	-	0	-
Stage 2	-	-	-	-	-	-	-	0	-

Approach	EB	WB	NB
HCM Control Delay, s	0.1	0	25.6
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBT	WBR
Capacity (veh/h)	311	618	-	-	-	-
HCM Lane V/C Ratio	0.447	0.005	-	-	-	-
HCM Control Delay (s)	25.6	10.9	0.1	-	-	-
HCM Lane LOS	D	B	A	-	-	-
HCM 95th %tile Q(veh)	2.2	0	-	-	-	-

HCM Signalized Intersection Capacity Analysis
5: Camden Dr & Wilshire Blvd & Dayton Wy

06/16/2023

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBR
Lane Configurations									
Traffic Volume (vph)	383	77	602	63	84	588	267	15	53
Future Volume (vph)	383	77	602	63	84	588	267	15	53
Ideal Flow (vphpl)	1350	1350	1350	1350	1350	1350	1350	1350	1350
Lane Width	12	9	10	9	9	9	9	9	15
Total Lost time (s)		4.6	5.3		4.6	5.3			4.6
Lane Util. Factor		1.00	0.91		1.00	0.91			1.00
Frpb, ped/bikes		1.00	0.99		1.00	0.95			1.00
Flpb, ped/bikes		1.00	1.00		1.00	1.00			1.00
Frt		1.00	0.99		1.00	0.95			0.86
Flt Protected		0.95	1.00		0.95	1.00			1.00
Satd. Flow (prot)		1018	2969		1018	2658			1133
Flt Permitted		0.95	1.00		0.95	1.00			1.00
Satd. Flow (perm)		1018	2969		1018	2658			1133
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	426	86	669	70	93	653	297	17	59
RTOR Reduction (vph)	0	0	9	0	0	2	0	0	47
Lane Group Flow (vph)	0	512	730	0	93	965	0	0	12
Confl. Peds. (#/hr)				32			54	54	
Confl. Bikes (#/hr)				2			8	8	
Turn Type	Prot	Prot	NA		Prot	NA			Perm
Protected Phases	5	5	2		1	6			
Permitted Phases									1
Actuated Green, G (s)		42.4	69.9		20.2	47.7			20.2
Effective Green, g (s)		42.4	69.9		20.2	47.7			20.2
Actuated g/C Ratio		0.42	0.70		0.20	0.48			0.20
Clearance Time (s)		4.6	5.3		4.6	5.3			4.6
Vehicle Extension (s)		2.5	5.0		2.5	5.0			2.5
Lane Grp Cap (vph)		431	2075		205	1267			228
v/s Ratio Prot		c0.50	0.25		0.09	c0.36			
v/s Ratio Perm									0.01
v/c Ratio		1.19	0.35		0.45	0.76			0.05
Uniform Delay, d1		28.8	6.0		35.1	21.5			32.2
Progression Factor		1.20	0.95		1.21	0.57			1.00
Incremental Delay, d2		103.7	0.4		1.0	3.8			0.1
Delay (s)		138.1	6.1		43.3	16.1			32.2
Level of Service		F	A		D	B			C
Approach Delay (s)			60.1			18.5			
Approach LOS			E			B			

Intersection Summary			
HCM 2000 Control Delay	40.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	9.9
Intersection Capacity Utilization	77.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	58	586	33	0	710	64	82	81	29	40	71	80
Future Volume (veh/h)	58	586	33	0	710	64	82	81	29	40	71	80
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		0.95	1.00		0.92	1.00		0.98	1.00		0.90
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	1148	1148	1196	0	1196	1196	1196	1196	1196	1148	1244	1196
Adj Flow Rate, veh/h	64	651	30	0	789	60	91	90	32	44	79	89
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	0	2	2	2	2	2	2	2	2
Cap, veh/h	277	1605	74	0	1610	122	145	107	38	232	264	194
Arrive On Green	1.00	1.00	1.00	0.00	1.00	1.00	0.13	0.13	0.13	0.21	0.21	0.21
Sat Flow, veh/h	392	3064	140	0	3183	232	1139	838	298	1094	1244	917
Grp Volume(v), veh/h	64	443	238	0	557	292	91	0	122	44	79	89
Grp Sat Flow(s),veh/h/ln	392	1045	1115	0	1088	1131	1139	0	1136	1094	1244	917
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	7.6	0.0	10.5	3.3	5.3	8.5
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	7.6	0.0	10.5	3.3	5.3	8.5
Prop In Lane	1.00		0.13	0.00		0.21	1.00		0.26	1.00		1.00
Lane Grp Cap(c), veh/h	277	1094	584	0	1140	592	145	0	145	232	264	194
V/C Ratio(X)	0.23	0.40	0.41	0.00	0.49	0.49	0.63	0.00	0.84	0.19	0.30	0.46
Avail Cap(c_a), veh/h	277	1094	584	0	1140	592	180	0	180	337	383	282
HCM Platoon Ratio	2.00	2.00	2.00	1.00	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	0.00	0.68	0.68	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	41.4	0.0	42.7	32.3	33.2	34.4
Incr Delay (d2), s/veh	1.8	1.1	2.0	0.0	1.0	2.0	4.6	0.0	24.6	0.4	0.6	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.2	0.3	0.0	0.2	0.3	2.3	0.0	3.9	0.9	1.7	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	1.8	1.1	2.0	0.0	1.0	2.0	46.0	0.0	67.3	32.7	33.8	36.1
LnGrp LOS	A	A	A	A	A	A	D	A	E	C	C	D
Approach Vol, veh/h		745			849			213			212	
Approach Delay, s/veh		1.4			1.4			58.2			34.5	
Approach LOS		A			A			E			C	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	57.7	16.9	57.7	25.4
Change Period (Y+Rc), s	5.3	* 4.2	5.3	4.2
Max Green Setting (Gmax), s	39.7	* 16	39.7	30.8
Max Q Clear Time (g_c+I1), s	2.0	12.5	2.0	10.5
Green Ext Time (p_c), s	12.1	0.3	12.9	0.8

Intersection Summary	
HCM 6th Ctrl Delay	10.9
HCM 6th LOS	B

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	24	699	59	48	713	48	80	478	68	0	364	56
Future Volume (veh/h)	24	699	59	48	713	48	80	478	68	0	364	56
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.96	0.99		0.95	1.00		0.97	1.00		0.92
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	1148	1148	1148	1148	1196	1196	1148	1148	1148	0	1148	1148
Adj Flow Rate, veh/h	27	777	55	53	792	44	89	531	29	0	404	18
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	0	2	2
Cap, veh/h	195	1270	89	251	1404	78	85	842	364	0	559	230
Arrive On Green	0.04	0.85	0.85	0.04	0.44	0.44	0.08	0.39	0.39	0.00	0.26	0.26
Sat Flow, veh/h	1094	2979	210	1094	3155	175	1094	2182	942	0	2239	898
Grp Volume(v), veh/h	27	544	288	53	545	291	89	531	29	0	404	18
Grp Sat Flow(s),veh/h/ln	1094	1045	1099	1094	1088	1153	1094	1091	942	0	1091	898
Q Serve(g_s), s	1.4	8.0	8.1	2.7	18.6	18.7	7.8	19.7	1.9	0.0	16.9	1.5
Cycle Q Clear(g_c), s	1.4	8.0	8.1	2.7	18.6	18.7	7.8	19.7	1.9	0.0	16.9	1.5
Prop In Lane	1.00		0.19	1.00		0.15	1.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	195	891	469	251	968	513	85	842	364	0	559	230
V/C Ratio(X)	0.14	0.61	0.62	0.21	0.56	0.57	1.04	0.63	0.08	0.00	0.72	0.08
Avail Cap(c_a), veh/h	256	891	469	292	968	513	85	934	403	0	650	268
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)	0.87	0.87	0.87	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	17.0	4.8	4.8	15.5	20.6	20.6	46.1	24.9	19.4	0.0	34.0	28.2
Incr Delay (d2), s/veh	0.1	2.7	5.2	0.2	2.4	4.5	109.8	1.5	0.1	0.0	3.9	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	1.3	1.7	0.7	4.9	5.5	4.7	5.2	1.3	0.0	4.8	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.1	7.5	10.0	15.7	22.9	25.1	155.9	26.4	19.6	0.0	37.8	28.4
LnGrp LOS	B	A	B	B	C	C	F	C	B	A	D	C
Approach Vol, veh/h		859			889			649			422	
Approach Delay, s/veh		8.7			23.2			43.8			37.4	
Approach LOS		A			C			D			D	

Timer - Assigned Phs	1	2		4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.3	47.9		43.8	6.4	49.8	13.0	30.8
Change Period (Y+Rc), s	4.6	5.3		5.2	4.6	5.3	5.2	5.2
Max Green Setting (Gmax), s	7.4	34.7		42.8	7.4	34.7	7.8	29.8
Max Q Clear Time (g_c+I1), s	4.7	10.1		21.7	3.4	20.7	9.8	18.9
Green Ext Time (p_c), s	0.0	10.5		5.2	0.0	7.4	0.0	2.7

Intersection Summary			
HCM 6th Ctrl Delay			25.7
HCM 6th LOS			C

Notes

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

Intersection	
Intersection Delay, s/veh	10.1
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			✣			✣	
Traffic Vol, veh/h	15	149	7	7	232	27	9	50	5	9	43	28
Future Vol, veh/h	15	149	7	7	232	27	9	50	5	9	43	28
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	19	186	9	9	290	34	11	63	6	11	54	35
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.7	11	9.1	9.1
HCM LOS	A	B	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	14%	9%	3%	11%
Vol Thru, %	78%	87%	87%	54%
Vol Right, %	8%	4%	10%	35%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	64	171	266	80
LT Vol	9	15	7	9
Through Vol	50	149	232	43
RT Vol	5	7	27	28
Lane Flow Rate	80	214	332	100
Geometry Grp	1	1	1	1
Degree of Util (X)	0.118	0.283	0.424	0.142
Departure Headway (Hd)	5.316	4.773	4.595	5.117
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	668	748	778	694
Service Time	3.397	2.833	2.648	3.196
HCM Lane V/C Ratio	0.12	0.286	0.427	0.144
HCM Control Delay	9.1	9.7	11	9.1
HCM Lane LOS	A	A	B	A
HCM 95th-tile Q	0.4	1.2	2.1	0.5

Intersection	
Intersection Delay, s/veh	10.4
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			✣			✣	
Traffic Vol, veh/h	9	149	5	9	252	12	6	92	13	12	18	4
Future Vol, veh/h	9	149	5	9	252	12	6	92	13	12	18	4
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	186	6	11	315	15	8	115	16	15	23	5
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.7	11.3	9.6	8.9
HCM LOS	A	B	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	5%	6%	3%	35%
Vol Thru, %	83%	91%	92%	53%
Vol Right, %	12%	3%	4%	12%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	111	163	273	34
LT Vol	6	9	9	12
Through Vol	92	149	252	18
RT Vol	13	5	12	4
Lane Flow Rate	139	204	341	42
Geometry Grp	1	1	1	1
Degree of Util (X)	0.2	0.271	0.439	0.064
Departure Headway (Hd)	5.189	4.795	4.629	5.405
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	685	744	775	656
Service Time	3.264	2.857	2.683	3.495
HCM Lane V/C Ratio	0.203	0.274	0.44	0.064
HCM Control Delay	9.6	9.7	11.3	8.9
HCM Lane LOS	A	A	B	A
HCM 95th-tile Q	0.7	1.1	2.3	0.2

Intersection	
Intersection Delay, s/veh	10.1
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	9	158	8	16	239	14	14	27	17	13	23	22
Future Vol, veh/h	9	158	8	16	239	14	14	27	17	13	23	22
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	198	10	20	299	18	18	34	21	16	29	28
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.6	10.9	8.8	8.8
HCM LOS	A	B	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	24%	5%	6%	22%
Vol Thru, %	47%	90%	89%	40%
Vol Right, %	29%	5%	5%	38%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	58	175	269	58
LT Vol	14	9	16	13
Through Vol	27	158	239	23
RT Vol	17	8	14	22
Lane Flow Rate	72	219	336	72
Geometry Grp	1	1	1	1
Degree of Util (X)	0.104	0.283	0.424	0.103
Departure Headway (Hd)	5.169	4.664	4.536	5.115
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	689	768	790	696
Service Time	3.237	2.711	2.577	3.183
HCM Lane V/C Ratio	0.104	0.285	0.425	0.103
HCM Control Delay	8.8	9.6	10.9	8.8
HCM Lane LOS	A	A	B	A
HCM 95th-tile Q	0.3	1.2	2.1	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1159	103	0	817	0	282	0	49	134	0	67
Future Volume (veh/h)	0	1159	103	0	817	0	282	0	49	134	0	67
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.92	1.00		1.00	1.00		1.00	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	0	1683	1683	0	1683	0	1616	0	1683	1751	0	1683
Adj Flow Rate, veh/h	0	1288	105	0	908	0	313	0	28	149	0	16
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	2	2	0	2	0	2	0	2	2	0	2
Cap, veh/h	0	2898	236	0	3100	0	349	0	0	378	0	0
Arrive On Green	0.00	0.67	0.67	0.00	1.00	0.00	0.23	0.00	0.00	0.23	0.00	0.00
Sat Flow, veh/h	0	4449	350	0	4898	0	1539	313		1667	149	
Grp Volume(v), veh/h	0	918	475	0	908	0	313	46.0		149	33.5	
Grp Sat Flow(s),veh/h/ln	0	1532	1584	0	1532	0	1539	D		1667	C	
Q Serve(g_s), s	0.0	13.9	13.9	0.0	0.0	0.0	19.7			7.6		
Cycle Q Clear(g_c), s	0.0	13.9	13.9	0.0	0.0	0.0	19.7			7.6		
Prop In Lane	0.00		0.22	0.00		0.00	1.00			1.00		
Lane Grp Cap(c), veh/h	0	2066	1068	0	3100	0	349			378		
V/C Ratio(X)	0.00	0.44	0.44	0.00	0.29	0.00	0.90			0.39		
Avail Cap(c_a), veh/h	0	2066	1068	0	3100	0	622			674		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	1.00	1.00			1.00		
Upstream Filter(I)	0.00	1.00	1.00	0.00	0.80	0.00	1.00			1.00		
Uniform Delay (d), s/veh	0.0	7.6	7.6	0.0	0.0	0.0	37.6			32.9		
Incr Delay (d2), s/veh	0.0	0.7	1.3	0.0	0.2	0.0	8.5			0.7		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0		
%ile BackOfQ(50%),veh/ln	0.0	4.2	4.6	0.0	0.1	0.0	8.2			3.1		
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	8.3	8.9	0.0	0.2	0.0	46.0			33.5		
LnGrp LOS	A	A	A	A	A	A	D			C		
Approach Vol, veh/h		1393			908							
Approach Delay, s/veh		8.5			0.2							
Approach LOS		A			A							
Timer - Assigned Phs		2	3			6	7					
Phs Duration (G+Y+Rc), s		72.8	27.2			72.8	27.2					
Change Period (Y+Rc), s		5.3	4.6			5.3	4.6					
Max Green Setting (Gmax), s		49.7	40.4			49.7	40.4					
Max Q Clear Time (g_c+I1), s		15.9	21.7			2.0	9.6					
Green Ext Time (p_c), s		21.8	0.9			15.8	0.4					
Intersection Summary												
HCM 6th Ctrl Delay			11.4									
HCM 6th LOS			B									

HCM Signalized Intersection Capacity Analysis
2: Roxbury Dr & Wilshire Blvd & Brighton Wy

06/16/2023

Movement	EBL2	EBT	EBR	WBL	WBT	WBR	NBR	SBR	SBR2
Lane Configurations									
Traffic Volume (vph)	105	1158	65	55	590	49	66	232	192
Future Volume (vph)	105	1158	65	55	590	49	66	232	192
Ideal Flow (vphpl)	1350	1350	1350	1350	1350	1350	1350	1350	1350
Lane Width	9	10	10	9	10	10	12	10	10
Total Lost time (s)	4.6	5.3		4.0	5.3		4.6	4.6	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.88	1.00
Frpb, ped/bikes	1.00	0.99		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	0.99		1.00	0.99		0.86	0.85	0.85
Flt Protected	0.95	1.00		0.95	1.00		1.00	1.00	1.00
Satd. Flow (prot)	1018	2967		1018	2972		1030	1663	945
Flt Permitted	0.95	1.00		0.95	1.00		1.00	1.00	1.00
Satd. Flow (perm)	1018	2967		1018	2972		1030	1663	945
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	117	1287	72	61	656	54	73	258	213
RTOR Reduction (vph)	0	6	0	0	0	0	0	0	0
Lane Group Flow (vph)	117	1353	0	61	710	0	73	258	213
Confl. Peds. (#/hr)			115			83			
Confl. Bikes (#/hr)			6			6	6	6	
Turn Type	Prot	NA		Prot	NA		Prot	Prot	Free
Protected Phases	5	2		1	6		8	4	
Permitted Phases									Free
Actuated Green, G (s)	15.4	66.6		1.0	51.6		18.5	18.5	100.0
Effective Green, g (s)	15.4	66.6		1.0	51.6		18.5	18.5	100.0
Actuated g/C Ratio	0.15	0.67		0.01	0.52		0.18	0.18	1.00
Clearance Time (s)	4.6	5.3		4.0	5.3		4.6	4.6	
Vehicle Extension (s)	1.5	3.0		1.5	3.0		2.5	2.5	
Lane Grp Cap (vph)	156	1976		10	1533		190	307	945
v/s Ratio Prot	c0.11	c0.46		c0.06	0.24		0.07	c0.16	
v/s Ratio Perm									0.23
v/c Ratio	0.75	0.68		6.10	0.46		0.38	0.84	0.23
Uniform Delay, d1	40.5	10.3		49.5	15.4		35.8	39.3	0.0
Progression Factor	0.65	0.45		0.85	0.84		1.00	1.00	1.00
Incremental Delay, d2	10.1	1.2		2475.1	0.9		0.9	18.1	0.6
Delay (s)	36.5	5.8		2517.1	13.9		36.7	57.4	0.6
Level of Service	D	A		F	B		D	E	A
Approach Delay (s)		8.2			211.9				
Approach LOS		A			F				

Intersection Summary			
HCM 2000 Control Delay	69.2	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	14.5
Intersection Capacity Utilization	53.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1182	43	50	500	0	117	0	105	389	218	78
Future Volume (veh/h)	0	1182	43	50	500	0	117	0	105	389	218	78
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.88	0.99		1.00	1.00		1.00	1.00		0.93
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	0	1616	1616	1616	1616	0	1683	0	1683	1683	1683	1683
Adj Flow Rate, veh/h	0	1313	47	56	556	0	130	0	117	432	242	17
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	2	2	2	2	0	2	0	2	2	2	2
Cap, veh/h	0	2986	107	306	3029	0	0	0	0	654	354	279
Arrive On Green	0.00	1.00	1.00	0.69	0.69	0.00	0.00	0.00	0.00	0.21	0.21	0.21
Sat Flow, veh/h	0	4494	156	341	4557	0		0		3110	1683	1327
Grp Volume(v), veh/h	0	888	472	56	556	0		0.0		432	242	17
Grp Sat Flow(s),veh/h/ln	0	1471	1563	341	1471	0				1555	1683	1327
Q Serve(g_s), s	0.0	0.0	0.0	6.2	4.5	0.0				12.7	13.3	1.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	6.2	4.5	0.0				12.7	13.3	1.0
Prop In Lane	0.00		0.10	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2020	1074	306	3029	0				654	354	279
V/C Ratio(X)	0.00	0.44	0.44	0.18	0.18	0.00				0.66	0.68	0.06
Avail Cap(c_a), veh/h	0	2020	1074	306	3029	0				809	438	345
HCM Platoon Ratio	1.00	2.00	2.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.69	0.69	1.00	1.00	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	5.9	5.6	0.0				36.2	36.4	31.6
Incr Delay (d2), s/veh	0.0	0.5	0.9	1.3	0.1	0.0				1.4	3.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.1	0.3	0.5	1.3	0.0				5.0	5.8	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.5	0.9	7.2	5.8	0.0				37.6	39.6	31.7
LnGrp LOS	A	A	A	A	A	A				D	D	C
Approach Vol, veh/h		1360			612						691	
Approach Delay, s/veh		0.6			5.9						38.2	
Approach LOS		A			A						D	

Timer - Assigned Phs	2				6		8
Phs Duration (G+Y+Rc), s	75.0				75.0		25.0
Change Period (Y+Rc), s	6.3				6.3		4.0
Max Green Setting (Gmax), s	43.7				43.7		26.0
Max Q Clear Time (g_c+I1), s	2.0				8.2		15.3
Green Ext Time (p_c), s	24.2				10.1		2.5

Intersection Summary	
HCM 6th Ctrl Delay	11.6
HCM 6th LOS	B

Notes

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

Intersection												
Int Delay, s/veh	5.5											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	1584	90	0	547	1	0	0	98	0	0	0
Future Vol, veh/h	2	1584	90	0	547	1	0	0	98	0	0	0
Conflicting Peds, #/hr	107	0	128	0	0	107	0	0	128	107	0	107
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	1760	100	0	608	1	0	0	109	0	0	0

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	716	0	0	-	-	0	-	-	1186
Stage 1	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-
Critical Hdwy	5.34	-	-	-	-	-	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.12	-	-	-	-	-	-	-	3.92
Pot Cap-1 Maneuver	535	-	-	0	-	-	0	0	156
Stage 1	-	-	-	0	-	-	0	0	-
Stage 2	-	-	-	0	-	-	0	0	-
Platoon blocked, %		-	-		-	-			
Mov Cap-1 Maneuver	535	-	-	-	-	-	-	0	119
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	0	-
Stage 1	-	-	-	-	-	-	-	0	-
Stage 2	-	-	-	-	-	-	-	0	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	129.4
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBT	WBR
Capacity (veh/h)	119	535	-	-	-	-
HCM Lane V/C Ratio	0.915	0.004	-	-	-	-
HCM Control Delay (s)	129.4	11.8	0	-	-	-
HCM Lane LOS	F	B	A	-	-	-
HCM 95th %tile Q(veh)	5.8	0	-	-	-	-

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBR
Lane Configurations									
Traffic Volume (vph)	178	331	1064	106	95	546	137	48	106
Future Volume (vph)	178	331	1064	106	95	546	137	48	106
Ideal Flow (vphpl)	1350	1350	1350	1350	1350	1350	1350	1350	1350
Lane Width	12	9	10	9	9	9	9	9	15
Total Lost time (s)		4.6	5.3		4.6	5.3			4.6
Lane Util. Factor		1.00	0.91		1.00	0.91			1.00
Frpb, ped/bikes		1.00	0.98		1.00	0.92			1.00
Flpb, ped/bikes		1.00	1.00		1.00	1.00			1.00
Frt		1.00	0.99		1.00	0.96			0.86
Flt Protected		0.95	1.00		0.95	1.00			1.00
Satd. Flow (prot)		1018	2924		1018	2602			1133
Flt Permitted		0.95	1.00		0.95	1.00			1.00
Satd. Flow (perm)		1018	2924		1018	2602			1133
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	198	368	1182	118	106	607	152	53	118
RTOR Reduction (vph)	0	0	9	0	0	8	0	0	59
Lane Group Flow (vph)	0	566	1291	0	106	804	0	0	60
Confl. Peds. (#/hr)				124			127	127	
Confl. Bikes (#/hr)				8			2	2	
Turn Type	Prot	Prot	NA		Prot	NA			Perm
Protected Phases	5	5	2		1	6			
Permitted Phases									1
Actuated Green, G (s)		42.4	68.1		22.0	47.7			22.0
Effective Green, g (s)		42.4	68.1		22.0	47.7			22.0
Actuated g/C Ratio		0.42	0.68		0.22	0.48			0.22
Clearance Time (s)		4.6	5.3		4.6	5.3			4.6
Vehicle Extension (s)		2.5	5.0		2.5	5.0			2.5
Lane Grp Cap (vph)		431	1991		223	1241			249
v/s Ratio Prot		c0.56	c0.44		0.10	0.31			
v/s Ratio Perm									0.05
v/c Ratio		1.31	0.65		0.48	0.65			0.24
Uniform Delay, d1		28.8	9.1		34.0	19.8			32.1
Progression Factor		1.18	1.11		1.20	0.59			1.00
Incremental Delay, d2		147.9	0.7		1.0	2.2			0.4
Delay (s)		182.0	10.8		41.9	13.9			32.5
Level of Service		F	B		D	B			C
Approach Delay (s)			62.7			17.1			
Approach LOS			E			B			

Intersection Summary			
HCM 2000 Control Delay	47.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	9.9
Intersection Capacity Utilization	77.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	101	1049	20	0	636	81	96	65	37	100	55	92
Future Volume (veh/h)	101	1049	20	0	636	81	96	65	37	100	55	92
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.97		0.93	1.00		0.88	1.00		0.98	1.00		0.89
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	1616	1616	1683	0	1683	1683	1683	1683	1683	1616	1751	1683
Adj Flow Rate, veh/h	112	1166	20	0	707	72	107	72	41	111	61	102
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	0	2	2	2	2	2	2	2	2
Cap, veh/h	389	2440	42	0	2289	230	152	95	54	340	387	280
Arrive On Green	1.00	1.00	1.00	0.00	1.00	1.00	0.10	0.10	0.10	0.22	0.22	0.22
Sat Flow, veh/h	579	4460	76	0	4335	420	1603	999	569	1539	1751	1269
Grp Volume(v), veh/h	112	769	417	0	515	264	107	0	113	111	61	102
Grp Sat Flow(s),veh/h/ln	579	1471	1595	0	1532	1540	1603	0	1568	1539	1751	1269
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	6.5	0.0	7.0	6.1	2.8	6.8
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	6.5	0.0	7.0	6.1	2.8	6.8
Prop In Lane	1.00		0.05	0.00		0.27	1.00		0.36	1.00		1.00
Lane Grp Cap(c), veh/h	389	1609	873	0	1676	843	152	0	149	340	387	280
V/C Ratio(X)	0.29	0.48	0.48	0.00	0.31	0.31	0.70	0.00	0.76	0.33	0.16	0.36
Avail Cap(c_a), veh/h	389	1609	873	0	1676	843	253	0	248	474	539	391
HCM Platoon Ratio	2.00	2.00	2.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.74	0.74	0.74	0.00	0.68	0.68	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	43.9	0.0	44.1	32.7	31.5	33.0
Incr Delay (d2), s/veh	1.4	0.8	1.4	0.0	0.3	0.7	5.8	0.0	7.7	0.6	0.2	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.2	0.3	0.0	0.1	0.2	2.8	0.0	3.1	2.3	1.2	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	1.4	0.8	1.4	0.0	0.3	0.7	49.7	0.0	51.8	33.3	31.6	33.8
LnGrp LOS	A	A	A	A	A	A	D	A	D	C	C	C
Approach Vol, veh/h		1298			779			220			274	
Approach Delay, s/veh		1.0			0.4			50.8			33.1	
Approach LOS		A			A			D			C	

Timer - Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		60.0		13.7		60.0		26.3
Change Period (Y+Rc), s		5.3		* 4.2		5.3		4.2
Max Green Setting (Gmax), s		39.7		* 16		39.7		30.8
Max Q Clear Time (g_c+I1), s		2.0		9.0		2.0		8.8
Green Ext Time (p_c), s		21.9		0.5		11.7		1.0

Intersection Summary			
HCM 6th Ctrl Delay			8.5
HCM 6th LOS			A

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	903	56	55	640	61	101	419	97	0	593	85
Future Volume (veh/h)	14	903	56	55	640	61	101	419	97	0	593	85
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		0.93	0.99		0.93	1.00		0.94	1.00		0.93
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	1616	1616	1616	1616	1683	1683	1616	1616	1616	0	1616	1616
Adj Flow Rate, veh/h	16	1003	54	61	711	55	112	466	41	0	659	27
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	0	2	2
Cap, veh/h	282	1758	94	278	1887	145	120	1234	518	0	835	348
Arrive On Green	0.02	0.82	0.82	0.04	0.44	0.44	0.08	0.40	0.40	0.00	0.27	0.27
Sat Flow, veh/h	1539	4267	229	1539	4326	332	1539	3070	1289	0	3151	1278
Grp Volume(v), veh/h	16	691	366	61	502	264	112	466	41	0	659	27
Grp Sat Flow(s),veh/h/ln	1539	1471	1555	1539	1532	1594	1539	1535	1289	0	1535	1278
Q Serve(g_s), s	0.6	7.8	7.8	2.3	11.0	11.2	7.2	10.7	2.0	0.0	19.9	1.6
Cycle Q Clear(g_c), s	0.6	7.8	7.8	2.3	11.0	11.2	7.2	10.7	2.0	0.0	19.9	1.6
Prop In Lane	1.00		0.15	1.00		0.21	1.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	282	1212	641	278	1337	695	120	1234	518	0	835	348
V/C Ratio(X)	0.06	0.57	0.57	0.22	0.38	0.38	0.93	0.38	0.08	0.00	0.79	0.08
Avail Cap(c_a), veh/h	379	1212	641	338	1337	695	120	1314	552	0	915	381
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)	0.45	0.45	0.45	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	17.0	5.9	5.9	16.3	19.0	19.0	45.8	21.1	18.5	0.0	33.7	27.1
Incr Delay (d2), s/veh	0.0	0.9	1.7	0.1	0.8	1.6	62.0	0.3	0.1	0.0	4.7	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	1.6	1.9	0.8	4.0	4.3	4.8	3.9	1.8	0.0	7.9	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.1	6.7	7.5	16.4	19.8	20.6	107.8	21.4	18.6	0.0	38.5	27.2
LnGrp LOS	B	A	A	B	B	C	F	C	B	A	D	C
Approach Vol, veh/h		1073			827			619			686	
Approach Delay, s/veh		7.2			19.8			36.8			38.0	
Approach LOS		A			B			D			D	

Timer - Assigned Phs	1	2		4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.1	46.5		45.4	5.7	48.9	13.0	32.4
Change Period (Y+Rc), s	4.6	5.3		5.2	4.6	5.3	5.2	5.2
Max Green Setting (Gmax), s	7.4	34.7		42.8	7.4	34.7	7.8	29.8
Max Q Clear Time (g_c+I1), s	4.3	9.8		12.7	2.6	13.2	9.2	21.9
Green Ext Time (p_c), s	0.0	13.5		5.2	0.0	8.9	0.0	3.6

Intersection Summary	
HCM 6th Ctrl Delay	22.8
HCM 6th LOS	C

Notes

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

Intersection	
Intersection Delay, s/veh	11.9
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥			✥			✥	
Traffic Vol, veh/h	14	286	9	9	148	32	5	30	13	47	139	53
Future Vol, veh/h	14	286	9	9	148	32	5	30	13	47	139	53
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	16	318	10	10	164	36	6	33	14	52	154	59
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	13.1	10.6	9.3	11.9
HCM LOS	B	B	A	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	10%	5%	5%	20%
Vol Thru, %	62%	93%	78%	58%
Vol Right, %	27%	3%	17%	22%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	48	309	189	239
LT Vol	5	14	9	47
Through Vol	30	286	148	139
RT Vol	13	9	32	53
Lane Flow Rate	53	343	210	266
Geometry Grp	1	1	1	1
Degree of Util (X)	0.085	0.491	0.306	0.396
Departure Headway (Hd)	5.727	5.145	5.253	5.375
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	625	700	685	669
Service Time	3.773	3.174	3.288	3.41
HCM Lane V/C Ratio	0.085	0.49	0.307	0.398
HCM Control Delay	9.3	13.1	10.6	11.9
HCM Lane LOS	A	B	B	B
HCM 95th-tile Q	0.3	2.7	1.3	1.9

Intersection	
Intersection Delay, s/veh	11.3
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥			✥			✥	
Traffic Vol, veh/h	14	323	6	7	167	20	6	83	8	34	51	18
Future Vol, veh/h	14	323	6	7	167	20	6	83	8	34	51	18
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	16	359	7	8	186	22	7	92	9	38	57	20
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	12.8	10.2	9.7	9.8
HCM LOS	B	B	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	6%	4%	4%	33%
Vol Thru, %	86%	94%	86%	50%
Vol Right, %	8%	2%	10%	17%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	97	343	194	103
LT Vol	6	14	7	34
Through Vol	83	323	167	51
RT Vol	8	6	20	18
Lane Flow Rate	108	381	216	114
Geometry Grp	1	1	1	1
Degree of Util (X)	0.168	0.507	0.302	0.177
Departure Headway (Hd)	5.598	4.893	5.048	5.583
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	643	743	716	644
Service Time	3.613	2.893	3.048	3.599
HCM Lane V/C Ratio	0.168	0.513	0.302	0.177
HCM Control Delay	9.7	12.8	10.2	9.8
HCM Lane LOS	A	B	B	A
HCM 95th-tile Q	0.6	2.9	1.3	0.6

Intersection	
Intersection Delay, s/veh	11.7
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			✣			✣	
Traffic Vol, veh/h	13	317	29	22	147	16	16	30	25	27	84	32
Future Vol, veh/h	13	317	29	22	147	16	16	30	25	27	84	32
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	14	352	32	24	163	18	18	33	28	30	93	36
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	13.5	10.3	9.4	10.3
HCM LOS	B	B	A	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	23%	4%	12%	19%
Vol Thru, %	42%	88%	79%	59%
Vol Right, %	35%	8%	9%	22%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	71	359	185	143
LT Vol	16	13	22	27
Through Vol	30	317	147	84
RT Vol	25	29	16	32
Lane Flow Rate	79	399	206	159
Geometry Grp	1	1	1	1
Degree of Util (X)	0.122	0.541	0.292	0.242
Departure Headway (Hd)	5.576	4.884	5.121	5.49
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	642	742	703	655
Service Time	3.615	2.884	3.151	3.525
HCM Lane V/C Ratio	0.123	0.538	0.293	0.243
HCM Control Delay	9.4	13.5	10.3	10.3
HCM Lane LOS	A	B	B	B
HCM 95th-tile Q	0.4	3.3	1.2	0.9

LOS Worksheets: Baseline Plus Scenario 2 Specific Plan Buildout Conditions

Fehr & Peers

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	933	49	0	539	0	223	0	85	70	0	54
Future Volume (veh/h)	0	933	49	0	539	0	223	0	85	70	0	54
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	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	0	1196	1196	0	1196	0	1148	0	1196	1244	0	1196
Adj Flow Rate, veh/h	0	1037	47	0	599	0	248	0	26	78	0	17
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	2	2	0	2	0	2	0	2	2	0	2
Cap, veh/h	0	2088	94	0	2135	0	270	0	0	293	0	0
Arrive On Green	0.00	0.65	0.65	0.00	0.87	0.00	0.25	0.00	0.00	0.25	0.00	0.00
Sat Flow, veh/h	0	3301	145	0	3481	0	1094	248		1185	78	
Grp Volume(v), veh/h	0	706	378	0	599	0	248	52.7		78	30.8	
Grp Sat Flow(s),veh/h/ln	0	1088	1161	0	1088	0	1094	D		1185	C	
Q Serve(g_s), s	0.0	16.6	16.7	0.0	3.2	0.0	22.1			5.3		
Cycle Q Clear(g_c), s	0.0	16.6	16.7	0.0	3.2	0.0	22.1			5.3		
Prop In Lane	0.00		0.12	0.00		0.00	1.00			1.00		
Lane Grp Cap(c), veh/h	0	1423	759	0	2135	0	270			293		
V/C Ratio(X)	0.00	0.50	0.50	0.00	0.28	0.00	0.92			0.27		
Avail Cap(c_a), veh/h	0	1423	759	0	2135	0	442			479		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.33	1.00	1.00			1.00		
Upstream Filter(I)	0.00	1.00	1.00	0.00	0.91	0.00	1.00			1.00		
Uniform Delay (d), s/veh	0.0	8.9	8.9	0.0	2.5	0.0	36.6			30.3		
Incr Delay (d2), s/veh	0.0	1.2	2.3	0.0	0.3	0.0	16.1			0.5		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0		
%ile BackOfQ(50%),veh/ln	0.0	3.8	4.3	0.0	0.6	0.0	7.1			1.6		
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	10.1	11.2	0.0	2.8	0.0	52.7			30.8		
LnGrp LOS	A	B	B	A	A	A	D			C		
Approach Vol, veh/h		1084			599							
Approach Delay, s/veh		10.5			2.8							
Approach LOS		B			A							
Timer - Assigned Phs		2	3			6	7					
Phs Duration (G+Y+Rc), s		70.7	29.3			70.7	29.3					
Change Period (Y+Rc), s		5.3	4.6			5.3	4.6					
Max Green Setting (Gmax), s		49.7	40.4			49.7	40.4					
Max Q Clear Time (g_c+I1), s		18.7	24.1			5.2	7.3					
Green Ext Time (p_c), s		15.7	0.7			9.2	0.2					
Intersection Summary												
HCM 6th Ctrl Delay			14.2									
HCM 6th LOS			B									

Movement	EBL2	EBT	EBR	WBL	WBT	WBR	NBR	SBR	SBR2
Lane Configurations									
Traffic Volume (vph)	190	833	51	21	509	120	93	87	197
Future Volume (vph)	190	833	51	21	509	120	93	87	197
Ideal Flow (vphpl)	1350	1350	1350	1350	1350	1350	1350	1350	1350
Lane Width	9	10	10	9	10	10	12	10	10
Total Lost time (s)	4.6	5.3		4.0	5.3		4.6	4.6	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.88	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.98		1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.99		1.00	0.97		0.86	0.85	0.85
Flt Protected	0.95	1.00		0.95	1.00		1.00	1.00	1.00
Satd. Flow (prot)	1018	2996		1018	2893		1030	1663	945
Flt Permitted	0.95	1.00		0.95	1.00		1.00	1.00	1.00
Satd. Flow (perm)	1018	2996		1018	2893		1030	1663	945
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	211	926	57	23	566	133	103	97	219
RTOR Reduction (vph)	0	6	0	0	0	0	0	0	0
Lane Group Flow (vph)	211	977	0	23	699	0	103	97	219
Confl. Peds. (#/hr)			24			64			
Confl. Bikes (#/hr)			3			3	3	3	
Turn Type	Prot	NA		Prot	NA		Prot	Prot	Free
Protected Phases	5	2		1	6		8	4	
Permitted Phases									Free
Actuated Green, G (s)	15.4	70.7		1.0	55.7		14.4	14.4	100.0
Effective Green, g (s)	15.4	70.7		1.0	55.7		14.4	14.4	100.0
Actuated g/C Ratio	0.15	0.71		0.01	0.56		0.14	0.14	1.00
Clearance Time (s)	4.6	5.3		4.0	5.3		4.6	4.6	
Vehicle Extension (s)	1.5	3.0		1.5	3.0		2.5	2.5	
Lane Grp Cap (vph)	156	2118		10	1611		148	239	945
v/s Ratio Prot	c0.21	c0.33		0.02	0.24		c0.10	0.06	
v/s Ratio Perm									0.23
v/c Ratio	1.35	0.46		2.30	0.43		0.70	0.41	0.23
Uniform Delay, d1	42.3	6.4		49.5	12.9		40.7	38.9	0.0
Progression Factor	0.78	0.43		0.83	1.13		1.00	1.00	1.00
Incremental Delay, d2	189.2	0.6		800.4	0.8		12.3	0.8	0.6
Delay (s)	222.0	3.3		841.5	15.4		53.0	39.7	0.6
Level of Service	F	A		F	B		D	D	A
Approach Delay (s)		42.0			41.7				
Approach LOS		D			D				

Intersection Summary			
HCM 2000 Control Delay	38.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	14.5
Intersection Capacity Utilization	53.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	827	100	115	439	0	132	0	54	252	89	42
Future Volume (veh/h)	0	827	100	115	439	0	132	0	54	252	89	42
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		1.00	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	0	1148	1148	1148	1148	0	1196	0	1196	1196	1196	1196
Adj Flow Rate, veh/h	0	919	109	128	488	0	147	0	60	280	99	6
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	2	2	2	2	0	2	0	2	2	2	2
Cap, veh/h	0	2028	240	312	2249	0	0	0	0	397	215	173
Arrive On Green	0.00	1.00	1.00	0.48	0.48	0.00	0.00	0.00	0.00	0.18	0.18	0.18
Sat Flow, veh/h	0	2931	334	335	3238	0		0		2210	1196	964
Grp Volume(v), veh/h	0	678	350	128	488	0		0.0		280	99	6
Grp Sat Flow(s),veh/h/ln	0	1045	1072	335	1045	0				1105	1196	964
Q Serve(g_s), s	0.0	0.0	0.0	26.6	9.0	0.0				11.9	7.4	0.5
Cycle Q Clear(g_c), s	0.0	0.0	0.0	26.6	9.0	0.0				11.9	7.4	0.5
Prop In Lane	0.00		0.31	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1499	769	312	2249	0				397	215	173
V/C Ratio(X)	0.00	0.45	0.46	0.41	0.22	0.00				0.71	0.46	0.03
Avail Cap(c_a), veh/h	0	1499	769	312	2249	0				575	311	251
HCM Platoon Ratio	1.00	2.00	2.00	0.67	0.67	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.88	0.88	1.00	1.00	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	14.3	9.7	0.0				38.5	36.7	33.9
Incr Delay (d2), s/veh	0.0	0.9	1.7	3.9	0.2	0.0				2.3	1.5	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
%ile BackOfQ(50%),veh/ln	0.0	0.2	0.4	2.5	2.1	0.0				3.4	2.3	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.9	1.7	18.2	9.9	0.0				40.8	38.2	33.9
LnGrp LOS	A	A	A	B	A	A				D	D	C
Approach Vol, veh/h		1028			616						385	
Approach Delay, s/veh		1.2			11.6						40.1	
Approach LOS		A			B						D	
Timer - Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		78.0				78.0		22.0				
Change Period (Y+Rc), s		6.3				6.3		4.0				
Max Green Setting (Gmax), s		43.7				43.7		26.0				
Max Q Clear Time (g_c+I1), s		2.0				28.6		13.9				
Green Ext Time (p_c), s		17.1				7.4		1.3				
Intersection Summary												
HCM 6th Ctrl Delay			11.7									
HCM 6th LOS			B									

Notes

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

Intersection	
Int Delay, s/veh	3.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	3	1111	33	0	540	3	0	0	178	0	0	0
Future Vol, veh/h	3	1111	33	0	540	3	0	0	178	0	0	0
Conflicting Peds, #/hr	55	0	36	0	0	53	0	0	34	53	0	55
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	1234	37	0	600	3	0	0	198	0	0	0

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	658	0	0	-	-	0	-	-	706
Stage 1	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-
Critical Hdwy	5.34	-	-	-	-	-	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.12	-	-	-	-	-	-	-	3.92
Pot Cap-1 Maneuver	570	-	-	0	-	-	0	0	324
Stage 1	-	-	-	0	-	-	0	0	-
Stage 2	-	-	-	0	-	-	0	0	-
Platoon blocked, %		-	-		-	-			
Mov Cap-1 Maneuver	570	-	-	-	-	-	-	0	302
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	0	-
Stage 1	-	-	-	-	-	-	-	0	-
Stage 2	-	-	-	-	-	-	-	0	-

Approach	EB	WB	NB
HCM Control Delay, s	0.1	0	37
HCM LOS			E

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBT	WBR
Capacity (veh/h)	302	570	-	-	-	-
HCM Lane V/C Ratio	0.655	0.006	-	-	-	-
HCM Control Delay (s)	37	11.4	0.1	-	-	-
HCM Lane LOS	E	B	A	-	-	-
HCM 95th %tile Q(veh)	4.3	0	-	-	-	-

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBR
Lane Configurations									
Traffic Volume (vph)	386	83	648	93	129	654	267	15	90
Future Volume (vph)	386	83	648	93	129	654	267	15	90
Ideal Flow (vphpl)	1350	1350	1350	1350	1350	1350	1350	1350	1350
Lane Width	12	9	10	9	9	9	9	9	15
Total Lost time (s)		4.6	5.3		4.6	5.3			4.6
Lane Util. Factor		1.00	0.91		1.00	0.91			1.00
Frpb, ped/bikes		1.00	0.99		1.00	0.96			1.00
Flpb, ped/bikes		1.00	1.00		1.00	1.00			1.00
Frt		1.00	0.98		1.00	0.95			0.86
Flt Protected		0.95	1.00		0.95	1.00			1.00
Satd. Flow (prot)		1018	2948		1018	2676			1133
Flt Permitted		0.95	1.00		0.95	1.00			1.00
Satd. Flow (perm)		1018	2948		1018	2676			1133
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	429	92	720	103	143	727	297	17	100
RTOR Reduction (vph)	0	0	15	0	0	2	0	0	77
Lane Group Flow (vph)	0	521	808	0	143	1039	0	0	23
Confl. Peds. (#/hr)				32			54	54	
Confl. Bikes (#/hr)				2			8	8	
Turn Type	Prot	Prot	NA		Prot	NA			Perm
Protected Phases	5	5	2		1	6			
Permitted Phases									1
Actuated Green, G (s)		42.4	67.1		23.0	47.7			23.0
Effective Green, g (s)		42.4	67.1		23.0	47.7			23.0
Actuated g/C Ratio		0.42	0.67		0.23	0.48			0.23
Clearance Time (s)		4.6	5.3		4.6	5.3			4.6
Vehicle Extension (s)		2.5	5.0		2.5	5.0			2.5
Lane Grp Cap (vph)		431	1978		234	1276			260
v/s Ratio Prot		c0.51	0.27		0.14	c0.39			
v/s Ratio Perm									0.02
v/c Ratio		1.21	0.41		0.61	0.81			0.09
Uniform Delay, d1		28.8	7.5		34.5	22.4			30.3
Progression Factor		1.30	1.02		1.21	0.59			1.00
Incremental Delay, d2		111.2	0.5		3.2	4.8			0.1
Delay (s)		148.7	8.1		44.9	17.9			30.4
Level of Service		F	A		D	B			C
Approach Delay (s)			62.6			21.2			
Approach LOS			E			C			

Intersection Summary			
HCM 2000 Control Delay	42.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	9.9
Intersection Capacity Utilization	79.8%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	656	33	0	801	64	82	81	29	40	71	101
Future Volume (veh/h)	70	656	33	0	801	64	82	81	29	40	71	101
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		0.95	1.00		0.92	1.00		0.98	1.00		0.91
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	1148	1148	1196	0	1196	1196	1196	1196	1196	1148	1244	1196
Adj Flow Rate, veh/h	78	729	30	0	890	60	91	90	32	44	79	112
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	0	2	2	2	2	2	2	2	2
Cap, veh/h	255	1582	65	0	1594	107	145	107	38	243	277	205
Arrive On Green	1.00	1.00	1.00	0.00	1.00	1.00	0.13	0.13	0.13	0.22	0.22	0.22
Sat Flow, veh/h	357	3082	126	0	3213	208	1139	838	298	1094	1244	921
Grp Volume(v), veh/h	78	493	266	0	623	327	91	0	122	44	79	112
Grp Sat Flow(s),veh/h/ln	357	1045	1118	0	1088	1137	1139	0	1136	1094	1244	921
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	7.6	0.0	10.5	3.3	5.3	10.8
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	7.6	0.0	10.5	3.3	5.3	10.8
Prop In Lane	1.00		0.11	0.00		0.18	1.00		0.26	1.00		1.00
Lane Grp Cap(c), veh/h	255	1073	574	0	1117	584	145	0	145	243	277	205
V/C Ratio(X)	0.31	0.46	0.46	0.00	0.56	0.56	0.63	0.00	0.84	0.18	0.29	0.55
Avail Cap(c_a), veh/h	255	1073	574	0	1117	584	180	0	180	337	383	284
HCM Platoon Ratio	2.00	2.00	2.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.92	0.92	0.92	0.00	0.60	0.60	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	41.4	0.0	42.7	31.5	32.3	34.4
Incr Delay (d2), s/veh	2.8	1.3	2.5	0.0	1.2	2.3	4.6	0.0	24.6	0.4	0.6	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.2	0.4	0.0	0.2	0.4	2.3	0.0	3.9	0.9	1.6	2.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	2.8	1.3	2.5	0.0	1.2	2.3	46.0	0.0	67.3	31.9	32.8	36.7
LnGrp LOS	A	A	A	A	A	A	D	A	E	C	C	D
Approach Vol, veh/h		837			950			213			235	
Approach Delay, s/veh		1.8			1.6			58.2			34.5	
Approach LOS		A			A			E			C	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		56.6		16.9		56.6		26.4				
Change Period (Y+Rc), s		5.3		* 4.2		5.3		4.2				
Max Green Setting (Gmax), s		39.7		* 16		39.7		30.8				
Max Q Clear Time (g_c+I1), s		2.0		12.5		2.0		12.8				
Green Ext Time (p_c), s		14.2		0.3		14.9		0.9				
Intersection Summary												
HCM 6th Ctrl Delay			10.5									
HCM 6th LOS			B									
Notes												

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	24	769	59	48	800	48	80	478	68	0	364	60
Future Volume (veh/h)	24	769	59	48	800	48	80	478	68	0	364	60
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.96	0.99		0.95	1.00		0.97	1.00		0.92
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	1148	1148	1148	1148	1196	1196	1148	1148	1148	0	1148	1148
Adj Flow Rate, veh/h	27	854	55	53	889	44	89	531	29	0	404	23
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	0	2	2
Cap, veh/h	175	1279	82	235	1413	70	85	843	364	0	559	230
Arrive On Green	0.04	0.85	0.85	0.04	0.44	0.44	0.08	0.39	0.39	0.00	0.26	0.26
Sat Flow, veh/h	1094	3000	192	1094	3177	157	1094	2182	942	0	2239	898
Grp Volume(v), veh/h	27	594	315	53	608	325	89	531	29	0	404	23
Grp Sat Flow(s),veh/h/ln	1094	1045	1103	1094	1088	1157	1094	1091	942	0	1091	898
Q Serve(g_s), s	1.4	9.7	9.8	2.7	21.5	21.7	7.8	19.7	1.9	0.0	16.9	2.0
Cycle Q Clear(g_c), s	1.4	9.7	9.8	2.7	21.5	21.7	7.8	19.7	1.9	0.0	16.9	2.0
Prop In Lane	1.00		0.17	1.00		0.14	1.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	175	891	470	235	968	515	85	843	364	0	559	230
V/C Ratio(X)	0.15	0.67	0.67	0.23	0.63	0.63	1.04	0.63	0.08	0.00	0.72	0.10
Avail Cap(c_a), veh/h	237	891	470	276	968	515	85	934	403	0	650	268
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	0.00	1.00	1.00
Uniform Delay (d), s/veh	17.6	4.9	5.0	15.7	21.4	21.4	46.1	24.9	19.4	0.0	33.9	28.4
Incr Delay (d2), s/veh	0.1	3.3	6.2	0.2	3.1	5.8	109.8	1.5	0.1	0.0	3.9	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	1.5	2.0	0.7	5.7	6.5	4.7	5.2	1.3	0.0	4.8	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.7	8.2	11.2	15.9	24.5	27.2	155.9	26.4	19.6	0.0	37.8	28.7
LnGrp LOS	B	A	B	B	C	C	F	C	B	A	D	C
Approach Vol, veh/h		936			986			649			427	
Approach Delay, s/veh		9.5			24.9			43.8			37.3	
Approach LOS		A			C			D			D	

Timer - Assigned Phs	1	2		4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.3	47.9		43.8	6.4	49.8	13.0	30.8
Change Period (Y+Rc), s	4.6	5.3		5.2	4.6	5.3	5.2	5.2
Max Green Setting (Gmax), s	7.4	34.7		42.8	7.4	34.7	7.8	29.8
Max Q Clear Time (g_c+I1), s	4.7	11.8		21.7	3.4	23.7	9.8	18.9
Green Ext Time (p_c), s	0.0	11.0		5.2	0.0	6.8	0.0	2.7

Intersection Summary	
HCM 6th Ctrl Delay	26.0
HCM 6th LOS	C

Notes

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

Intersection	
Intersection Delay, s/veh	10.3
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			✣			✣	
Traffic Vol, veh/h	22	154	7	7	237	16	9	55	5	5	49	34
Future Vol, veh/h	22	154	7	7	237	16	9	55	5	5	49	34
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	28	193	9	9	296	20	11	69	6	6	61	43
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	10	11.2	9.3	9.2
HCM LOS	A	B	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	13%	12%	3%	6%
Vol Thru, %	80%	84%	91%	56%
Vol Right, %	7%	4%	6%	39%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	69	183	260	88
LT Vol	9	22	7	5
Through Vol	55	154	237	49
RT Vol	5	7	16	34
Lane Flow Rate	86	229	325	110
Geometry Grp	1	1	1	1
Degree of Util (X)	0.129	0.307	0.423	0.157
Departure Headway (Hd)	5.365	4.825	4.684	5.128
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	661	739	764	692
Service Time	3.458	2.895	2.749	3.217
HCM Lane V/C Ratio	0.13	0.31	0.425	0.159
HCM Control Delay	9.3	10	11.2	9.2
HCM Lane LOS	A	A	B	A
HCM 95th-tile Q	0.4	1.3	2.1	0.6

Intersection	
Intersection Delay, s/veh	10.8
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥			✥			✥	
Traffic Vol, veh/h	10	149	5	9	245	40	6	96	13	27	19	5
Future Vol, veh/h	10	149	5	9	245	40	6	96	13	27	19	5
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	13	186	6	11	306	50	8	120	16	34	24	6
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.9	12	9.8	9.3
HCM LOS	A	B	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	5%	6%	3%	53%
Vol Thru, %	83%	91%	83%	37%
Vol Right, %	11%	3%	14%	10%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	115	164	294	51
LT Vol	6	10	9	27
Through Vol	96	149	245	19
RT Vol	13	5	40	5
Lane Flow Rate	144	205	368	64
Geometry Grp	1	1	1	1
Degree of Util (X)	0.211	0.28	0.476	0.1
Departure Headway (Hd)	5.296	4.91	4.659	5.644
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	670	724	768	639
Service Time	3.395	2.994	2.73	3.644
HCM Lane V/C Ratio	0.215	0.283	0.479	0.1
HCM Control Delay	9.8	9.9	12	9.3
HCM Lane LOS	A	A	B	A
HCM 95th-tile Q	0.8	1.1	2.6	0.3

Intersection	
Intersection Delay, s/veh	10.7
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			✣			✣	
Traffic Vol, veh/h	13	169	8	16	256	23	14	30	17	22	27	26
Future Vol, veh/h	13	169	8	16	256	23	14	30	17	22	27	26
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	16	211	10	20	320	29	18	38	21	28	34	33
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	10.1	11.8	9.1	9.2
HCM LOS	B	B	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	23%	7%	5%	29%
Vol Thru, %	49%	89%	87%	36%
Vol Right, %	28%	4%	8%	35%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	61	190	295	75
LT Vol	14	13	16	22
Through Vol	30	169	256	27
RT Vol	17	8	23	26
Lane Flow Rate	76	238	369	94
Geometry Grp	1	1	1	1
Degree of Util (X)	0.113	0.316	0.474	0.138
Departure Headway (Hd)	5.347	4.791	4.624	5.289
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	663	746	774	671
Service Time	3.439	2.857	2.682	3.377
HCM Lane V/C Ratio	0.115	0.319	0.477	0.14
HCM Control Delay	9.1	10.1	11.8	9.2
HCM Lane LOS	A	B	B	A
HCM 95th-tile Q	0.4	1.4	2.6	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1241	103	0	852	0	282	0	49	134	0	67
Future Volume (veh/h)	0	1241	103	0	852	0	282	0	49	134	0	67
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.92	1.00		1.00	1.00		1.00	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	0	1683	1683	0	1683	0	1616	0	1683	1751	0	1683
Adj Flow Rate, veh/h	0	1379	105	0	947	0	313	0	28	149	0	16
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	2	2	0	2	0	2	0	2	2	0	2
Cap, veh/h	0	2917	222	0	3100	0	349	0	0	378	0	0
Arrive On Green	0.00	0.67	0.67	0.00	1.00	0.00	0.23	0.00	0.00	0.23	0.00	0.00
Sat Flow, veh/h	0	4476	329	0	4898	0	1539	313		1667	149	
Grp Volume(v), veh/h	0	977	507	0	947	0	313	46.0		149	33.5	
Grp Sat Flow(s),veh/h/ln	0	1532	1590	0	1532	0	1539	D		1667	C	
Q Serve(g_s), s	0.0	15.2	15.2	0.0	0.0	0.0	19.7			7.6		
Cycle Q Clear(g_c), s	0.0	15.2	15.2	0.0	0.0	0.0	19.7			7.6		
Prop In Lane	0.00		0.21	0.00		0.00	1.00			1.00		
Lane Grp Cap(c), veh/h	0	2066	1072	0	3100	0	349			378		
V/C Ratio(X)	0.00	0.47	0.47	0.00	0.31	0.00	0.90			0.39		
Avail Cap(c_a), veh/h	0	2066	1072	0	3100	0	622			674		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	1.00	1.00			1.00		
Upstream Filter(I)	0.00	1.00	1.00	0.00	0.79	0.00	1.00			1.00		
Uniform Delay (d), s/veh	0.0	7.8	7.8	0.0	0.0	0.0	37.6			32.9		
Incr Delay (d2), s/veh	0.0	0.8	1.5	0.0	0.2	0.0	8.5			0.7		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0		
%ile BackOfQ(50%),veh/ln	0.0	4.6	5.0	0.0	0.1	0.0	8.2			3.1		
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	8.6	9.3	0.0	0.2	0.0	46.0			33.5		
LnGrp LOS	A	A	A	A	A	A	D			C		
Approach Vol, veh/h		1484			947							
Approach Delay, s/veh		8.8			0.2							
Approach LOS		A			A							

Timer - Assigned Phs		2	3			6	7					
Phs Duration (G+Y+Rc), s		72.8	27.2			72.8	27.2					
Change Period (Y+Rc), s		5.3	4.6			5.3	4.6					
Max Green Setting (Gmax), s		49.7	40.4			49.7	40.4					
Max Q Clear Time (g_c+I1), s		17.2	21.7			2.0	9.6					
Green Ext Time (p_c), s		22.5	0.9			16.7	0.4					

Intersection Summary			
HCM 6th Ctrl Delay			11.3
HCM 6th LOS			B

Movement	EBL2	EBT	EBR	WBL	WBT	WBR	NBR	SBR	SBR2
Lane Configurations									
Traffic Volume (vph)	105	1240	65	55	625	56	66	232	192
Future Volume (vph)	105	1240	65	55	625	56	66	232	192
Ideal Flow (vphpl)	1350	1350	1350	1350	1350	1350	1350	1350	1350
Lane Width	9	10	10	9	10	10	12	10	10
Total Lost time (s)	4.6	5.3		4.0	5.3		4.6	4.6	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.88	1.00
Frpb, ped/bikes	1.00	0.99		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	0.99		1.00	0.99		0.86	0.85	0.85
Flt Protected	0.95	1.00		0.95	1.00		1.00	1.00	1.00
Satd. Flow (prot)	1018	2971		1018	2967		1030	1663	945
Flt Permitted	0.95	1.00		0.95	1.00		1.00	1.00	1.00
Satd. Flow (perm)	1018	2971		1018	2967		1030	1663	945
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	117	1378	72	61	694	62	73	258	213
RTOR Reduction (vph)	0	5	0	0	0	0	0	0	0
Lane Group Flow (vph)	117	1445	0	61	756	0	73	258	213
Confl. Peds. (#/hr)			115			83			
Confl. Bikes (#/hr)			6			6	6	6	
Turn Type	Prot	NA		Prot	NA		Prot	Prot	Free
Protected Phases	5	2		1	6		8	4	
Permitted Phases									Free
Actuated Green, G (s)	15.4	66.6		1.0	51.6		18.5	18.5	100.0
Effective Green, g (s)	15.4	66.6		1.0	51.6		18.5	18.5	100.0
Actuated g/C Ratio	0.15	0.67		0.01	0.52		0.18	0.18	1.00
Clearance Time (s)	4.6	5.3		4.0	5.3		4.6	4.6	
Vehicle Extension (s)	1.5	3.0		1.5	3.0		2.5	2.5	
Lane Grp Cap (vph)	156	1978		10	1530		190	307	945
v/s Ratio Prot	c0.11	c0.49		c0.06	0.25		0.07	c0.16	
v/s Ratio Perm									0.23
v/c Ratio	0.75	0.73		6.10	0.49		0.38	0.84	0.23
Uniform Delay, d1	40.5	10.9		49.5	15.7		35.8	39.3	0.0
Progression Factor	0.63	0.45		0.89	0.95		1.00	1.00	1.00
Incremental Delay, d2	8.8	1.2		2464.5	1.0		0.9	18.1	0.6
Delay (s)	34.4	6.1		2508.6	15.8		36.7	57.4	0.6
Level of Service	C	A		F	B		D	E	A
Approach Delay (s)		8.2			202.0				
Approach LOS		A			F				

Intersection Summary			
HCM 2000 Control Delay	66.8	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	14.5
Intersection Capacity Utilization	55.2%	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)	0	1222	85	113	500	0	159	0	63	396	225	78
Future Volume (veh/h)	0	1222	85	113	500	0	159	0	63	396	225	78
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.88	0.99		1.00	1.00		1.00	1.00		0.93
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	0	1616	1616	1616	1616	0	1683	0	1683	1683	1683	1683
Adj Flow Rate, veh/h	0	1358	93	126	556	0	177	0	70	440	250	17
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	2	2	2	2	0	2	0	2	2	2	2
Cap, veh/h	0	2854	195	286	3017	0	0	0	0	663	359	283
Arrive On Green	0.00	1.00	1.00	0.68	0.68	0.00	0.00	0.00	0.00	0.21	0.21	0.21
Sat Flow, veh/h	0	4320	286	313	4557	0		0		3110	1683	1328
Grp Volume(v), veh/h	0	957	494	126	556	0		0.0		440	250	17
Grp Sat Flow(s),veh/h/ln	0	1471	1519	313	1471	0				1555	1683	1328
Q Serve(g_s), s	0.0	0.0	0.0	21.3	4.6	0.0				13.0	13.7	1.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	21.3	4.6	0.0				13.0	13.7	1.0
Prop In Lane	0.00		0.19	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2011	1039	286	3017	0				663	359	283
V/C Ratio(X)	0.00	0.48	0.48	0.44	0.18	0.00				0.66	0.70	0.06
Avail Cap(c_a), veh/h	0	2011	1039	286	3017	0				809	438	345
HCM Platoon Ratio	1.00	2.00	2.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.63	0.63	1.00	1.00	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	8.4	5.7	0.0				36.1	36.4	31.4
Incr Delay (d2), s/veh	0.0	0.5	1.0	4.9	0.1	0.0				1.5	3.7	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.1	0.3	1.6	1.3	0.0				5.1	6.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.5	1.0	13.2	5.9	0.0				37.6	40.0	31.4
LnGrp LOS	A	A	A	B	A	A				D	D	C
Approach Vol, veh/h		1451			682						707	
Approach Delay, s/veh		0.7			7.2						38.3	
Approach LOS		A			A						D	

Timer - Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		74.7				74.7		25.3				
Change Period (Y+Rc), s		6.3				6.3		4.0				
Max Green Setting (Gmax), s		43.7				43.7		26.0				
Max Q Clear Time (g_c+I1), s		2.0				23.3		15.7				
Green Ext Time (p_c), s		26.1				9.9		2.5				

Intersection Summary			
HCM 6th Ctrl Delay			11.6
HCM 6th LOS			B

Notes

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

Intersection	
Int Delay, s/veh	23.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	1582	98	0	610	1	0	0	165	0	0	0
Future Vol, veh/h	2	1582	98	0	610	1	0	0	165	0	0	0
Conflicting Peds, #/hr	107	0	128	0	0	107	0	0	128	107	0	107
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	1758	109	0	678	1	0	0	183	0	0	0

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	786	0	0	-	-	0	-	-	1190
Stage 1	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-
Critical Hdwy	5.34	-	-	-	-	-	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.12	-	-	-	-	-	-	-	3.92
Pot Cap-1 Maneuver	496	-	-	0	-	-	0	0	~ 155
Stage 1	-	-	-	0	-	-	0	0	-
Stage 2	-	-	-	0	-	-	0	0	-
Platoon blocked, %		-	-		-	-			
Mov Cap-1 Maneuver	496	-	-	-	-	-	-	0	~ 118
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	0	-
Stage 1	-	-	-	-	-	-	-	0	-
Stage 2	-	-	-	-	-	-	-	0	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	$ 352
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBT	WBR
Capacity (veh/h)	118	496	-	-	-	-
HCM Lane V/C Ratio	1.554	0.004	-	-	-	-
HCM Control Delay (s)	$ 352	12.3	0	-	-	-
HCM Lane LOS	F	B	A	-	-	-
HCM 95th %tile Q(veh)	13.3	0	-	-	-	-

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

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBR
Lane Configurations									
Traffic Volume (vph)	180	334	1084	146	157	609	137	48	132
Future Volume (vph)	180	334	1084	146	157	609	137	48	132
Ideal Flow (vphpl)	1350	1350	1350	1350	1350	1350	1350	1350	1350
Lane Width	12	9	10	9	9	9	9	9	15
Total Lost time (s)		4.6	5.3		4.6	5.3			4.6
Lane Util. Factor		1.00	0.91		1.00	0.91			1.00
Frpb, ped/bikes		1.00	0.97		1.00	0.93			1.00
Flpb, ped/bikes		1.00	1.00		1.00	1.00			1.00
Frt		1.00	0.98		1.00	0.97			0.86
Flt Protected		0.95	1.00		0.95	1.00			1.00
Satd. Flow (prot)		1018	2890		1018	2628			1133
Flt Permitted		0.95	1.00		0.95	1.00			1.00
Satd. Flow (perm)		1018	2890		1018	2628			1133
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	200	371	1204	162	174	677	152	53	147
RTOR Reduction (vph)	0	0	15	0	0	7	0	0	57
Lane Group Flow (vph)	0	571	1351	0	174	875	0	0	90
Confl. Peds. (#/hr)				124			127	127	
Confl. Bikes (#/hr)				8			2	2	
Turn Type	Prot	Prot	NA		Prot	NA			Perm
Protected Phases	5	5	2		1	6			
Permitted Phases									1
Actuated Green, G (s)		42.4	66.0		24.1	47.7			24.1
Effective Green, g (s)		42.4	66.0		24.1	47.7			24.1
Actuated g/C Ratio		0.42	0.66		0.24	0.48			0.24
Clearance Time (s)		4.6	5.3		4.6	5.3			4.6
Vehicle Extension (s)		2.5	5.0		2.5	5.0			2.5
Lane Grp Cap (vph)		431	1907		245	1253			273
v/s Ratio Prot		c0.56	c0.47		0.17	0.33			
v/s Ratio Perm									0.08
v/c Ratio		1.32	0.71		0.71	0.70			0.33
Uniform Delay, d1		28.8	10.9		34.8	20.5			31.3
Progression Factor		1.19	1.08		1.21	0.59			1.00
Incremental Delay, d2		152.3	0.9		6.8	2.5			0.5
Delay (s)		186.6	12.6		49.0	14.5			31.8
Level of Service		F	B		D	B			C
Approach Delay (s)			63.9			20.2			
Approach LOS			E			C			

Intersection Summary			
HCM 2000 Control Delay	47.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	9.9
Intersection Capacity Utilization	79.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	108	1088	20	0	736	81	96	65	37	100	55	117
Future Volume (veh/h)	108	1088	20	0	736	81	96	65	37	100	55	117
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.97		0.93	1.00		0.88	1.00		0.98	1.00		0.89
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	1616	1616	1683	0	1683	1683	1683	1683	1683	1616	1751	1683
Adj Flow Rate, veh/h	120	1209	20	0	818	72	107	72	41	111	61	130
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	0	2	2	2	2	2	2	2	2
Cap, veh/h	355	2409	40	0	2293	200	152	95	54	351	400	291
Arrive On Green	1.00	1.00	1.00	0.00	1.00	1.00	0.10	0.10	0.10	0.23	0.23	0.23
Sat Flow, veh/h	524	4463	74	0	4401	371	1603	999	569	1539	1751	1274
Grp Volume(v), veh/h	120	797	432	0	588	302	107	0	113	111	61	130
Grp Sat Flow(s),veh/h/ln	524	1471	1596	0	1532	1556	1603	0	1568	1539	1751	1274
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	6.5	0.0	7.0	6.0	2.8	8.8
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	6.5	0.0	7.0	6.0	2.8	8.8
Prop In Lane	1.00		0.05	0.00		0.24	1.00		0.36	1.00		1.00
Lane Grp Cap(c), veh/h	355	1587	861	0	1654	840	152	0	149	351	400	291
V/C Ratio(X)	0.34	0.50	0.50	0.00	0.36	0.36	0.70	0.00	0.76	0.32	0.15	0.45
Avail Cap(c_a), veh/h	355	1587	861	0	1654	840	253	0	248	474	539	392
HCM Platoon Ratio	2.00	2.00	2.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.67	0.67	0.67	0.00	0.59	0.59	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	43.9	0.0	44.1	32.1	30.9	33.2
Incr Delay (d2), s/veh	1.7	0.8	1.4	0.0	0.4	0.7	5.8	0.0	7.7	0.5	0.2	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.2	0.3	0.0	0.1	0.2	2.8	0.0	3.1	2.3	1.2	2.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	1.7	0.8	1.4	0.0	0.4	0.7	49.7	0.0	51.8	32.6	31.0	34.2
LnGrp LOS	A	A	A	A	A	A	D	A	D	C	C	C
Approach Vol, veh/h		1349			890			220			302	
Approach Delay, s/veh		1.1			0.5			50.8			33.0	
Approach LOS		A			A			D			C	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		59.3		13.7		59.3		27.0				
Change Period (Y+Rc), s		5.3		* 4.2		5.3		4.2				
Max Green Setting (Gmax), s		39.7		* 16		39.7		30.8				
Max Q Clear Time (g_c+I1), s		2.0		9.0		2.0		10.8				
Green Ext Time (p_c), s		23.1		0.5		13.8		1.1				
Intersection Summary												
HCM 6th Ctrl Delay			8.3									
HCM 6th LOS			A									

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	942	56	55	737	61	101	419	97	0	593	88
Future Volume (veh/h)	14	942	56	55	737	61	101	419	97	0	593	88
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.93	0.99		0.93	1.00		0.94	1.00		0.93
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	1616	1616	1616	1616	1683	1683	1616	1616	1616	0	1616	1616
Adj Flow Rate, veh/h	16	1047	54	61	819	55	112	466	41	0	659	31
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	0	2	2
Cap, veh/h	254	1762	91	269	1909	128	120	1234	518	0	835	348
Arrive On Green	0.02	0.82	0.82	0.04	0.44	0.44	0.08	0.40	0.40	0.00	0.27	0.27
Sat Flow, veh/h	1539	4278	220	1539	4376	292	1539	3070	1289	0	3151	1278
Grp Volume(v), veh/h	16	719	382	61	572	302	112	466	41	0	659	31
Grp Sat Flow(s),veh/h/ln	1539	1471	1557	1539	1532	1605	1539	1535	1289	0	1535	1278
Q Serve(g_s), s	0.6	8.4	8.5	2.3	12.9	13.1	7.2	10.7	2.0	0.0	19.9	1.8
Cycle Q Clear(g_c), s	0.6	8.4	8.5	2.3	12.9	13.1	7.2	10.7	2.0	0.0	19.9	1.8
Prop In Lane	1.00		0.14	1.00		0.18	1.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	254	1211	641	269	1336	700	120	1234	518	0	835	348
V/C Ratio(X)	0.06	0.59	0.60	0.23	0.43	0.43	0.93	0.38	0.08	0.00	0.79	0.09
Avail Cap(c_a), veh/h	351	1211	641	329	1336	700	120	1314	552	0	915	381
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)	0.38	0.38	0.38	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	17.2	5.9	5.9	16.3	19.5	19.6	45.8	21.1	18.5	0.0	33.7	27.2
Incr Delay (d2), s/veh	0.0	0.8	1.6	0.2	1.0	1.9	62.0	0.3	0.1	0.0	4.7	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	0.2	1.7	1.9	0.8	4.7	5.1	4.8	3.9	1.8	0.0	7.9	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.2	6.7	7.5	16.5	20.5	21.5	107.8	21.4	18.6	0.0	38.4	27.3
LnGrp LOS	B	A	A	B	C	C	F	C	B	A	D	C
Approach Vol, veh/h		1117			935			619			690	
Approach Delay, s/veh		7.1			20.6			36.8			37.9	
Approach LOS		A			C			D			D	

Timer - Assigned Phs	1	2		4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.1	46.5		45.4	5.7	48.9	13.0	32.4
Change Period (Y+Rc), s	4.6	5.3		5.2	4.6	5.3	5.2	5.2
Max Green Setting (Gmax), s	7.4	34.7		42.8	7.4	34.7	7.8	29.8
Max Q Clear Time (g_c+I1), s	4.3	10.5		12.7	2.6	15.1	9.2	21.9
Green Ext Time (p_c), s	0.0	13.8		5.2	0.0	9.7	0.0	3.6

Intersection Summary		
HCM 6th Ctrl Delay		22.7
HCM 6th LOS		C

Notes

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

Intersection	
Intersection Delay, s/veh	12
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			✣			✣	
Traffic Vol, veh/h	21	293	9	9	150	22	5	35	13	33	142	56
Future Vol, veh/h	21	293	9	9	150	22	5	35	13	33	142	56
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	23	326	10	10	167	24	6	39	14	37	158	62
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	13.4	10.6	9.4	11.8
HCM LOS	B	B	A	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	9%	7%	5%	14%
Vol Thru, %	66%	91%	83%	61%
Vol Right, %	25%	3%	12%	24%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	53	323	181	231
LT Vol	5	21	9	33
Through Vol	35	293	150	142
RT Vol	13	9	22	56
Lane Flow Rate	59	359	201	257
Geometry Grp	1	1	1	1
Degree of Util (X)	0.094	0.511	0.296	0.384
Departure Headway (Hd)	5.744	5.129	5.295	5.382
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	622	703	678	667
Service Time	3.792	3.161	3.332	3.418
HCM Lane V/C Ratio	0.095	0.511	0.296	0.385
HCM Control Delay	9.4	13.4	10.6	11.8
HCM Lane LOS	A	B	B	B
HCM 95th-tile Q	0.3	2.9	1.2	1.8

Intersection	
Intersection Delay, s/veh	11.6
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥			✥			✥	
Traffic Vol, veh/h	15	315	6	7	159	47	6	87	8	55	51	18
Future Vol, veh/h	15	315	6	7	159	47	6	87	8	55	51	18
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	17	350	7	8	177	52	7	97	9	61	57	20
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	13.3	10.6	10	10.3
HCM LOS	B	B	A	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	6%	4%	3%	44%
Vol Thru, %	86%	94%	75%	41%
Vol Right, %	8%	2%	22%	15%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	101	336	213	124
LT Vol	6	15	7	55
Through Vol	87	315	159	51
RT Vol	8	6	47	18
Lane Flow Rate	112	373	237	138
Geometry Grp	1	1	1	1
Degree of Util (X)	0.178	0.519	0.333	0.218
Departure Headway (Hd)	5.707	5.004	5.067	5.692
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	628	721	710	630
Service Time	3.748	3.029	3.098	3.731
HCM Lane V/C Ratio	0.178	0.517	0.334	0.219
HCM Control Delay	10	13.3	10.6	10.3
HCM Lane LOS	A	B	B	B
HCM 95th-tile Q	0.6	3	1.5	0.8

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	19	324	29	22	164	27	16	35	25	33	86	34
Future Vol, veh/h	19	324	29	22	164	27	16	35	25	33	86	34
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	21	360	32	24	182	30	18	39	28	37	96	38
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	14.5	10.9	9.7	10.8
HCM LOS	B	B	A	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	21%	5%	10%	22%
Vol Thru, %	46%	87%	77%	56%
Vol Right, %	33%	8%	13%	22%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	76	372	213	153
LT Vol	16	19	22	33
Through Vol	35	324	164	86
RT Vol	25	29	27	34
Lane Flow Rate	84	413	237	170
Geometry Grp	1	1	1	1
Degree of Util (X)	0.135	0.572	0.342	0.267
Departure Headway (Hd)	5.766	4.986	5.202	5.651
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	621	723	691	636
Service Time	3.812	3.017	3.238	3.691
HCM Lane V/C Ratio	0.135	0.571	0.343	0.267
HCM Control Delay	9.7	14.5	10.9	10.8
HCM Lane LOS	A	B	B	B
HCM 95th-tile Q	0.5	3.7	1.5	1.1

LOS Worksheets: Baseline Plus Scenario 2 Specific Plan Buildout Conditions with Via Closure

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	933	49	0	539	0	223	0	85	70	0	54
Future Volume (veh/h)	0	933	49	0	539	0	223	0	85	70	0	54
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	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	0	1196	1196	0	1196	0	1148	0	1196	1244	0	1196
Adj Flow Rate, veh/h	0	1037	47	0	599	0	248	0	26	78	0	17
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	2	2	0	2	0	2	0	2	2	0	2
Cap, veh/h	0	2088	94	0	2135	0	270	0	0	293	0	0
Arrive On Green	0.00	0.65	0.65	0.00	0.87	0.00	0.25	0.00	0.00	0.25	0.00	0.00
Sat Flow, veh/h	0	3301	145	0	3481	0	1094	248		1185	78	
Grp Volume(v), veh/h	0	706	378	0	599	0	248	52.7		78	30.8	
Grp Sat Flow(s),veh/h/ln	0	1088	1161	0	1088	0	1094	D		1185	C	
Q Serve(g_s), s	0.0	16.6	16.7	0.0	3.2	0.0	22.1			5.3		
Cycle Q Clear(g_c), s	0.0	16.6	16.7	0.0	3.2	0.0	22.1			5.3		
Prop In Lane	0.00		0.12	0.00		0.00	1.00			1.00		
Lane Grp Cap(c), veh/h	0	1423	759	0	2135	0	270			293		
V/C Ratio(X)	0.00	0.50	0.50	0.00	0.28	0.00	0.92			0.27		
Avail Cap(c_a), veh/h	0	1423	759	0	2135	0	442			479		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.33	1.00	1.00			1.00		
Upstream Filter(I)	0.00	1.00	1.00	0.00	0.91	0.00	1.00			1.00		
Uniform Delay (d), s/veh	0.0	8.9	8.9	0.0	2.5	0.0	36.6			30.3		
Incr Delay (d2), s/veh	0.0	1.2	2.3	0.0	0.3	0.0	16.1			0.5		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0		
%ile BackOfQ(50%),veh/ln	0.0	3.8	4.3	0.0	0.6	0.0	7.1			1.6		
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	10.1	11.2	0.0	2.8	0.0	52.7			30.8		
LnGrp LOS	A	B	B	A	A	A	D			C		
Approach Vol, veh/h		1084			599							
Approach Delay, s/veh		10.5			2.8							
Approach LOS		B			A							

Timer - Assigned Phs		2	3			6	7					
Phs Duration (G+Y+Rc), s		70.7	29.3			70.7	29.3					
Change Period (Y+Rc), s		5.3	4.6			5.3	4.6					
Max Green Setting (Gmax), s		49.7	40.4			49.7	40.4					
Max Q Clear Time (g_c+I1), s		18.7	24.1			5.2	7.3					
Green Ext Time (p_c), s		15.7	0.7			9.2	0.2					

Intersection Summary		
HCM 6th Ctrl Delay		14.2
HCM 6th LOS		B

Movement	EBL2	EBT	EBR	WBL	WBT	WBR	NBR	SBR	SBR2
Lane Configurations									
Traffic Volume (vph)	190	833	51	21	509	120	93	87	197
Future Volume (vph)	190	833	51	21	509	120	93	87	197
Ideal Flow (vphpl)	1350	1350	1350	1350	1350	1350	1350	1350	1350
Lane Width	9	10	10	9	10	10	12	10	10
Total Lost time (s)	4.6	5.3		4.0	5.3		4.6	4.6	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.88	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.98		1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.99		1.00	0.97		0.86	0.85	0.85
Flt Protected	0.95	1.00		0.95	1.00		1.00	1.00	1.00
Satd. Flow (prot)	1018	2996		1018	2893		1030	1663	945
Flt Permitted	0.95	1.00		0.95	1.00		1.00	1.00	1.00
Satd. Flow (perm)	1018	2996		1018	2893		1030	1663	945
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	211	926	57	23	566	133	103	97	219
RTOR Reduction (vph)	0	6	0	0	0	0	0	0	0
Lane Group Flow (vph)	211	977	0	23	699	0	103	97	219
Confl. Peds. (#/hr)			24			64			
Confl. Bikes (#/hr)			3			3	3	3	
Turn Type	Prot	NA		Prot	NA		Prot	Prot	Free
Protected Phases	5	2		1	6		8	4	
Permitted Phases									Free
Actuated Green, G (s)	15.4	70.7		1.0	55.7		14.4	14.4	100.0
Effective Green, g (s)	15.4	70.7		1.0	55.7		14.4	14.4	100.0
Actuated g/C Ratio	0.15	0.71		0.01	0.56		0.14	0.14	1.00
Clearance Time (s)	4.6	5.3		4.0	5.3		4.6	4.6	
Vehicle Extension (s)	1.5	3.0		1.5	3.0		2.5	2.5	
Lane Grp Cap (vph)	156	2118		10	1611		148	239	945
v/s Ratio Prot	c0.21	c0.33		0.02	0.24		c0.10	0.06	
v/s Ratio Perm									0.23
v/c Ratio	1.35	0.46		2.30	0.43		0.70	0.41	0.23
Uniform Delay, d1	42.3	6.4		49.5	12.9		40.7	38.9	0.0
Progression Factor	0.78	0.43		0.83	1.13		1.00	1.00	1.00
Incremental Delay, d2	189.2	0.6		800.4	0.8		12.3	0.8	0.6
Delay (s)	222.0	3.3		841.5	15.4		53.0	39.7	0.6
Level of Service	F	A		F	B		D	D	A
Approach Delay (s)		42.0			41.7				
Approach LOS		D			D				

Intersection Summary			
HCM 2000 Control Delay	38.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	14.5
Intersection Capacity Utilization	53.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	827	100	115	439	0	132	0	108	252	89	42
Future Volume (veh/h)	0	827	100	115	439	0	132	0	108	252	89	42
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		1.00	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	0	1148	1148	1148	1148	0	1196	0	1196	1196	1196	1196
Adj Flow Rate, veh/h	0	919	109	128	488	0	147	0	120	280	99	6
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	2	2	2	2	0	2	0	2	2	2	2
Cap, veh/h	0	2028	240	312	2249	0	0	0	0	397	215	173
Arrive On Green	0.00	1.00	1.00	0.48	0.48	0.00	0.00	0.00	0.00	0.18	0.18	0.18
Sat Flow, veh/h	0	2931	334	335	3238	0		0		2210	1196	964
Grp Volume(v), veh/h	0	678	350	128	488	0		0.0		280	99	6
Grp Sat Flow(s),veh/h/ln	0	1045	1072	335	1045	0				1105	1196	964
Q Serve(g_s), s	0.0	0.0	0.0	26.6	9.0	0.0				11.9	7.4	0.5
Cycle Q Clear(g_c), s	0.0	0.0	0.0	26.6	9.0	0.0				11.9	7.4	0.5
Prop In Lane	0.00		0.31	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1499	769	312	2249	0				397	215	173
V/C Ratio(X)	0.00	0.45	0.46	0.41	0.22	0.00				0.71	0.46	0.03
Avail Cap(c_a), veh/h	0	1499	769	312	2249	0				575	311	251
HCM Platoon Ratio	1.00	2.00	2.00	0.67	0.67	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.88	0.88	1.00	1.00	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	14.3	9.7	0.0				38.5	36.7	33.9
Incr Delay (d2), s/veh	0.0	0.9	1.7	3.9	0.2	0.0				2.3	1.5	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
%ile BackOfQ(50%),veh/ln	0.0	0.2	0.4	2.5	2.1	0.0				3.4	2.3	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.9	1.7	18.2	9.9	0.0				40.8	38.2	33.9
LnGrp LOS	A	A	A	B	A	A				D	D	C
Approach Vol, veh/h		1028			616						385	
Approach Delay, s/veh		1.2			11.6						40.1	
Approach LOS		A			B						D	

Timer - Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		78.0				78.0		22.0
Change Period (Y+Rc), s		6.3				6.3		4.0
Max Green Setting (Gmax), s		43.7				43.7		26.0
Max Q Clear Time (g_c+I1), s		2.0				28.6		13.9
Green Ext Time (p_c), s		17.1				7.4		1.3

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

Notes

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

Intersection												
Int Delay, s/veh	2											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	3	1164	33	0	540	3	0	0	125	0	0	0
Future Vol, veh/h	3	1164	33	0	540	3	0	0	125	0	0	0
Conflicting Peds, #/hr	55	0	36	0	0	53	0	0	34	53	0	55
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	1293	37	0	600	3	0	0	139	0	0	0

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	658	0	0	-	-	0	-	-	735
Stage 1	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-
Critical Hdwy	5.34	-	-	-	-	-	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.12	-	-	-	-	-	-	-	3.92
Pot Cap-1 Maneuver	570	-	-	0	-	-	0	0	311
Stage 1	-	-	-	0	-	-	0	0	-
Stage 2	-	-	-	0	-	-	0	0	-
Platoon blocked, %		-	-		-	-			
Mov Cap-1 Maneuver	570	-	-	-	-	-	-	0	290
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	0	-
Stage 1	-	-	-	-	-	-	-	0	-
Stage 2	-	-	-	-	-	-	-	0	-

Approach	EB	WB	NB
HCM Control Delay, s	0.1	0	28.3
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBT	WBR
Capacity (veh/h)	290	570	-	-	-	-
HCM Lane V/C Ratio	0.479	0.006	-	-	-	-
HCM Control Delay (s)	28.3	11.4	0.1	-	-	-
HCM Lane LOS	D	B	A	-	-	-
HCM 95th %tile Q(veh)	2.4	0	-	-	-	-

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBR
Lane Configurations									
Traffic Volume (vph)	386	83	648	93	129	654	267	15	90
Future Volume (vph)	386	83	648	93	129	654	267	15	90
Ideal Flow (vphpl)	1350	1350	1350	1350	1350	1350	1350	1350	1350
Lane Width	12	9	10	9	9	9	9	9	15
Total Lost time (s)		4.6	5.3		4.6	5.3			4.6
Lane Util. Factor		1.00	0.91		1.00	0.91			1.00
Frpb, ped/bikes		1.00	0.99		1.00	0.96			1.00
Flpb, ped/bikes		1.00	1.00		1.00	1.00			1.00
Frt		1.00	0.98		1.00	0.95			0.86
Flt Protected		0.95	1.00		0.95	1.00			1.00
Satd. Flow (prot)		1018	2948		1018	2676			1133
Flt Permitted		0.95	1.00		0.95	1.00			1.00
Satd. Flow (perm)		1018	2948		1018	2676			1133
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	429	92	720	103	143	727	297	17	100
RTOR Reduction (vph)	0	0	15	0	0	2	0	0	77
Lane Group Flow (vph)	0	521	808	0	143	1039	0	0	23
Confl. Peds. (#/hr)				32			54	54	
Confl. Bikes (#/hr)				2			8	8	
Turn Type	Prot	Prot	NA		Prot	NA			Perm
Protected Phases	5	5	2		1	6			
Permitted Phases									1
Actuated Green, G (s)		42.4	67.1		23.0	47.7			23.0
Effective Green, g (s)		42.4	67.1		23.0	47.7			23.0
Actuated g/C Ratio		0.42	0.67		0.23	0.48			0.23
Clearance Time (s)		4.6	5.3		4.6	5.3			4.6
Vehicle Extension (s)		2.5	5.0		2.5	5.0			2.5
Lane Grp Cap (vph)		431	1978		234	1276			260
v/s Ratio Prot		c0.51	0.27		0.14	c0.39			
v/s Ratio Perm									0.02
v/c Ratio		1.21	0.41		0.61	0.81			0.09
Uniform Delay, d1		28.8	7.5		34.5	22.4			30.3
Progression Factor		1.24	1.01		1.21	0.59			1.00
Incremental Delay, d2		110.4	0.5		3.2	4.8			0.1
Delay (s)		146.1	8.0		44.9	17.9			30.4
Level of Service		F	A		D	B			C
Approach Delay (s)			61.5			21.2			
Approach LOS			E			C			

Intersection Summary			
HCM 2000 Control Delay	42.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	9.9
Intersection Capacity Utilization	79.8%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	656	33	0	801	64	82	81	29	40	71	101
Future Volume (veh/h)	70	656	33	0	801	64	82	81	29	40	71	101
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		0.95	1.00		0.92	1.00		0.98	1.00		0.91
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	1148	1148	1196	0	1196	1196	1196	1196	1196	1148	1244	1196
Adj Flow Rate, veh/h	78	729	30	0	890	60	91	90	32	44	79	112
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	0	2	2	2	2	2	2	2	2
Cap, veh/h	255	1582	65	0	1594	107	145	107	38	243	277	205
Arrive On Green	1.00	1.00	1.00	0.00	1.00	1.00	0.13	0.13	0.13	0.22	0.22	0.22
Sat Flow, veh/h	357	3082	126	0	3213	208	1139	838	298	1094	1244	921
Grp Volume(v), veh/h	78	493	266	0	623	327	91	0	122	44	79	112
Grp Sat Flow(s),veh/h/ln	357	1045	1118	0	1088	1137	1139	0	1136	1094	1244	921
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	7.6	0.0	10.5	3.3	5.3	10.8
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	7.6	0.0	10.5	3.3	5.3	10.8
Prop In Lane	1.00		0.11	0.00		0.18	1.00		0.26	1.00		1.00
Lane Grp Cap(c), veh/h	255	1073	574	0	1117	584	145	0	145	243	277	205
V/C Ratio(X)	0.31	0.46	0.46	0.00	0.56	0.56	0.63	0.00	0.84	0.18	0.29	0.55
Avail Cap(c_a), veh/h	255	1073	574	0	1117	584	180	0	180	337	383	284
HCM Platoon Ratio	2.00	2.00	2.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.92	0.92	0.92	0.00	0.60	0.60	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	41.4	0.0	42.7	31.5	32.3	34.4
Incr Delay (d2), s/veh	2.8	1.3	2.5	0.0	1.2	2.3	4.6	0.0	24.6	0.4	0.6	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.2	0.4	0.0	0.2	0.4	2.3	0.0	3.9	0.9	1.6	2.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	2.8	1.3	2.5	0.0	1.2	2.3	46.0	0.0	67.3	31.9	32.8	36.7
LnGrp LOS	A	A	A	A	A	A	D	A	E	C	C	D
Approach Vol, veh/h		837			950			213			235	
Approach Delay, s/veh		1.8			1.6			58.2			34.5	
Approach LOS		A			A			E			C	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		56.6		16.9		56.6		26.4				
Change Period (Y+Rc), s		5.3		* 4.2		5.3		4.2				
Max Green Setting (Gmax), s		39.7		* 16		39.7		30.8				
Max Q Clear Time (g_c+I1), s		2.0		12.5		2.0		12.8				
Green Ext Time (p_c), s		14.2		0.3		14.9		0.9				
Intersection Summary												
HCM 6th Ctrl Delay			10.5									
HCM 6th LOS			B									

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	24	769	59	48	800	48	80	478	68	0	364	60
Future Volume (veh/h)	24	769	59	48	800	48	80	478	68	0	364	60
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.96	0.99		0.95	1.00		0.97	1.00		0.92
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	1148	1148	1148	1148	1196	1196	1148	1148	1148	0	1148	1148
Adj Flow Rate, veh/h	27	854	55	53	889	44	89	531	29	0	404	23
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	0	2	2
Cap, veh/h	175	1279	82	235	1413	70	85	843	364	0	559	230
Arrive On Green	0.04	0.85	0.85	0.04	0.44	0.44	0.08	0.39	0.39	0.00	0.26	0.26
Sat Flow, veh/h	1094	3000	192	1094	3177	157	1094	2182	942	0	2239	898
Grp Volume(v), veh/h	27	594	315	53	608	325	89	531	29	0	404	23
Grp Sat Flow(s),veh/h/ln	1094	1045	1103	1094	1088	1157	1094	1091	942	0	1091	898
Q Serve(g_s), s	1.4	9.7	9.8	2.7	21.5	21.7	7.8	19.7	1.9	0.0	16.9	2.0
Cycle Q Clear(g_c), s	1.4	9.7	9.8	2.7	21.5	21.7	7.8	19.7	1.9	0.0	16.9	2.0
Prop In Lane	1.00		0.17	1.00		0.14	1.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	175	891	470	235	968	515	85	843	364	0	559	230
V/C Ratio(X)	0.15	0.67	0.67	0.23	0.63	0.63	1.04	0.63	0.08	0.00	0.72	0.10
Avail Cap(c_a), veh/h	237	891	470	276	968	515	85	934	403	0	650	268
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	0.00	1.00	1.00
Uniform Delay (d), s/veh	17.6	4.9	5.0	15.7	21.4	21.4	46.1	24.9	19.4	0.0	33.9	28.4
Incr Delay (d2), s/veh	0.1	3.3	6.2	0.2	3.1	5.8	109.8	1.5	0.1	0.0	3.9	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	1.5	2.0	0.7	5.7	6.5	4.7	5.2	1.3	0.0	4.8	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.7	8.2	11.2	15.9	24.5	27.2	155.9	26.4	19.6	0.0	37.8	28.7
LnGrp LOS	B	A	B	B	C	C	F	C	B	A	D	C
Approach Vol, veh/h		936			986			649			427	
Approach Delay, s/veh		9.5			24.9			43.8			37.3	
Approach LOS		A			C			D			D	

Timer - Assigned Phs	1	2		4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.3	47.9		43.8	6.4	49.8	13.0	30.8
Change Period (Y+Rc), s	4.6	5.3		5.2	4.6	5.3	5.2	5.2
Max Green Setting (Gmax), s	7.4	34.7		42.8	7.4	34.7	7.8	29.8
Max Q Clear Time (g_c+I1), s	4.7	11.8		21.7	3.4	23.7	9.8	18.9
Green Ext Time (p_c), s	0.0	11.0		5.2	0.0	6.8	0.0	2.7

Intersection Summary		
HCM 6th Ctrl Delay		26.0
HCM 6th LOS		C

Notes

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

Intersection	
Intersection Delay, s/veh	10.8
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			✣			✣	
Traffic Vol, veh/h	22	154	7	7	237	42	9	55	5	20	49	34
Future Vol, veh/h	22	154	7	7	237	42	9	55	5	20	49	34
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	28	193	9	9	296	53	11	69	6	25	61	43
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	10.3	11.9	9.5	9.6
HCM LOS	B	B	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	13%	12%	2%	19%
Vol Thru, %	80%	84%	83%	48%
Vol Right, %	7%	4%	15%	33%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	69	183	286	103
LT Vol	9	22	7	20
Through Vol	55	154	237	49
RT Vol	5	7	42	34
Lane Flow Rate	86	229	358	129
Geometry Grp	1	1	1	1
Degree of Util (X)	0.134	0.313	0.466	0.192
Departure Headway (Hd)	5.59	4.925	4.697	5.371
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	645	721	758	672
Service Time	3.595	3.022	2.784	3.375
HCM Lane V/C Ratio	0.133	0.318	0.472	0.192
HCM Control Delay	9.5	10.3	11.9	9.6
HCM Lane LOS	A	B	B	A
HCM 95th-tile Q	0.5	1.3	2.5	0.7

Intersection	
Intersection Delay, s/veh	10.9
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			✣			✣	
Traffic Vol, veh/h	10	164	5	9	271	14	6	96	13	12	19	5
Future Vol, veh/h	10	164	5	9	271	14	6	96	13	12	19	5
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	13	205	6	11	339	18	8	120	16	15	24	6
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	10.1	12	9.8	9
HCM LOS	B	B	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	5%	6%	3%	33%
Vol Thru, %	83%	92%	92%	53%
Vol Right, %	11%	3%	5%	14%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	115	179	294	36
LT Vol	6	10	9	12
Through Vol	96	164	271	19
RT Vol	13	5	14	5
Lane Flow Rate	144	224	368	45
Geometry Grp	1	1	1	1
Degree of Util (X)	0.212	0.302	0.478	0.07
Departure Headway (Hd)	5.307	4.86	4.682	5.625
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	670	734	764	641
Service Time	3.397	2.935	2.747	3.625
HCM Lane V/C Ratio	0.215	0.305	0.482	0.07
HCM Control Delay	9.8	10.1	12	9
HCM Lane LOS	A	B	B	A
HCM 95th-tile Q	0.8	1.3	2.6	0.2

Intersection	
Intersection Delay, s/veh	10.7
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			✣			✣	
Traffic Vol, veh/h	13	169	8	16	256	23	14	30	17	22	27	26
Future Vol, veh/h	13	169	8	16	256	23	14	30	17	22	27	26
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	16	211	10	20	320	29	18	38	21	28	34	33
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	10.1	11.8	9.1	9.2
HCM LOS	B	B	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	23%	7%	5%	29%
Vol Thru, %	49%	89%	87%	36%
Vol Right, %	28%	4%	8%	35%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	61	190	295	75
LT Vol	14	13	16	22
Through Vol	30	169	256	27
RT Vol	17	8	23	26
Lane Flow Rate	76	238	369	94
Geometry Grp	1	1	1	1
Degree of Util (X)	0.113	0.316	0.474	0.138
Departure Headway (Hd)	5.347	4.791	4.624	5.289
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	663	746	774	671
Service Time	3.439	2.857	2.682	3.377
HCM Lane V/C Ratio	0.115	0.319	0.477	0.14
HCM Control Delay	9.1	10.1	11.8	9.2
HCM Lane LOS	A	B	B	A
HCM 95th-tile Q	0.4	1.4	2.6	0.5

HCM 6th Signalized Intersection Summary
1: S Linden Dr & Wilshire Blvd 06/27/2023

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1241	103	0	852	0	282	0	49	134	0	67
Future Volume (veh/h)	0	1241	103	0	852	0	282	0	49	134	0	67
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.92	1.00		1.00	1.00		1.00	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	0	1683	1683	0	1683	0	1616	0	1683	1751	0	1683
Adj Flow Rate, veh/h	0	1379	105	0	947	0	313	0	28	149	0	16
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	2	2	0	2	0	2	0	2	2	0	2
Cap, veh/h	0	2917	222	0	3100	0	349	0	0	378	0	0
Arrive On Green	0.00	0.67	0.67	0.00	1.00	0.00	0.23	0.00	0.00	0.23	0.00	0.00
Sat Flow, veh/h	0	4476	329	0	4898	0	1539	313		1667	149	
Grp Volume(v), veh/h	0	977	507	0	947	0	313	46.0		149	33.5	
Grp Sat Flow(s),veh/h/ln	0	1532	1590	0	1532	0	1539	D		1667	C	
Q Serve(g_s), s	0.0	15.2	15.2	0.0	0.0	0.0	19.7			7.6		
Cycle Q Clear(g_c), s	0.0	15.2	15.2	0.0	0.0	0.0	19.7			7.6		
Prop In Lane	0.00		0.21	0.00		0.00	1.00			1.00		
Lane Grp Cap(c), veh/h	0	2066	1072	0	3100	0	349			378		
V/C Ratio(X)	0.00	0.47	0.47	0.00	0.31	0.00	0.90			0.39		
Avail Cap(c_a), veh/h	0	2066	1072	0	3100	0	622			674		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	1.00	1.00			1.00		
Upstream Filter(I)	0.00	1.00	1.00	0.00	0.79	0.00	1.00			1.00		
Uniform Delay (d), s/veh	0.0	7.8	7.8	0.0	0.0	0.0	37.6			32.9		
Incr Delay (d2), s/veh	0.0	0.8	1.5	0.0	0.2	0.0	8.5			0.7		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0		
%ile BackOfQ(50%),veh/ln	0.0	4.6	5.0	0.0	0.1	0.0	8.2			3.1		
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	8.6	9.3	0.0	0.2	0.0	46.0			33.5		
LnGrp LOS	A	A	A	A	A	A	D			C		
Approach Vol, veh/h		1484			947							
Approach Delay, s/veh		8.8			0.2							
Approach LOS		A			A							
Timer - Assigned Phs		2	3			6	7					
Phs Duration (G+Y+Rc), s		72.8	27.2			72.8	27.2					
Change Period (Y+Rc), s		5.3	4.6			5.3	4.6					
Max Green Setting (Gmax), s		49.7	40.4			49.7	40.4					
Max Q Clear Time (g_c+I1), s		17.2	21.7			2.0	9.6					
Green Ext Time (p_c), s		22.5	0.9			16.7	0.4					
Intersection Summary												
HCM 6th Ctrl Delay			11.3									
HCM 6th LOS			B									

Movement	EBL2	EBT	EBR	WBL	WBT	WBR	NBR	SBR	SBR2
Lane Configurations									
Traffic Volume (vph)	105	1240	65	55	625	56	66	232	192
Future Volume (vph)	105	1240	65	55	625	56	66	232	192
Ideal Flow (vphpl)	1350	1350	1350	1350	1350	1350	1350	1350	1350
Lane Width	9	10	10	9	10	10	12	10	10
Total Lost time (s)	4.6	5.3		4.0	5.3		4.6	4.6	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.88	1.00
Frpb, ped/bikes	1.00	0.99		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	0.99		1.00	0.99		0.86	0.85	0.85
Flt Protected	0.95	1.00		0.95	1.00		1.00	1.00	1.00
Satd. Flow (prot)	1018	2971		1018	2967		1030	1663	945
Flt Permitted	0.95	1.00		0.95	1.00		1.00	1.00	1.00
Satd. Flow (perm)	1018	2971		1018	2967		1030	1663	945
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	117	1378	72	61	694	62	73	258	213
RTOR Reduction (vph)	0	5	0	0	0	0	0	0	0
Lane Group Flow (vph)	117	1445	0	61	756	0	73	258	213
Confl. Peds. (#/hr)			115			83			
Confl. Bikes (#/hr)			6			6	6	6	
Turn Type	Prot	NA		Prot	NA		Prot	Prot	Free
Protected Phases	5	2		1	6		8	4	
Permitted Phases									Free
Actuated Green, G (s)	15.4	66.6		1.0	51.6		18.5	18.5	100.0
Effective Green, g (s)	15.4	66.6		1.0	51.6		18.5	18.5	100.0
Actuated g/C Ratio	0.15	0.67		0.01	0.52		0.18	0.18	1.00
Clearance Time (s)	4.6	5.3		4.0	5.3		4.6	4.6	
Vehicle Extension (s)	1.5	3.0		1.5	3.0		2.5	2.5	
Lane Grp Cap (vph)	156	1978		10	1530		190	307	945
v/s Ratio Prot	c0.11	c0.49		c0.06	0.25		0.07	c0.16	
v/s Ratio Perm									0.23
v/c Ratio	0.75	0.73		6.10	0.49		0.38	0.84	0.23
Uniform Delay, d1	40.5	10.9		49.5	15.7		35.8	39.3	0.0
Progression Factor	0.63	0.45		0.89	0.95		1.00	1.00	1.00
Incremental Delay, d2	8.8	1.2		2464.5	1.0		0.9	18.1	0.6
Delay (s)	34.4	6.1		2508.6	15.8		36.7	57.4	0.6
Level of Service	C	A		F	B		D	E	A
Approach Delay (s)		8.2			202.0				
Approach LOS		A			F				

Intersection Summary			
HCM 2000 Control Delay	66.8	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	14.5
Intersection Capacity Utilization	55.2%	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)	0	1222	85	113	500	0	159	0	129	396	225	78
Future Volume (veh/h)	0	1222	85	113	500	0	159	0	129	396	225	78
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.88	0.99		1.00	1.00		1.00	1.00		0.93
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	0	1616	1616	1616	1616	0	1683	0	1683	1683	1683	1683
Adj Flow Rate, veh/h	0	1358	93	126	556	0	177	0	143	440	250	17
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	2	2	2	2	0	2	0	2	2	2	2
Cap, veh/h	0	2854	195	286	3017	0	0	0	0	663	359	283
Arrive On Green	0.00	1.00	1.00	0.68	0.68	0.00	0.00	0.00	0.00	0.21	0.21	0.21
Sat Flow, veh/h	0	4320	286	313	4557	0		0		3110	1683	1328
Grp Volume(v), veh/h	0	957	494	126	556	0		0.0		440	250	17
Grp Sat Flow(s),veh/h/ln	0	1471	1519	313	1471	0				1555	1683	1328
Q Serve(g_s), s	0.0	0.0	0.0	21.3	4.6	0.0				13.0	13.7	1.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	21.3	4.6	0.0				13.0	13.7	1.0
Prop In Lane	0.00		0.19	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2011	1039	286	3017	0				663	359	283
V/C Ratio(X)	0.00	0.48	0.48	0.44	0.18	0.00				0.66	0.70	0.06
Avail Cap(c_a), veh/h	0	2011	1039	286	3017	0				809	438	345
HCM Platoon Ratio	1.00	2.00	2.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.63	0.63	1.00	1.00	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	8.4	5.7	0.0				36.1	36.4	31.4
Incr Delay (d2), s/veh	0.0	0.5	1.0	4.9	0.1	0.0				1.5	3.7	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.1	0.3	1.6	1.3	0.0				5.1	6.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.5	1.0	13.2	5.9	0.0				37.6	40.0	31.4
LnGrp LOS	A	A	A	B	A	A				D	D	C
Approach Vol, veh/h		1451			682						707	
Approach Delay, s/veh		0.7			7.2						38.3	
Approach LOS		A			A						D	

Timer - Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		74.7				74.7		25.3				
Change Period (Y+Rc), s		6.3				6.3		4.0				
Max Green Setting (Gmax), s		43.7				43.7		26.0				
Max Q Clear Time (g_c+I1), s		2.0				23.3		15.7				
Green Ext Time (p_c), s		26.1				9.9		2.5				

Intersection Summary			
HCM 6th Ctrl Delay			11.6
HCM 6th LOS			B

Notes

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

Intersection												
Int Delay, s/veh	6.3											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	1648	98	0	610	1	0	0	99	0	0	0
Future Vol, veh/h	2	1648	98	0	610	1	0	0	99	0	0	0
Conflicting Peds, #/hr	107	0	128	0	0	107	0	0	128	107	0	107
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	1831	109	0	678	1	0	0	110	0	0	0

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	786	0	0	-	-	0	-	-	1226
Stage 1	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-
Critical Hdwy	5.34	-	-	-	-	-	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.12	-	-	-	-	-	-	-	3.92
Pot Cap-1 Maneuver	496	-	-	0	-	-	0	0	146
Stage 1	-	-	-	0	-	-	0	0	-
Stage 2	-	-	-	0	-	-	0	0	-
Platoon blocked, %		-	-		-	-			
Mov Cap-1 Maneuver	496	-	-	-	-	-	-	0	111
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	0	-
Stage 1	-	-	-	-	-	-	-	0	-
Stage 2	-	-	-	-	-	-	-	0	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	155.7
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBT	WBR
Capacity (veh/h)	111	496	-	-	-	-
HCM Lane V/C Ratio	0.991	0.004	-	-	-	-
HCM Control Delay (s)	155.7	12.3	0	-	-	-
HCM Lane LOS	F	B	A	-	-	-
HCM 95th %tile Q(veh)	6.4	0	-	-	-	-

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBR
Lane Configurations									
Traffic Volume (vph)	180	334	1084	146	157	609	137	48	132
Future Volume (vph)	180	334	1084	146	157	609	137	48	132
Ideal Flow (vphpl)	1350	1350	1350	1350	1350	1350	1350	1350	1350
Lane Width	12	9	10	9	9	9	9	9	15
Total Lost time (s)		4.6	5.3		4.6	5.3			4.6
Lane Util. Factor		1.00	0.91		1.00	0.91			1.00
Frpb, ped/bikes		1.00	0.97		1.00	0.93			1.00
Flpb, ped/bikes		1.00	1.00		1.00	1.00			1.00
Frt		1.00	0.98		1.00	0.97			0.86
Flt Protected		0.95	1.00		0.95	1.00			1.00
Satd. Flow (prot)		1018	2890		1018	2628			1133
Flt Permitted		0.95	1.00		0.95	1.00			1.00
Satd. Flow (perm)		1018	2890		1018	2628			1133
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	200	371	1204	162	174	677	152	53	147
RTOR Reduction (vph)	0	0	15	0	0	7	0	0	57
Lane Group Flow (vph)	0	571	1351	0	174	875	0	0	90
Confl. Peds. (#/hr)				124			127	127	
Confl. Bikes (#/hr)				8			2	2	
Turn Type	Prot	Prot	NA		Prot	NA			Perm
Protected Phases	5	5	2		1	6			
Permitted Phases									1
Actuated Green, G (s)		42.4	66.0		24.1	47.7			24.1
Effective Green, g (s)		42.4	66.0		24.1	47.7			24.1
Actuated g/C Ratio		0.42	0.66		0.24	0.48			0.24
Clearance Time (s)		4.6	5.3		4.6	5.3			4.6
Vehicle Extension (s)		2.5	5.0		2.5	5.0			2.5
Lane Grp Cap (vph)		431	1907		245	1253			273
v/s Ratio Prot		c0.56	c0.47		0.17	0.33			
v/s Ratio Perm									0.08
v/c Ratio		1.32	0.71		0.71	0.70			0.33
Uniform Delay, d1		28.8	10.9		34.8	20.5			31.3
Progression Factor		1.14	1.09		1.21	0.59			1.00
Incremental Delay, d2		150.5	0.6		6.8	2.5			0.5
Delay (s)		183.4	12.4		49.0	14.5			31.8
Level of Service		F	B		D	B			C
Approach Delay (s)			62.8			20.2			
Approach LOS			E			C			

Intersection Summary			
HCM 2000 Control Delay	47.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	9.9
Intersection Capacity Utilization	79.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	108	1088	20	0	736	81	96	65	37	100	55	117
Future Volume (veh/h)	108	1088	20	0	736	81	96	65	37	100	55	117
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.97		0.93	1.00		0.88	1.00		0.98	1.00		0.89
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	1616	1616	1683	0	1683	1683	1683	1683	1683	1616	1751	1683
Adj Flow Rate, veh/h	120	1209	20	0	818	72	107	72	41	111	61	130
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	0	2	2	2	2	2	2	2	2
Cap, veh/h	355	2409	40	0	2293	200	152	95	54	351	400	291
Arrive On Green	1.00	1.00	1.00	0.00	1.00	1.00	0.10	0.10	0.10	0.23	0.23	0.23
Sat Flow, veh/h	524	4463	74	0	4401	371	1603	999	569	1539	1751	1274
Grp Volume(v), veh/h	120	797	432	0	588	302	107	0	113	111	61	130
Grp Sat Flow(s),veh/h/ln	524	1471	1596	0	1532	1556	1603	0	1568	1539	1751	1274
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	6.5	0.0	7.0	6.0	2.8	8.8
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	6.5	0.0	7.0	6.0	2.8	8.8
Prop In Lane	1.00		0.05	0.00		0.24	1.00		0.36	1.00		1.00
Lane Grp Cap(c), veh/h	355	1587	861	0	1654	840	152	0	149	351	400	291
V/C Ratio(X)	0.34	0.50	0.50	0.00	0.36	0.36	0.70	0.00	0.76	0.32	0.15	0.45
Avail Cap(c_a), veh/h	355	1587	861	0	1654	840	253	0	248	474	539	392
HCM Platoon Ratio	2.00	2.00	2.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.67	0.67	0.67	0.00	0.59	0.59	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	43.9	0.0	44.1	32.1	30.9	33.2
Incr Delay (d2), s/veh	1.7	0.8	1.4	0.0	0.4	0.7	5.8	0.0	7.7	0.5	0.2	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.2	0.3	0.0	0.1	0.2	2.8	0.0	3.1	2.3	1.2	2.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	1.7	0.8	1.4	0.0	0.4	0.7	49.7	0.0	51.8	32.6	31.0	34.2
LnGrp LOS	A	A	A	A	A	A	D	A	D	C	C	C
Approach Vol, veh/h		1349			890			220			302	
Approach Delay, s/veh		1.1			0.5			50.8			33.0	
Approach LOS		A			A			D			C	

Timer - Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		59.3		13.7		59.3		27.0
Change Period (Y+Rc), s		5.3		* 4.2		5.3		4.2
Max Green Setting (Gmax), s		39.7		* 16		39.7		30.8
Max Q Clear Time (g_c+I1), s		2.0		9.0		2.0		10.8
Green Ext Time (p_c), s		23.1		0.5		13.8		1.1

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

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	942	56	55	737	61	101	419	97	0	593	88
Future Volume (veh/h)	14	942	56	55	737	61	101	419	97	0	593	88
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.93	0.99		0.93	1.00		0.94	1.00		0.93
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	1616	1616	1616	1616	1683	1683	1616	1616	1616	0	1616	1616
Adj Flow Rate, veh/h	16	1047	54	61	819	55	112	466	41	0	659	31
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	0	2	2
Cap, veh/h	254	1762	91	269	1909	128	120	1234	518	0	835	348
Arrive On Green	0.02	0.82	0.82	0.04	0.44	0.44	0.08	0.40	0.40	0.00	0.27	0.27
Sat Flow, veh/h	1539	4278	220	1539	4376	292	1539	3070	1289	0	3151	1278
Grp Volume(v), veh/h	16	719	382	61	572	302	112	466	41	0	659	31
Grp Sat Flow(s),veh/h/ln	1539	1471	1557	1539	1532	1605	1539	1535	1289	0	1535	1278
Q Serve(g_s), s	0.6	8.4	8.5	2.3	12.9	13.1	7.2	10.7	2.0	0.0	19.9	1.8
Cycle Q Clear(g_c), s	0.6	8.4	8.5	2.3	12.9	13.1	7.2	10.7	2.0	0.0	19.9	1.8
Prop In Lane	1.00		0.14	1.00		0.18	1.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	254	1211	641	269	1336	700	120	1234	518	0	835	348
V/C Ratio(X)	0.06	0.59	0.60	0.23	0.43	0.43	0.93	0.38	0.08	0.00	0.79	0.09
Avail Cap(c_a), veh/h	351	1211	641	329	1336	700	120	1314	552	0	915	381
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)	0.38	0.38	0.38	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	17.2	5.9	5.9	16.3	19.5	19.6	45.8	21.1	18.5	0.0	33.7	27.2
Incr Delay (d2), s/veh	0.0	0.8	1.6	0.2	1.0	1.9	62.0	0.3	0.1	0.0	4.7	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	0.2	1.7	1.9	0.8	4.7	5.1	4.8	3.9	1.8	0.0	7.9	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.2	6.7	7.5	16.5	20.5	21.5	107.8	21.4	18.6	0.0	38.4	27.3
LnGrp LOS	B	A	A	B	C	C	F	C	B	A	D	C
Approach Vol, veh/h		1117			935			619			690	
Approach Delay, s/veh		7.1			20.6			36.8			37.9	
Approach LOS		A			C			D			D	

Timer - Assigned Phs	1	2		4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.1	46.5		45.4	5.7	48.9	13.0	32.4
Change Period (Y+Rc), s	4.6	5.3		5.2	4.6	5.3	5.2	5.2
Max Green Setting (Gmax), s	7.4	34.7		42.8	7.4	34.7	7.8	29.8
Max Q Clear Time (g_c+I1), s	4.3	10.5		12.7	2.6	15.1	9.2	21.9
Green Ext Time (p_c), s	0.0	13.8		5.2	0.0	9.7	0.0	3.6

Intersection Summary		
HCM 6th Ctrl Delay		22.7
HCM 6th LOS		C

Notes

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

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	21	293	9	9	150	46	5	35	13	53	142	56
Future Vol, veh/h	21	293	9	9	150	46	5	35	13	53	142	56
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	23	326	10	10	167	51	6	39	14	59	158	62
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	14	11.1	9.6	12.6
HCM LOS	B	B	A	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	9%	7%	4%	21%
Vol Thru, %	66%	91%	73%	57%
Vol Right, %	25%	3%	22%	22%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	53	323	205	251
LT Vol	5	21	9	53
Through Vol	35	293	150	142
RT Vol	13	9	46	56
Lane Flow Rate	59	359	228	279
Geometry Grp	1	1	1	1
Degree of Util (X)	0.096	0.524	0.337	0.426
Departure Headway (Hd)	5.897	5.258	5.334	5.497
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	605	685	672	655
Service Time	3.956	3.296	3.378	3.539
HCM Lane V/C Ratio	0.098	0.524	0.339	0.426
HCM Control Delay	9.6	14	11.1	12.6
HCM Lane LOS	A	B	B	B
HCM 95th-tile Q	0.3	3.1	1.5	2.1

Intersection	
Intersection Delay, s/veh	11.9
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			✣			✣	
Traffic Vol, veh/h	15	335	6	7	183	23	6	87	8	35	51	18
Future Vol, veh/h	15	335	6	7	183	23	6	87	8	35	51	18
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	17	372	7	8	203	26	7	97	9	39	57	20
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	13.7	10.7	10	10
HCM LOS	B	B	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	6%	4%	3%	34%
Vol Thru, %	86%	94%	86%	49%
Vol Right, %	8%	2%	11%	17%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	101	356	213	104
LT Vol	6	15	7	35
Through Vol	87	335	183	51
RT Vol	8	6	23	18
Lane Flow Rate	112	396	237	116
Geometry Grp	1	1	1	1
Degree of Util (X)	0.178	0.545	0.334	0.183
Departure Headway (Hd)	5.71	4.959	5.087	5.702
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	627	732	708	629
Service Time	3.75	2.959	3.117	3.742
HCM Lane V/C Ratio	0.179	0.541	0.335	0.184
HCM Control Delay	10	13.7	10.7	10
HCM Lane LOS	A	B	B	A
HCM 95th-tile Q	0.6	3.3	1.5	0.7

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	19	324	29	22	164	27	16	35	25	33	86	34
Future Vol, veh/h	19	324	29	22	164	27	16	35	25	33	86	34
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	21	360	32	24	182	30	18	39	28	37	96	38
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	14.5	10.9	9.7	10.8
HCM LOS	B	B	A	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	21%	5%	10%	22%
Vol Thru, %	46%	87%	77%	56%
Vol Right, %	33%	8%	13%	22%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	76	372	213	153
LT Vol	16	19	22	33
Through Vol	35	324	164	86
RT Vol	25	29	27	34
Lane Flow Rate	84	413	237	170
Geometry Grp	1	1	1	1
Degree of Util (X)	0.135	0.572	0.342	0.267
Departure Headway (Hd)	5.766	4.986	5.202	5.651
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	621	723	691	636
Service Time	3.812	3.017	3.238	3.691
HCM Lane V/C Ratio	0.135	0.571	0.343	0.267
HCM Control Delay	9.7	14.5	10.9	10.8
HCM Lane LOS	A	B	B	B
HCM 95th-tile Q	0.5	3.7	1.5	1.1

LOS Worksheets: Baseline Plus Scenario 3 Specific Plan Buildout Conditions

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	903	49	0	536	0	223	0	85	70	0	54
Future Volume (veh/h)	0	903	49	0	536	0	223	0	85	70	0	54
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	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	0	1196	1196	0	1196	0	1148	0	1196	1244	0	1196
Adj Flow Rate, veh/h	0	1003	47	0	596	0	248	0	26	78	0	17
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	2	2	0	2	0	2	0	2	2	0	2
Cap, veh/h	0	2084	97	0	2135	0	270	0	0	293	0	0
Arrive On Green	0.00	0.65	0.65	0.00	0.87	0.00	0.25	0.00	0.00	0.25	0.00	0.00
Sat Flow, veh/h	0	3296	149	0	3481	0	1094	248		1185	78	
Grp Volume(v), veh/h	0	684	366	0	596	0	248	52.7		78	30.8	
Grp Sat Flow(s),veh/h/ln	0	1088	1160	0	1088	0	1094	D		1185	C	
Q Serve(g_s), s	0.0	15.9	15.9	0.0	3.1	0.0	22.1			5.3		
Cycle Q Clear(g_c), s	0.0	15.9	15.9	0.0	3.1	0.0	22.1			5.3		
Prop In Lane	0.00		0.13	0.00		0.00	1.00			1.00		
Lane Grp Cap(c), veh/h	0	1423	758	0	2135	0	270			293		
V/C Ratio(X)	0.00	0.48	0.48	0.00	0.28	0.00	0.92			0.27		
Avail Cap(c_a), veh/h	0	1423	758	0	2135	0	442			479		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.33	1.00	1.00			1.00		
Upstream Filter(I)	0.00	1.00	1.00	0.00	0.91	0.00	1.00			1.00		
Uniform Delay (d), s/veh	0.0	8.7	8.8	0.0	2.5	0.0	36.6			30.3		
Incr Delay (d2), s/veh	0.0	1.2	2.2	0.0	0.3	0.0	16.1			0.5		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0		
%ile BackOfQ(50%),veh/ln	0.0	3.6	4.1	0.0	0.6	0.0	7.1			1.6		
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	9.9	10.9	0.0	2.8	0.0	52.7			30.8		
LnGrp LOS	A	A	B	A	A	A	D			C		
Approach Vol, veh/h		1050			596							
Approach Delay, s/veh		10.3			2.8							
Approach LOS		B			A							
Timer - Assigned Phs		2	3			6	7					
Phs Duration (G+Y+Rc), s		70.7	29.3			70.7	29.3					
Change Period (Y+Rc), s		5.3	4.6			5.3	4.6					
Max Green Setting (Gmax), s		49.7	40.4			49.7	40.4					
Max Q Clear Time (g_c+I1), s		17.9	24.1			5.1	7.3					
Green Ext Time (p_c), s		15.4	0.7			9.2	0.2					
Intersection Summary												
HCM 6th Ctrl Delay			14.2									
HCM 6th LOS			B									

Movement	EBL2	EBT	EBR	WBL	WBT	WBR	NBR	SBR	SBR2
Lane Configurations									
Traffic Volume (vph)	190	803	51	21	506	120	93	87	197
Future Volume (vph)	190	803	51	21	506	120	93	87	197
Ideal Flow (vphpl)	1350	1350	1350	1350	1350	1350	1350	1350	1350
Lane Width	9	10	10	9	10	10	12	10	10
Total Lost time (s)	4.6	5.3		4.0	5.3		4.6	4.6	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.88	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.98		1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.99		1.00	0.97		0.86	0.85	0.85
Flt Protected	0.95	1.00		0.95	1.00		1.00	1.00	1.00
Satd. Flow (prot)	1018	2994		1018	2892		1030	1663	945
Flt Permitted	0.95	1.00		0.95	1.00		1.00	1.00	1.00
Satd. Flow (perm)	1018	2994		1018	2892		1030	1663	945
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	211	892	57	23	562	133	103	97	219
RTOR Reduction (vph)	0	6	0	0	0	0	0	0	0
Lane Group Flow (vph)	211	943	0	23	695	0	103	97	219
Confl. Peds. (#/hr)			24			64			
Confl. Bikes (#/hr)			3			3	3	3	
Turn Type	Prot	NA		Prot	NA		Prot	Prot	Free
Protected Phases	5	2		1	6		8	4	
Permitted Phases									Free
Actuated Green, G (s)	15.4	70.7		1.0	55.7		14.4	14.4	100.0
Effective Green, g (s)	15.4	70.7		1.0	55.7		14.4	14.4	100.0
Actuated g/C Ratio	0.15	0.71		0.01	0.56		0.14	0.14	1.00
Clearance Time (s)	4.6	5.3		4.0	5.3		4.6	4.6	
Vehicle Extension (s)	1.5	3.0		1.5	3.0		2.5	2.5	
Lane Grp Cap (vph)	156	2116		10	1610		148	239	945
v/s Ratio Prot	c0.21	c0.31		0.02	0.24		c0.10	0.06	
v/s Ratio Perm									0.23
v/c Ratio	1.35	0.45		2.30	0.43		0.70	0.41	0.23
Uniform Delay, d1	42.3	6.3		49.5	12.9		40.7	38.9	0.0
Progression Factor	0.78	0.43		0.82	1.10		1.00	1.00	1.00
Incremental Delay, d2	189.7	0.6		801.1	0.8		12.3	0.8	0.6
Delay (s)	222.8	3.3		841.7	15.0		53.0	39.7	0.6
Level of Service	F	A		F	B		D	D	A
Approach Delay (s)		43.2			41.5				
Approach LOS		D			D				

Intersection Summary			
HCM 2000 Control Delay	38.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	14.5
Intersection Capacity Utilization	53.7%	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)	0	824	73	74	439	0	129	0	54	252	85	42
Future Volume (veh/h)	0	824	73	74	439	0	129	0	54	252	85	42
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		1.00	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	0	1148	1148	1148	1148	0	1196	0	1196	1196	1196	1196
Adj Flow Rate, veh/h	0	916	79	82	488	0	143	0	60	280	94	6
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	2	2	2	2	0	2	0	2	2	2	2
Cap, veh/h	0	2101	181	320	2249	0	0	0	0	397	215	173
Arrive On Green	0.00	1.00	1.00	0.48	0.48	0.00	0.00	0.00	0.00	0.18	0.18	0.18
Sat Flow, veh/h	0	3032	252	346	3238	0		0		2210	1196	964
Grp Volume(v), veh/h	0	653	342	82	488	0		0.0		280	94	6
Grp Sat Flow(s),veh/h/ln	0	1045	1090	346	1045	0				1105	1196	964
Q Serve(g_s), s	0.0	0.0	0.0	14.6	9.0	0.0				11.9	7.0	0.5
Cycle Q Clear(g_c), s	0.0	0.0	0.0	14.6	9.0	0.0				11.9	7.0	0.5
Prop In Lane	0.00		0.23	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1499	782	320	2249	0				397	215	173
V/C Ratio(X)	0.00	0.44	0.44	0.26	0.22	0.00				0.71	0.44	0.03
Avail Cap(c_a), veh/h	0	1499	782	320	2249	0				575	311	251
HCM Platoon Ratio	1.00	2.00	2.00	0.67	0.67	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.89	0.89	1.00	1.00	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	11.1	9.7	0.0				38.5	36.5	33.9
Incr Delay (d2), s/veh	0.0	0.8	1.6	1.9	0.2	0.0				2.3	1.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.2	0.3	1.4	2.1	0.0				3.4	2.1	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.8	1.6	13.1	9.9	0.0				40.9	37.9	34.0
LnGrp LOS	A	A	A	B	A	A				D	D	C
Approach Vol, veh/h		995			570						380	
Approach Delay, s/veh		1.1			10.4						40.0	
Approach LOS		A			B						D	
Timer - Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		78.1				78.1		21.9				
Change Period (Y+Rc), s		6.3				6.3		4.0				
Max Green Setting (Gmax), s		43.7				43.7		26.0				
Max Q Clear Time (g_c+I1), s		2.0				16.6		13.9				
Green Ext Time (p_c), s		16.4				8.9		1.3				

Intersection Summary		
HCM 6th Ctrl Delay		11.4
HCM 6th LOS		B

Notes

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

Intersection	
Int Delay, s/veh	3.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	3	1111	29	0	499	3	0	0	175	0	0	0
Future Vol, veh/h	3	1111	29	0	499	3	0	0	175	0	0	0
Conflicting Peds, #/hr	55	0	36	0	0	53	0	0	34	53	0	55
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	1234	32	0	554	3	0	0	194	0	0	0

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	612	0	0	-	-	0	-	-	703
Stage 1	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-
Critical Hdwy	5.34	-	-	-	-	-	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.12	-	-	-	-	-	-	-	3.92
Pot Cap-1 Maneuver	600	-	-	0	-	-	0	0	326
Stage 1	-	-	-	0	-	-	0	0	-
Stage 2	-	-	-	0	-	-	0	0	-
Platoon blocked, %		-	-		-	-			
Mov Cap-1 Maneuver	600	-	-	-	-	-	-	0	304
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	0	-
Stage 1	-	-	-	-	-	-	-	0	-
Stage 2	-	-	-	-	-	-	-	0	-

Approach	EB	WB	NB
HCM Control Delay, s	0.1	0	35.7
HCM LOS			E

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBT	WBR
Capacity (veh/h)	304	600	-	-	-	-
HCM Lane V/C Ratio	0.64	0.006	-	-	-	-
HCM Control Delay (s)	35.7	11	0.1	-	-	-
HCM Lane LOS	E	B	A	-	-	-
HCM 95th %tile Q(veh)	4.1	0	-	-	-	-

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBR
Lane Configurations									
Traffic Volume (vph)	385	83	645	93	124	613	267	15	89
Future Volume (vph)	385	83	645	93	124	613	267	15	89
Ideal Flow (vphpl)	1350	1350	1350	1350	1350	1350	1350	1350	1350
Lane Width	12	9	10	9	9	9	9	9	15
Total Lost time (s)		4.6	5.3		4.6	5.3			4.6
Lane Util. Factor		1.00	0.91		1.00	0.91			1.00
Frpb, ped/bikes		1.00	0.99		1.00	0.96			1.00
Flpb, ped/bikes		1.00	1.00		1.00	1.00			1.00
Frt		1.00	0.98		1.00	0.95			0.86
Flt Protected		0.95	1.00		0.95	1.00			1.00
Satd. Flow (prot)		1018	2948		1018	2665			1133
Flt Permitted		0.95	1.00		0.95	1.00			1.00
Satd. Flow (perm)		1018	2948		1018	2665			1133
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	428	92	717	103	138	681	297	17	99
RTOR Reduction (vph)	0	0	15	0	0	2	0	0	76
Lane Group Flow (vph)	0	520	805	0	138	993	0	0	23
Confl. Peds. (#/hr)				32			54	54	
Confl. Bikes (#/hr)				2			8	8	
Turn Type	Prot	Prot	NA		Prot	NA			Perm
Protected Phases	5	5	2		1	6			
Permitted Phases									1
Actuated Green, G (s)		42.4	67.2		22.9	47.7			22.9
Effective Green, g (s)		42.4	67.2		22.9	47.7			22.9
Actuated g/C Ratio		0.42	0.67		0.23	0.48			0.23
Clearance Time (s)		4.6	5.3		4.6	5.3			4.6
Vehicle Extension (s)		2.5	5.0		2.5	5.0			2.5
Lane Grp Cap (vph)		431	1981		233	1271			259
v/s Ratio Prot		c0.51	0.27		0.14	c0.37			
v/s Ratio Perm									0.02
v/c Ratio		1.21	0.41		0.59	0.78			0.09
Uniform Delay, d1		28.8	7.4		34.4	21.8			30.3
Progression Factor		1.32	0.99		1.21	0.58			1.00
Incremental Delay, d2		110.4	0.5		2.8	4.1			0.1
Delay (s)		148.3	7.9		44.2	16.7			30.4
Level of Service		F	A		D	B			C
Approach Delay (s)			62.4			20.0			
Approach LOS			E			C			

Intersection Summary			
HCM 2000 Control Delay	42.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	9.9
Intersection Capacity Utilization	78.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	69	654	33	0	762	64	82	81	29	40	71	93
Future Volume (veh/h)	69	654	33	0	762	64	82	81	29	40	71	93
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		0.95	1.00		0.92	1.00		0.98	1.00		0.91
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	1148	1148	1196	0	1196	1196	1196	1196	1196	1148	1244	1196
Adj Flow Rate, veh/h	77	727	30	0	847	60	91	90	32	44	79	103
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	0	2	2	2	2	2	2	2	2
Cap, veh/h	264	1594	66	0	1600	113	145	107	38	239	272	201
Arrive On Green	1.00	1.00	1.00	0.00	1.00	1.00	0.13	0.13	0.13	0.22	0.22	0.22
Sat Flow, veh/h	371	3081	127	0	3201	218	1139	838	298	1094	1244	920
Grp Volume(v), veh/h	77	492	265	0	595	312	91	0	122	44	79	103
Grp Sat Flow(s),veh/h/ln	371	1045	1118	0	1088	1135	1139	0	1136	1094	1244	920
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	7.6	0.0	10.5	3.3	5.3	9.9
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	7.6	0.0	10.5	3.3	5.3	9.9
Prop In Lane	1.00		0.11	0.00		0.19	1.00		0.26	1.00		1.00
Lane Grp Cap(c), veh/h	264	1081	578	0	1126	587	145	0	145	239	272	201
V/C Ratio(X)	0.29	0.46	0.46	0.00	0.53	0.53	0.63	0.00	0.84	0.18	0.29	0.51
Avail Cap(c_a), veh/h	264	1081	578	0	1126	587	180	0	180	337	383	283
HCM Platoon Ratio	2.00	2.00	2.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.93	0.93	0.93	0.00	0.63	0.63	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	41.4	0.0	42.7	31.8	32.6	34.4
Incr Delay (d2), s/veh	2.6	1.3	2.4	0.0	1.1	2.2	4.6	0.0	24.6	0.4	0.6	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.2	0.4	0.0	0.2	0.4	2.3	0.0	3.9	0.9	1.7	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	2.6	1.3	2.4	0.0	1.1	2.2	46.0	0.0	67.3	32.2	33.2	36.4
LnGrp LOS	A	A	A	A	A	A	D	A	E	C	C	D
Approach Vol, veh/h		834			907			213			226	
Approach Delay, s/veh		1.8			1.5			58.2			34.5	
Approach LOS		A			A			E			C	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		57.0		16.9		57.0		26.0				
Change Period (Y+Rc), s		5.3		* 4.2		5.3		4.2				
Max Green Setting (Gmax), s		39.7		* 16		39.7		30.8				
Max Q Clear Time (g_c+I1), s		2.0		12.5		2.0		11.9				
Green Ext Time (p_c), s		14.0		0.3		14.0		0.9				
Intersection Summary												
HCM 6th Ctrl Delay			10.6									
HCM 6th LOS			B									

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	24	767	59	48	764	48	80	478	68	0	364	57
Future Volume (veh/h)	24	767	59	48	764	48	80	478	68	0	364	57
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.96	0.99		0.95	1.00		0.97	1.00		0.92
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	1148	1148	1148	1148	1196	1196	1148	1148	1148	0	1148	1148
Adj Flow Rate, veh/h	27	852	55	53	849	44	89	531	29	0	404	19
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	0	2	2
Cap, veh/h	183	1279	82	235	1410	73	85	842	364	0	559	230
Arrive On Green	0.04	0.85	0.85	0.04	0.44	0.44	0.08	0.39	0.39	0.00	0.26	0.26
Sat Flow, veh/h	1094	3000	193	1094	3169	164	1094	2182	942	0	2239	898
Grp Volume(v), veh/h	27	592	315	53	582	311	89	531	29	0	404	19
Grp Sat Flow(s),veh/h/ln	1094	1045	1103	1094	1088	1156	1094	1091	942	0	1091	898
Q Serve(g_s), s	1.4	9.7	9.8	2.7	20.3	20.4	7.8	19.7	1.9	0.0	16.9	1.6
Cycle Q Clear(g_c), s	1.4	9.7	9.8	2.7	20.3	20.4	7.8	19.7	1.9	0.0	16.9	1.6
Prop In Lane	1.00		0.17	1.00		0.14	1.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	183	891	470	235	968	514	85	842	364	0	559	230
V/C Ratio(X)	0.15	0.67	0.67	0.23	0.60	0.60	1.04	0.63	0.08	0.00	0.72	0.08
Avail Cap(c_a), veh/h	244	891	470	276	968	514	85	934	403	0	650	268
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	0.00	1.00	1.00
Uniform Delay (d), s/veh	17.4	4.9	4.9	15.7	21.0	21.1	46.1	24.9	19.4	0.0	34.0	28.3
Incr Delay (d2), s/veh	0.1	3.3	6.2	0.2	2.8	5.2	109.8	1.5	0.1	0.0	3.9	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	1.5	1.9	0.7	5.4	6.1	4.7	5.2	1.3	0.0	4.8	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.5	8.2	11.1	15.9	23.8	26.3	155.9	26.4	19.6	0.0	37.8	28.5
LnGrp LOS	B	A	B	B	C	C	F	C	B	A	D	C
Approach Vol, veh/h		934			946			649			423	
Approach Delay, s/veh		9.4			24.2			43.8			37.4	
Approach LOS		A			C			D			D	

Timer - Assigned Phs	1	2		4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.3	47.9		43.8	6.4	49.8	13.0	30.8
Change Period (Y+Rc), s	4.6	5.3		5.2	4.6	5.3	5.2	5.2
Max Green Setting (Gmax), s	7.4	34.7		42.8	7.4	34.7	7.8	29.8
Max Q Clear Time (g_c+I1), s	4.7	11.8		21.7	3.4	22.4	9.8	18.9
Green Ext Time (p_c), s	0.0	11.0		5.2	0.0	7.2	0.0	2.7

Intersection Summary	
HCM 6th Ctrl Delay	25.7
HCM 6th LOS	C

Notes

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

Intersection	
Intersection Delay, s/veh	10.2
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			✣			✣	
Traffic Vol, veh/h	17	153	7	7	236	16	9	51	5	5	49	34
Future Vol, veh/h	17	153	7	7	236	16	9	51	5	5	49	34
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	21	191	9	9	295	20	11	64	6	6	61	43
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.9	11.1	9.2	9.1
HCM LOS	A	B	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	14%	10%	3%	6%
Vol Thru, %	78%	86%	91%	56%
Vol Right, %	8%	4%	6%	39%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	65	177	259	88
LT Vol	9	17	7	5
Through Vol	51	153	236	49
RT Vol	5	7	16	34
Lane Flow Rate	81	221	324	110
Geometry Grp	1	1	1	1
Degree of Util (X)	0.121	0.295	0.419	0.156
Departure Headway (Hd)	5.34	4.799	4.658	5.095
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	665	743	767	697
Service Time	3.427	2.867	2.719	3.178
HCM Lane V/C Ratio	0.122	0.297	0.422	0.158
HCM Control Delay	9.2	9.9	11.1	9.1
HCM Lane LOS	A	A	B	A
HCM 95th-tile Q	0.4	1.2	2.1	0.6

Intersection	
Intersection Delay, s/veh	10.6
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			✣			✣	
Traffic Vol, veh/h	9	149	5	9	245	30	6	93	13	27	18	4
Future Vol, veh/h	9	149	5	9	245	30	6	93	13	27	18	4
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	186	6	11	306	38	8	116	16	34	23	5
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.8	11.7	9.7	9.2
HCM LOS	A	B	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	5%	6%	3%	55%
Vol Thru, %	83%	91%	86%	37%
Vol Right, %	12%	3%	11%	8%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	112	163	284	49
LT Vol	6	9	9	27
Through Vol	93	149	245	18
RT Vol	13	5	30	4
Lane Flow Rate	140	204	355	61
Geometry Grp	1	1	1	1
Degree of Util (X)	0.205	0.276	0.459	0.095
Departure Headway (Hd)	5.259	4.874	4.654	5.611
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	675	729	767	643
Service Time	3.349	2.952	2.722	3.611
HCM Lane V/C Ratio	0.207	0.28	0.463	0.095
HCM Control Delay	9.7	9.8	11.7	9.2
HCM Lane LOS	A	A	B	A
HCM 95th-tile Q	0.8	1.1	2.4	0.3

Intersection	
Intersection Delay, s/veh	10.5
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥			✥			✥	
Traffic Vol, veh/h	13	169	8	16	246	23	14	30	17	21	27	26
Future Vol, veh/h	13	169	8	16	246	23	14	30	17	21	27	26
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	16	211	10	20	308	29	18	38	21	26	34	33
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	10	11.5	9.1	9.2
HCM LOS	A	B	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	23%	7%	6%	28%
Vol Thru, %	49%	89%	86%	36%
Vol Right, %	28%	4%	8%	35%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	61	190	285	74
LT Vol	14	13	16	21
Through Vol	30	169	246	27
RT Vol	17	8	23	26
Lane Flow Rate	76	238	356	92
Geometry Grp	1	1	1	1
Degree of Util (X)	0.113	0.315	0.457	0.135
Departure Headway (Hd)	5.312	4.77	4.615	5.253
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	667	748	777	675
Service Time	3.402	2.835	2.673	3.34
HCM Lane V/C Ratio	0.114	0.318	0.458	0.136
HCM Control Delay	9.1	10	11.5	9.2
HCM Lane LOS	A	A	B	A
HCM 95th-tile Q	0.4	1.4	2.4	0.5

HCM 6th Signalized Intersection Summary
1: S Linden Dr & Wilshire Blvd

06/27/2023

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1229	103	0	823	0	282	0	49	134	0	67
Future Volume (veh/h)	0	1229	103	0	823	0	282	0	49	134	0	67
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.92	1.00		1.00	1.00		1.00	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	0	1683	1683	0	1683	0	1616	0	1683	1751	0	1683
Adj Flow Rate, veh/h	0	1366	105	0	914	0	313	0	28	149	0	16
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	2	2	0	2	0	2	0	2	2	0	2
Cap, veh/h	0	2914	224	0	3100	0	349	0	0	378	0	0
Arrive On Green	0.00	0.67	0.67	0.00	1.00	0.00	0.23	0.00	0.00	0.23	0.00	0.00
Sat Flow, veh/h	0	4472	332	0	4898	0	1539	313		1667	149	
Grp Volume(v), veh/h	0	969	502	0	914	0	313	46.0		149	33.5	
Grp Sat Flow(s),veh/h/ln	0	1532	1589	0	1532	0	1539	D		1667	C	
Q Serve(g_s), s	0.0	15.0	15.0	0.0	0.0	0.0	19.7			7.6		
Cycle Q Clear(g_c), s	0.0	15.0	15.0	0.0	0.0	0.0	19.7			7.6		
Prop In Lane	0.00		0.21	0.00		0.00	1.00			1.00		
Lane Grp Cap(c), veh/h	0	2066	1072	0	3100	0	349			378		
V/C Ratio(X)	0.00	0.47	0.47	0.00	0.29	0.00	0.90			0.39		
Avail Cap(c_a), veh/h	0	2066	1072	0	3100	0	622			674		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	1.00	1.00			1.00		
Upstream Filter(I)	0.00	1.00	1.00	0.00	0.80	0.00	1.00			1.00		
Uniform Delay (d), s/veh	0.0	7.7	7.7	0.0	0.0	0.0	37.6			32.9		
Incr Delay (d2), s/veh	0.0	0.8	1.5	0.0	0.2	0.0	8.5			0.7		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0		
%ile BackOfQ(50%),veh/ln	0.0	4.6	5.0	0.0	0.1	0.0	8.2			3.1		
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	8.5	9.2	0.0	0.2	0.0	46.0			33.5		
LnGrp LOS	A	A	A	A	A	A	D			C		
Approach Vol, veh/h		1471			914							
Approach Delay, s/veh		8.8			0.2							
Approach LOS		A			A							
Timer - Assigned Phs		2	3			6	7					
Phs Duration (G+Y+Rc), s		72.8	27.2			72.8	27.2					
Change Period (Y+Rc), s		5.3	4.6			5.3	4.6					
Max Green Setting (Gmax), s		49.7	40.4			49.7	40.4					
Max Q Clear Time (g_c+I1), s		17.0	21.7			2.0	9.6					
Green Ext Time (p_c), s		22.5	0.9			15.9	0.4					
Intersection Summary												
HCM 6th Ctrl Delay			11.4									
HCM 6th LOS			B									

Movement	EBL2	EBT	EBR	WBL	WBT	WBR	NBR	SBR	SBR2
Lane Configurations									
Traffic Volume (vph)	105	1228	65	55	596	51	66	232	192
Future Volume (vph)	105	1228	65	55	596	51	66	232	192
Ideal Flow (vphpl)	1350	1350	1350	1350	1350	1350	1350	1350	1350
Lane Width	9	10	10	9	10	10	12	10	10
Total Lost time (s)	4.6	5.3		4.0	5.3		4.6	4.6	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.88	1.00
Frpb, ped/bikes	1.00	0.99		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	0.99		1.00	0.99		0.86	0.85	0.85
Flt Protected	0.95	1.00		0.95	1.00		1.00	1.00	1.00
Satd. Flow (prot)	1018	2970		1018	2969		1030	1663	945
Flt Permitted	0.95	1.00		0.95	1.00		1.00	1.00	1.00
Satd. Flow (perm)	1018	2970		1018	2969		1030	1663	945
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	117	1364	72	61	662	57	73	258	213
RTOR Reduction (vph)	0	5	0	0	0	0	0	0	0
Lane Group Flow (vph)	117	1431	0	61	719	0	73	258	213
Confl. Peds. (#/hr)			115			83			
Confl. Bikes (#/hr)			6			6	6	6	
Turn Type	Prot	NA		Prot	NA		Prot	Prot	Free
Protected Phases	5	2		1	6		8	4	
Permitted Phases									Free
Actuated Green, G (s)	15.4	66.6		1.0	51.6		18.5	18.5	100.0
Effective Green, g (s)	15.4	66.6		1.0	51.6		18.5	18.5	100.0
Actuated g/C Ratio	0.15	0.67		0.01	0.52		0.18	0.18	1.00
Clearance Time (s)	4.6	5.3		4.0	5.3		4.6	4.6	
Vehicle Extension (s)	1.5	3.0		1.5	3.0		2.5	2.5	
Lane Grp Cap (vph)	156	1978		10	1532		190	307	945
v/s Ratio Prot	c0.11	c0.48		c0.06	0.24		0.07	c0.16	
v/s Ratio Perm									0.23
v/c Ratio	0.75	0.72		6.10	0.47		0.38	0.84	0.23
Uniform Delay, d1	40.5	10.8		49.5	15.5		35.8	39.3	0.0
Progression Factor	0.63	0.44		0.85	0.91		1.00	1.00	1.00
Incremental Delay, d2	9.0	1.2		2473.5	0.9		0.9	18.1	0.6
Delay (s)	34.6	6.0		2515.4	15.1		36.7	57.4	0.6
Level of Service	C	A		F	B		D	E	A
Approach Delay (s)		8.2			210.6				
Approach LOS		A			F				

Intersection Summary			
HCM 2000 Control Delay	67.6	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	14.5
Intersection Capacity Utilization	54.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1219	76	101	500	0	125	0	54	396	224	78
Future Volume (veh/h)	0	1219	76	101	500	0	125	0	54	396	224	78
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.88	0.99		1.00	1.00		1.00	1.00		0.93
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	0	1616	1616	1616	1616	0	1683	0	1683	1683	1683	1683
Adj Flow Rate, veh/h	0	1354	83	112	556	0	139	0	60	440	249	17
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	2	2	2	2	0	2	0	2	2	2	2
Cap, veh/h	0	2881	177	289	3018	0	0	0	0	662	358	283
Arrive On Green	0.00	1.00	1.00	0.68	0.68	0.00	0.00	0.00	0.00	0.21	0.21	0.21
Sat Flow, veh/h	0	4357	258	317	4557	0		0		3110	1683	1328
Grp Volume(v), veh/h	0	946	491	112	556	0		0.0		440	249	17
Grp Sat Flow(s),veh/h/ln	0	1471	1529	317	1471	0				1555	1683	1328
Q Serve(g_s), s	0.0	0.0	0.0	17.3	4.6	0.0				13.0	13.7	1.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	17.3	4.6	0.0				13.0	13.7	1.0
Prop In Lane	0.00		0.17	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2012	1046	289	3018	0				662	358	283
V/C Ratio(X)	0.00	0.47	0.47	0.39	0.18	0.00				0.66	0.69	0.06
Avail Cap(c_a), veh/h	0	2012	1046	289	3018	0				809	438	345
HCM Platoon Ratio	1.00	2.00	2.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.64	0.64	1.00	1.00	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	7.7	5.7	0.0				36.1	36.4	31.4
Incr Delay (d2), s/veh	0.0	0.5	1.0	3.9	0.1	0.0				1.5	3.6	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
%ile BackOfQ(50%),veh/ln	0.0	0.1	0.3	1.3	1.3	0.0				5.1	6.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.5	1.0	11.6	5.8	0.0				37.6	40.0	31.5
LnGrp LOS	A	A	A	B	A	A				D	D	C
Approach Vol, veh/h		1437			668						706	
Approach Delay, s/veh		0.7			6.8						38.3	
Approach LOS		A			A						D	

Timer - Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		74.7				74.7		25.3				
Change Period (Y+Rc), s		6.3				6.3		4.0				
Max Green Setting (Gmax), s		43.7				43.7		26.0				
Max Q Clear Time (g_c+I1), s		2.0				19.3		15.7				
Green Ext Time (p_c), s		25.8				10.6		2.5				

Intersection Summary			
HCM 6th Ctrl Delay			11.6
HCM 6th LOS			B

Notes

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

Intersection	
Int Delay, s/veh	12.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	1573	94	0	598	1	0	0	134	0	0	0
Future Vol, veh/h	2	1573	94	0	598	1	0	0	134	0	0	0
Conflicting Peds, #/hr	107	0	128	0	0	107	0	0	128	107	0	107
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	1748	104	0	664	1	0	0	149	0	0	0

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	772	0	0	-	-	0	-	-	1182
Stage 1	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-
Critical Hdwy	5.34	-	-	-	-	-	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.12	-	-	-	-	-	-	-	3.92
Pot Cap-1 Maneuver	504	-	-	0	-	-	0	0	157
Stage 1	-	-	-	0	-	-	0	0	-
Stage 2	-	-	-	0	-	-	0	0	-
Platoon blocked, %		-	-		-	-			
Mov Cap-1 Maneuver	504	-	-	-	-	-	-	0	~ 120
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	0	-
Stage 1	-	-	-	-	-	-	-	0	-
Stage 2	-	-	-	-	-	-	-	0	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	229.5
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBT	WBR
Capacity (veh/h)	120	504	-	-	-	-
HCM Lane V/C Ratio	1.241	0.004	-	-	-	-
HCM Control Delay (s)	229.5	12.2	0	-	-	-
HCM Lane LOS	F	B	A	-	-	-
HCM 95th %tile Q(veh)	9.5	0	-	-	-	-

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

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBR
Lane Configurations									
Traffic Volume (vph)	178	330	1051	146	152	597	137	48	127
Future Volume (vph)	178	330	1051	146	152	597	137	48	127
Ideal Flow (vphpl)	1350	1350	1350	1350	1350	1350	1350	1350	1350
Lane Width	12	9	10	9	9	9	9	9	15
Total Lost time (s)		4.6	5.3		4.6	5.3			4.6
Lane Util. Factor		1.00	0.91		1.00	0.91			1.00
Frpb, ped/bikes		1.00	0.97		1.00	0.93			1.00
Flpb, ped/bikes		1.00	1.00		1.00	1.00			1.00
Frt		1.00	0.98		1.00	0.96			0.86
Flt Protected		0.95	1.00		0.95	1.00			1.00
Satd. Flow (prot)		1018	2886		1018	2623			1133
Flt Permitted		0.95	1.00		0.95	1.00			1.00
Satd. Flow (perm)		1018	2886		1018	2623			1133
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	198	367	1168	162	169	663	152	53	141
RTOR Reduction (vph)	0	0	15	0	0	7	0	0	57
Lane Group Flow (vph)	0	565	1315	0	169	861	0	0	84
Confl. Peds. (#/hr)				124			127	127	
Confl. Bikes (#/hr)				8			2	2	
Turn Type	Prot	Prot	NA		Prot	NA			Perm
Protected Phases	5	5	2		1	6			
Permitted Phases									1
Actuated Green, G (s)		42.4	66.2		23.9	47.7			23.9
Effective Green, g (s)		42.4	66.2		23.9	47.7			23.9
Actuated g/C Ratio		0.42	0.66		0.24	0.48			0.24
Clearance Time (s)		4.6	5.3		4.6	5.3			4.6
Vehicle Extension (s)		2.5	5.0		2.5	5.0			2.5
Lane Grp Cap (vph)		431	1910		243	1251			270
v/s Ratio Prot		c0.55	c0.46		0.17	0.33			
v/s Ratio Perm									0.07
v/c Ratio		1.31	0.69		0.70	0.69			0.31
Uniform Delay, d1		28.8	10.5		34.7	20.4			31.3
Progression Factor		1.21	1.09		1.21	0.59			1.00
Incremental Delay, d2		146.3	0.8		6.1	2.5			0.5
Delay (s)		181.2	12.2		48.2	14.4			31.8
Level of Service		F	B		D	B			C
Approach Delay (s)			62.6			19.9			
Approach LOS			E			B			

Intersection Summary			
HCM 2000 Control Delay	46.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	9.9
Intersection Capacity Utilization	78.3%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	105	1053	20	0	721	81	96	65	37	100	55	114
Future Volume (veh/h)	105	1053	20	0	721	81	96	65	37	100	55	114
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.97		0.93	1.00		0.88	1.00		0.98	1.00		0.89
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	1616	1616	1683	0	1683	1683	1683	1683	1683	1616	1751	1683
Adj Flow Rate, veh/h	117	1170	20	0	801	72	107	72	41	111	61	127
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	0	2	2	2	2	2	2	2	2
Cap, veh/h	360	2411	41	0	2292	204	152	95	54	350	398	290
Arrive On Green	1.00	1.00	1.00	0.00	1.00	1.00	0.10	0.10	0.10	0.23	0.23	0.23
Sat Flow, veh/h	532	4460	76	0	4392	378	1603	999	569	1539	1751	1273
Grp Volume(v), veh/h	117	771	419	0	577	296	107	0	113	111	61	127
Grp Sat Flow(s),veh/h/ln	532	1471	1595	0	1532	1554	1603	0	1568	1539	1751	1273
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	6.5	0.0	7.0	6.0	2.8	8.6
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	6.5	0.0	7.0	6.0	2.8	8.6
Prop In Lane	1.00		0.05	0.00		0.24	1.00		0.36	1.00		1.00
Lane Grp Cap(c), veh/h	360	1590	862	0	1656	840	152	0	149	350	398	290
V/C Ratio(X)	0.33	0.49	0.49	0.00	0.35	0.35	0.70	0.00	0.76	0.32	0.15	0.44
Avail Cap(c_a), veh/h	360	1590	862	0	1656	840	253	0	248	474	539	392
HCM Platoon Ratio	2.00	2.00	2.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.69	0.69	0.69	0.00	0.60	0.60	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	43.9	0.0	44.1	32.2	30.9	33.1
Incr Delay (d2), s/veh	1.7	0.7	1.4	0.0	0.3	0.7	5.8	0.0	7.7	0.5	0.2	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.2	0.3	0.0	0.1	0.2	2.8	0.0	3.1	2.3	1.2	2.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	1.7	0.7	1.4	0.0	0.3	0.7	49.7	0.0	51.8	32.7	31.1	34.2
LnGrp LOS	A	A	A	A	A	A	D	A	D	C	C	C
Approach Vol, veh/h		1307			873			220			299	
Approach Delay, s/veh		1.0			0.5			50.8			33.0	
Approach LOS		A			A			D			C	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		59.4		13.7		59.4		26.9				
Change Period (Y+Rc), s		5.3		* 4.2		5.3		4.2				
Max Green Setting (Gmax), s		39.7		* 16		39.7		30.8				
Max Q Clear Time (g_c+I1), s		2.0		9.0		2.0		10.6				
Green Ext Time (p_c), s		22.3		0.5		13.5		1.1				
Intersection Summary												
HCM 6th Ctrl Delay			8.4									
HCM 6th LOS			A									

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	907	56	55	723	61	101	419	97	0	593	87
Future Volume (veh/h)	14	907	56	55	723	61	101	419	97	0	593	87
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.93	0.99		0.93	1.00		0.94	1.00		0.93
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	1616	1616	1616	1616	1683	1683	1616	1616	1616	0	1616	1616
Adj Flow Rate, veh/h	16	1008	54	61	803	55	112	466	41	0	659	30
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	0	2	2
Cap, veh/h	258	1758	94	277	1906	130	120	1234	518	0	835	348
Arrive On Green	0.02	0.82	0.82	0.04	0.44	0.44	0.08	0.40	0.40	0.00	0.27	0.27
Sat Flow, veh/h	1539	4268	228	1539	4369	298	1539	3070	1289	0	3151	1278
Grp Volume(v), veh/h	16	694	368	61	562	296	112	466	41	0	659	30
Grp Sat Flow(s),veh/h/ln	1539	1471	1555	1539	1532	1603	1539	1535	1289	0	1535	1278
Q Serve(g_s), s	0.6	7.9	7.9	2.3	12.7	12.8	7.2	10.7	2.0	0.0	19.9	1.7
Cycle Q Clear(g_c), s	0.6	7.9	7.9	2.3	12.7	12.8	7.2	10.7	2.0	0.0	19.9	1.7
Prop In Lane	1.00		0.15	1.00		0.19	1.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	258	1212	641	277	1336	699	120	1234	518	0	835	348
V/C Ratio(X)	0.06	0.57	0.57	0.22	0.42	0.42	0.93	0.38	0.08	0.00	0.79	0.09
Avail Cap(c_a), veh/h	355	1212	641	337	1336	699	120	1314	552	0	915	381
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)	0.43	0.43	0.43	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	17.2	5.9	5.9	16.3	19.5	19.5	45.8	21.1	18.5	0.0	33.7	27.1
Incr Delay (d2), s/veh	0.0	0.9	1.6	0.1	1.0	1.9	62.0	0.3	0.1	0.0	4.7	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	0.2	1.6	1.9	0.8	4.6	5.0	4.8	3.9	1.8	0.0	7.9	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.2	6.7	7.5	16.4	20.4	21.4	107.8	21.4	18.6	0.0	38.4	27.3
LnGrp LOS	B	A	A	B	C	C	F	C	B	A	D	C
Approach Vol, veh/h		1078			919			619			689	
Approach Delay, s/veh		7.1			20.5			36.8			38.0	
Approach LOS		A			C			D			D	

Timer - Assigned Phs	1	2		4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.1	46.5		45.4	5.7	48.9	13.0	32.4
Change Period (Y+Rc), s	4.6	5.3		5.2	4.6	5.3	5.2	5.2
Max Green Setting (Gmax), s	7.4	34.7		42.8	7.4	34.7	7.8	29.8
Max Q Clear Time (g_c+I1), s	4.3	9.9		12.7	2.6	14.8	9.2	21.9
Green Ext Time (p_c), s	0.0	13.5		5.2	0.0	9.6	0.0	3.6

Intersection Summary	
HCM 6th Ctrl Delay	22.8
HCM 6th LOS	C

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

Intersection	
Intersection Delay, s/veh	11.8
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	20	292	9	9	150	22	5	34	13	33	138	52
Future Vol, veh/h	20	292	9	9	150	22	5	34	13	33	138	52
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	22	324	10	10	167	24	6	38	14	37	153	58
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	13.2	10.5	9.3	11.5
HCM LOS	B	B	A	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	10%	6%	5%	15%
Vol Thru, %	65%	91%	83%	62%
Vol Right, %	25%	3%	12%	23%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	52	321	181	223
LT Vol	5	20	9	33
Through Vol	34	292	150	138
RT Vol	13	9	22	52
Lane Flow Rate	58	357	201	248
Geometry Grp	1	1	1	1
Degree of Util (X)	0.092	0.505	0.294	0.37
Departure Headway (Hd)	5.708	5.096	5.256	5.372
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	626	706	684	669
Service Time	3.755	3.126	3.291	3.408
HCM Lane V/C Ratio	0.093	0.506	0.294	0.371
HCM Control Delay	9.3	13.2	10.5	11.5
HCM Lane LOS	A	B	B	B
HCM 95th-tile Q	0.3	2.9	1.2	1.7

Intersection	
Intersection Delay, s/veh	11.5
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			✣			✣	
Traffic Vol, veh/h	14	315	6	7	159	43	6	86	8	46	51	18
Future Vol, veh/h	14	315	6	7	159	43	6	86	8	46	51	18
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	16	350	7	8	177	48	7	96	9	51	57	20
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	13.1	10.5	9.9	10.1
HCM LOS	B	B	A	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	6%	4%	3%	40%
Vol Thru, %	86%	94%	76%	44%
Vol Right, %	8%	2%	21%	16%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	100	335	209	115
LT Vol	6	14	7	46
Through Vol	86	315	159	51
RT Vol	8	6	43	18
Lane Flow Rate	111	372	232	128
Geometry Grp	1	1	1	1
Degree of Util (X)	0.175	0.515	0.324	0.201
Departure Headway (Hd)	5.66	4.978	5.028	5.649
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	633	730	715	635
Service Time	3.7	2.978	3.06	3.687
HCM Lane V/C Ratio	0.175	0.51	0.324	0.202
HCM Control Delay	9.9	13.1	10.5	10.1
HCM Lane LOS	A	B	B	B
HCM 95th-tile Q	0.6	3	1.4	0.7

Intersection	
Intersection Delay, s/veh	12.2
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			✣			✣	
Traffic Vol, veh/h	19	315	29	22	160	27	16	35	25	32	86	34
Future Vol, veh/h	19	315	29	22	160	27	16	35	25	32	86	34
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	21	350	32	24	178	30	18	39	28	36	96	38
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	14.1	10.8	9.7	10.6
HCM LOS	B	B	A	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	21%	5%	11%	21%
Vol Thru, %	46%	87%	77%	57%
Vol Right, %	33%	8%	13%	22%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	76	363	209	152
LT Vol	16	19	22	32
Through Vol	35	315	160	86
RT Vol	25	29	27	34
Lane Flow Rate	84	403	232	169
Geometry Grp	1	1	1	1
Degree of Util (X)	0.134	0.557	0.334	0.263
Departure Headway (Hd)	5.718	4.971	5.179	5.608
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	626	726	694	640
Service Time	3.763	2.998	3.21	3.646
HCM Lane V/C Ratio	0.134	0.555	0.334	0.264
HCM Control Delay	9.7	14.1	10.8	10.6
HCM Lane LOS	A	B	B	B
HCM 95th-tile Q	0.5	3.5	1.5	1.1

LOS Worksheets: Baseline Plus Scenario 3 Specific Plan Buildout Conditions with Via Closure

Fehr Peers

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	903	49	0	536	0	223	0	85	70	0	54
Future Volume (veh/h)	0	903	49	0	536	0	223	0	85	70	0	54
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	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	0	1196	1196	0	1196	0	1148	0	1196	1244	0	1196
Adj Flow Rate, veh/h	0	1003	47	0	596	0	248	0	26	78	0	17
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	2	2	0	2	0	2	0	2	2	0	2
Cap, veh/h	0	2084	97	0	2135	0	270	0	0	293	0	0
Arrive On Green	0.00	0.65	0.65	0.00	0.87	0.00	0.25	0.00	0.00	0.25	0.00	0.00
Sat Flow, veh/h	0	3296	149	0	3481	0	1094	248		1185	78	
Grp Volume(v), veh/h	0	684	366	0	596	0	248	52.7		78	30.8	
Grp Sat Flow(s),veh/h/ln	0	1088	1160	0	1088	0	1094	D		1185	C	
Q Serve(g_s), s	0.0	15.9	15.9	0.0	3.1	0.0	22.1			5.3		
Cycle Q Clear(g_c), s	0.0	15.9	15.9	0.0	3.1	0.0	22.1			5.3		
Prop In Lane	0.00		0.13	0.00		0.00	1.00			1.00		
Lane Grp Cap(c), veh/h	0	1423	758	0	2135	0	270			293		
V/C Ratio(X)	0.00	0.48	0.48	0.00	0.28	0.00	0.92			0.27		
Avail Cap(c_a), veh/h	0	1423	758	0	2135	0	442			479		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.33	1.00	1.00			1.00		
Upstream Filter(I)	0.00	1.00	1.00	0.00	0.91	0.00	1.00			1.00		
Uniform Delay (d), s/veh	0.0	8.7	8.8	0.0	2.5	0.0	36.6			30.3		
Incr Delay (d2), s/veh	0.0	1.2	2.2	0.0	0.3	0.0	16.1			0.5		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0		
%ile BackOfQ(50%),veh/ln	0.0	3.6	4.1	0.0	0.6	0.0	7.1			1.6		
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	9.9	10.9	0.0	2.8	0.0	52.7			30.8		
LnGrp LOS	A	A	B	A	A	A	D			C		
Approach Vol, veh/h		1050			596							
Approach Delay, s/veh		10.3			2.8							
Approach LOS		B			A							
Timer - Assigned Phs		2	3			6	7					
Phs Duration (G+Y+Rc), s		70.7	29.3			70.7	29.3					
Change Period (Y+Rc), s		5.3	4.6			5.3	4.6					
Max Green Setting (Gmax), s		49.7	40.4			49.7	40.4					
Max Q Clear Time (g_c+I1), s		17.9	24.1			5.1	7.3					
Green Ext Time (p_c), s		15.4	0.7			9.2	0.2					
Intersection Summary												
HCM 6th Ctrl Delay			14.2									
HCM 6th LOS			B									

Movement	EBL2	EBT	EBR	WBL	WBT	WBR	NBR	SBR	SBR2
Lane Configurations									
Traffic Volume (vph)	190	803	51	21	506	120	93	87	197
Future Volume (vph)	190	803	51	21	506	120	93	87	197
Ideal Flow (vphpl)	1350	1350	1350	1350	1350	1350	1350	1350	1350
Lane Width	9	10	10	9	10	10	12	10	10
Total Lost time (s)	4.6	5.3		4.0	5.3		4.6	4.6	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.88	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.98		1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.99		1.00	0.97		0.86	0.85	0.85
Flt Protected	0.95	1.00		0.95	1.00		1.00	1.00	1.00
Satd. Flow (prot)	1018	2994		1018	2892		1030	1663	945
Flt Permitted	0.95	1.00		0.95	1.00		1.00	1.00	1.00
Satd. Flow (perm)	1018	2994		1018	2892		1030	1663	945
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	211	892	57	23	562	133	103	97	219
RTOR Reduction (vph)	0	6	0	0	0	0	0	0	0
Lane Group Flow (vph)	211	943	0	23	695	0	103	97	219
Confl. Peds. (#/hr)			24			64			
Confl. Bikes (#/hr)			3			3	3	3	
Turn Type	Prot	NA		Prot	NA		Prot	Prot	Free
Protected Phases	5	2		1	6		8	4	
Permitted Phases									Free
Actuated Green, G (s)	15.4	70.7		1.0	55.7		14.4	14.4	100.0
Effective Green, g (s)	15.4	70.7		1.0	55.7		14.4	14.4	100.0
Actuated g/C Ratio	0.15	0.71		0.01	0.56		0.14	0.14	1.00
Clearance Time (s)	4.6	5.3		4.0	5.3		4.6	4.6	
Vehicle Extension (s)	1.5	3.0		1.5	3.0		2.5	2.5	
Lane Grp Cap (vph)	156	2116		10	1610		148	239	945
v/s Ratio Prot	c0.21	c0.31		0.02	0.24		c0.10	0.06	
v/s Ratio Perm									0.23
v/c Ratio	1.35	0.45		2.30	0.43		0.70	0.41	0.23
Uniform Delay, d1	42.3	6.3		49.5	12.9		40.7	38.9	0.0
Progression Factor	0.78	0.43		0.82	1.10		1.00	1.00	1.00
Incremental Delay, d2	189.7	0.6		801.1	0.8		12.3	0.8	0.6
Delay (s)	222.8	3.3		841.7	15.0		53.0	39.7	0.6
Level of Service	F	A		F	B		D	D	A
Approach Delay (s)		43.2			41.5				
Approach LOS		D			D				

Intersection Summary			
HCM 2000 Control Delay	38.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	14.5
Intersection Capacity Utilization	53.7%	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)	0	824	73	74	439	0	129	0	105	252	85	42
Future Volume (veh/h)	0	824	73	74	439	0	129	0	105	252	85	42
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		1.00	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	0	1148	1148	1148	1148	0	1196	0	1196	1196	1196	1196
Adj Flow Rate, veh/h	0	916	79	82	488	0	143	0	117	280	94	6
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	2	2	2	2	0	2	0	2	2	2	2
Cap, veh/h	0	2101	181	320	2249	0	0	0	0	397	215	173
Arrive On Green	0.00	1.00	1.00	0.48	0.48	0.00	0.00	0.00	0.00	0.18	0.18	0.18
Sat Flow, veh/h	0	3032	252	346	3238	0		0		2210	1196	964
Grp Volume(v), veh/h	0	653	342	82	488	0		0.0		280	94	6
Grp Sat Flow(s),veh/h/ln	0	1045	1090	346	1045	0				1105	1196	964
Q Serve(g_s), s	0.0	0.0	0.0	14.6	9.0	0.0				11.9	7.0	0.5
Cycle Q Clear(g_c), s	0.0	0.0	0.0	14.6	9.0	0.0				11.9	7.0	0.5
Prop In Lane	0.00		0.23	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1499	782	320	2249	0				397	215	173
V/C Ratio(X)	0.00	0.44	0.44	0.26	0.22	0.00				0.71	0.44	0.03
Avail Cap(c_a), veh/h	0	1499	782	320	2249	0				575	311	251
HCM Platoon Ratio	1.00	2.00	2.00	0.67	0.67	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.89	0.89	1.00	1.00	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	11.1	9.7	0.0				38.5	36.5	33.9
Incr Delay (d2), s/veh	0.0	0.8	1.6	1.9	0.2	0.0				2.3	1.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.2	0.3	1.4	2.1	0.0				3.4	2.1	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.8	1.6	13.1	9.9	0.0				40.9	37.9	34.0
LnGrp LOS	A	A	A	B	A	A				D	D	C
Approach Vol, veh/h		995			570						380	
Approach Delay, s/veh		1.1			10.4						40.0	
Approach LOS		A			B						D	
Timer - Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		78.1				78.1		21.9				
Change Period (Y+Rc), s		6.3				6.3		4.0				
Max Green Setting (Gmax), s		43.7				43.7		26.0				
Max Q Clear Time (g_c+I1), s		2.0				16.6		13.9				
Green Ext Time (p_c), s		16.4				8.9		1.3				
Intersection Summary												
HCM 6th Ctrl Delay			11.4									
HCM 6th LOS			B									

Notes

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

Intersection	
Int Delay, s/veh	2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	3	1161	29	0	499	3	0	0	125	0	0	0
Future Vol, veh/h	3	1161	29	0	499	3	0	0	125	0	0	0
Conflicting Peds, #/hr	55	0	36	0	0	53	0	0	34	53	0	55
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	1290	32	0	554	3	0	0	139	0	0	0

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	612	0	0	-	-	0	-	-	731
Stage 1	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-
Critical Hdwy	5.34	-	-	-	-	-	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.12	-	-	-	-	-	-	-	3.92
Pot Cap-1 Maneuver	600	-	-	0	-	-	0	0	312
Stage 1	-	-	-	0	-	-	0	0	-
Stage 2	-	-	-	0	-	-	0	0	-
Platoon blocked, %		-	-		-	-			
Mov Cap-1 Maneuver	600	-	-	-	-	-	-	0	291
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	0	-
Stage 1	-	-	-	-	-	-	-	0	-
Stage 2	-	-	-	-	-	-	-	0	-

Approach	EB	WB	NB
HCM Control Delay, s	0.1	0	28.2
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBT	WBR
Capacity (veh/h)	291	600	-	-	-	-
HCM Lane V/C Ratio	0.477	0.006	-	-	-	-
HCM Control Delay (s)	28.2	11	0.1	-	-	-
HCM Lane LOS	D	B	A	-	-	-
HCM 95th %tile Q(veh)	2.4	0	-	-	-	-

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBR
Lane Configurations									
Traffic Volume (vph)	385	83	645	93	124	613	267	15	89
Future Volume (vph)	385	83	645	93	124	613	267	15	89
Ideal Flow (vphpl)	1350	1350	1350	1350	1350	1350	1350	1350	1350
Lane Width	12	9	10	9	9	9	9	9	15
Total Lost time (s)		4.6	5.3		4.6	5.3			4.6
Lane Util. Factor		1.00	0.91		1.00	0.91			1.00
Frpb, ped/bikes		1.00	0.99		1.00	0.96			1.00
Flpb, ped/bikes		1.00	1.00		1.00	1.00			1.00
Frt		1.00	0.98		1.00	0.95			0.86
Flt Protected		0.95	1.00		0.95	1.00			1.00
Satd. Flow (prot)		1018	2948		1018	2665			1133
Flt Permitted		0.95	1.00		0.95	1.00			1.00
Satd. Flow (perm)		1018	2948		1018	2665			1133
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	428	92	717	103	138	681	297	17	99
RTOR Reduction (vph)	0	0	15	0	0	2	0	0	76
Lane Group Flow (vph)	0	520	805	0	138	993	0	0	23
Confl. Peds. (#/hr)				32			54	54	
Confl. Bikes (#/hr)				2			8	8	
Turn Type	Prot	Prot	NA		Prot	NA			Perm
Protected Phases	5	5	2		1	6			
Permitted Phases									1
Actuated Green, G (s)		42.4	67.2		22.9	47.7			22.9
Effective Green, g (s)		42.4	67.2		22.9	47.7			22.9
Actuated g/C Ratio		0.42	0.67		0.23	0.48			0.23
Clearance Time (s)		4.6	5.3		4.6	5.3			4.6
Vehicle Extension (s)		2.5	5.0		2.5	5.0			2.5
Lane Grp Cap (vph)		431	1981		233	1271			259
v/s Ratio Prot		c0.51	0.27		0.14	c0.37			
v/s Ratio Perm									0.02
v/c Ratio		1.21	0.41		0.59	0.78			0.09
Uniform Delay, d1		28.8	7.4		34.4	21.8			30.3
Progression Factor		1.25	0.99		1.21	0.58			1.00
Incremental Delay, d2		109.8	0.5		2.8	4.1			0.1
Delay (s)		145.8	7.8		44.2	16.7			30.4
Level of Service		F	A		D	B			C
Approach Delay (s)			61.4			20.0			
Approach LOS			E			C			

Intersection Summary			
HCM 2000 Control Delay	42.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	9.9
Intersection Capacity Utilization	78.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	69	654	33	0	762	64	82	81	29	40	71	93
Future Volume (veh/h)	69	654	33	0	762	64	82	81	29	40	71	93
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		0.95	1.00		0.92	1.00		0.98	1.00		0.91
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	1148	1148	1196	0	1196	1196	1196	1196	1196	1148	1244	1196
Adj Flow Rate, veh/h	77	727	30	0	847	60	91	90	32	44	79	103
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	0	2	2	2	2	2	2	2	2
Cap, veh/h	264	1594	66	0	1600	113	145	107	38	239	272	201
Arrive On Green	1.00	1.00	1.00	0.00	1.00	1.00	0.13	0.13	0.13	0.22	0.22	0.22
Sat Flow, veh/h	371	3081	127	0	3201	218	1139	838	298	1094	1244	920
Grp Volume(v), veh/h	77	492	265	0	595	312	91	0	122	44	79	103
Grp Sat Flow(s),veh/h/ln	371	1045	1118	0	1088	1135	1139	0	1136	1094	1244	920
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	7.6	0.0	10.5	3.3	5.3	9.9
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	7.6	0.0	10.5	3.3	5.3	9.9
Prop In Lane	1.00		0.11	0.00		0.19	1.00		0.26	1.00		1.00
Lane Grp Cap(c), veh/h	264	1081	578	0	1126	587	145	0	145	239	272	201
V/C Ratio(X)	0.29	0.46	0.46	0.00	0.53	0.53	0.63	0.00	0.84	0.18	0.29	0.51
Avail Cap(c_a), veh/h	264	1081	578	0	1126	587	180	0	180	337	383	283
HCM Platoon Ratio	2.00	2.00	2.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.93	0.93	0.93	0.00	0.63	0.63	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	41.4	0.0	42.7	31.8	32.6	34.4
Incr Delay (d2), s/veh	2.6	1.3	2.4	0.0	1.1	2.2	4.6	0.0	24.6	0.4	0.6	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.2	0.4	0.0	0.2	0.4	2.3	0.0	3.9	0.9	1.7	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	2.6	1.3	2.4	0.0	1.1	2.2	46.0	0.0	67.3	32.2	33.2	36.4
LnGrp LOS	A	A	A	A	A	A	D	A	E	C	C	D
Approach Vol, veh/h		834			907			213			226	
Approach Delay, s/veh		1.8			1.5			58.2			34.5	
Approach LOS		A			A			E			C	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	57.0	16.9	57.0	26.0
Change Period (Y+Rc), s	5.3	* 4.2	5.3	4.2
Max Green Setting (Gmax), s	39.7	* 16	39.7	30.8
Max Q Clear Time (g_c+I1), s	2.0	12.5	2.0	11.9
Green Ext Time (p_c), s	14.0	0.3	14.0	0.9

Intersection Summary	
HCM 6th Ctrl Delay	10.6
HCM 6th LOS	B

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	24	767	59	48	764	48	80	478	68	0	364	57
Future Volume (veh/h)	24	767	59	48	764	48	80	478	68	0	364	57
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.96	0.99		0.95	1.00		0.97	1.00		0.92
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	1148	1148	1148	1148	1196	1196	1148	1148	1148	0	1148	1148
Adj Flow Rate, veh/h	27	852	55	53	849	44	89	531	29	0	404	19
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	0	2	2
Cap, veh/h	183	1279	82	235	1410	73	85	842	364	0	559	230
Arrive On Green	0.04	0.85	0.85	0.04	0.44	0.44	0.08	0.39	0.39	0.00	0.26	0.26
Sat Flow, veh/h	1094	3000	193	1094	3169	164	1094	2182	942	0	2239	898
Grp Volume(v), veh/h	27	592	315	53	582	311	89	531	29	0	404	19
Grp Sat Flow(s),veh/h/ln	1094	1045	1103	1094	1088	1156	1094	1091	942	0	1091	898
Q Serve(g_s), s	1.4	9.7	9.8	2.7	20.3	20.4	7.8	19.7	1.9	0.0	16.9	1.6
Cycle Q Clear(g_c), s	1.4	9.7	9.8	2.7	20.3	20.4	7.8	19.7	1.9	0.0	16.9	1.6
Prop In Lane	1.00		0.17	1.00		0.14	1.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	183	891	470	235	968	514	85	842	364	0	559	230
V/C Ratio(X)	0.15	0.67	0.67	0.23	0.60	0.60	1.04	0.63	0.08	0.00	0.72	0.08
Avail Cap(c_a), veh/h	244	891	470	276	968	514	85	934	403	0	650	268
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	0.00	1.00	1.00
Uniform Delay (d), s/veh	17.4	4.9	4.9	15.7	21.0	21.1	46.1	24.9	19.4	0.0	34.0	28.3
Incr Delay (d2), s/veh	0.1	3.3	6.2	0.2	2.8	5.2	109.8	1.5	0.1	0.0	3.9	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	1.5	1.9	0.7	5.4	6.1	4.7	5.2	1.3	0.0	4.8	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.5	8.2	11.1	15.9	23.8	26.3	155.9	26.4	19.6	0.0	37.8	28.5
LnGrp LOS	B	A	B	B	C	C	F	C	B	A	D	C
Approach Vol, veh/h		934			946			649			423	
Approach Delay, s/veh		9.4			24.2			43.8			37.4	
Approach LOS		A			C			D			D	
Timer - Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.3	47.9		43.8	6.4	49.8	13.0	30.8				
Change Period (Y+Rc), s	4.6	5.3		5.2	4.6	5.3	5.2	5.2				
Max Green Setting (Gmax), s	7.4	34.7		42.8	7.4	34.7	7.8	29.8				
Max Q Clear Time (g_c+I1), s	4.7	11.8		21.7	3.4	22.4	9.8	18.9				
Green Ext Time (p_c), s	0.0	11.0		5.2	0.0	7.2	0.0	2.7				
Intersection Summary												
HCM 6th Ctrl Delay			25.7									
HCM 6th LOS			C									

Notes

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

Intersection	
Intersection Delay, s/veh	10.6
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥			✥			✥	
Traffic Vol, veh/h	17	153	7	7	236	33	9	51	5	20	49	34
Future Vol, veh/h	17	153	7	7	236	33	9	51	5	20	49	34
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	21	191	9	9	295	41	11	64	6	25	61	43
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	10.1	11.6	9.3	9.5
HCM LOS	B	B	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	14%	10%	3%	19%
Vol Thru, %	78%	86%	86%	48%
Vol Right, %	8%	4%	12%	33%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	65	177	276	103
LT Vol	9	17	7	20
Through Vol	51	153	236	49
RT Vol	5	7	33	34
Lane Flow Rate	81	221	345	129
Geometry Grp	1	1	1	1
Degree of Util (X)	0.125	0.3	0.449	0.186
Departure Headway (Hd)	5.531	4.887	4.686	5.211
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	652	728	762	680
Service Time	3.531	2.968	2.758	3.309
HCM Lane V/C Ratio	0.124	0.304	0.453	0.19
HCM Control Delay	9.3	10.1	11.6	9.5
HCM Lane LOS	A	B	B	A
HCM 95th-tile Q	0.4	1.3	2.3	0.7

Intersection	
Intersection Delay, s/veh	10.7
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	9	164	5	9	262	13	6	93	13	12	18	4
Future Vol, veh/h	9	164	5	9	262	13	6	93	13	12	18	4
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	205	6	11	328	16	8	116	16	15	23	5
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	10	11.7	9.7	9
HCM LOS	A	B	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	5%	5%	3%	35%
Vol Thru, %	83%	92%	92%	53%
Vol Right, %	12%	3%	5%	12%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	112	178	284	34
LT Vol	6	9	9	12
Through Vol	93	164	262	18
RT Vol	13	5	13	4
Lane Flow Rate	140	222	355	42
Geometry Grp	1	1	1	1
Degree of Util (X)	0.205	0.298	0.46	0.066
Departure Headway (Hd)	5.266	4.822	4.66	5.591
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	675	739	767	645
Service Time	3.351	2.893	2.722	3.591
HCM Lane V/C Ratio	0.207	0.3	0.463	0.065
HCM Control Delay	9.7	10	11.7	9
HCM Lane LOS	A	A	B	A
HCM 95th-tile Q	0.8	1.2	2.4	0.2

Intersection	
Intersection Delay, s/veh	10.5
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			✣			✣	
Traffic Vol, veh/h	13	169	8	16	246	23	14	30	17	21	27	26
Future Vol, veh/h	13	169	8	16	246	23	14	30	17	21	27	26
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	16	211	10	20	308	29	18	38	21	26	34	33
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	10	11.5	9.1	9.2
HCM LOS	A	B	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	23%	7%	6%	28%
Vol Thru, %	49%	89%	86%	36%
Vol Right, %	28%	4%	8%	35%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	61	190	285	74
LT Vol	14	13	16	21
Through Vol	30	169	246	27
RT Vol	17	8	23	26
Lane Flow Rate	76	238	356	92
Geometry Grp	1	1	1	1
Degree of Util (X)	0.113	0.315	0.457	0.135
Departure Headway (Hd)	5.312	4.77	4.615	5.253
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	667	748	777	675
Service Time	3.402	2.835	2.673	3.34
HCM Lane V/C Ratio	0.114	0.318	0.458	0.136
HCM Control Delay	9.1	10	11.5	9.2
HCM Lane LOS	A	A	B	A
HCM 95th-tile Q	0.4	1.4	2.4	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1229	103	0	823	0	282	0	49	134	0	67
Future Volume (veh/h)	0	1229	103	0	823	0	282	0	49	134	0	67
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.92	1.00		1.00	1.00		1.00	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	0	1683	1683	0	1683	0	1616	0	1683	1751	0	1683
Adj Flow Rate, veh/h	0	1366	105	0	914	0	313	0	28	149	0	16
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	2	2	0	2	0	2	0	2	2	0	2
Cap, veh/h	0	2914	224	0	3100	0	349	0	0	378	0	0
Arrive On Green	0.00	0.67	0.67	0.00	1.00	0.00	0.23	0.00	0.00	0.23	0.00	0.00
Sat Flow, veh/h	0	4472	332	0	4898	0	1539	313		1667	149	
Grp Volume(v), veh/h	0	969	502	0	914	0	313	46.0		149	33.5	
Grp Sat Flow(s),veh/h/ln	0	1532	1589	0	1532	0	1539	D		1667	C	
Q Serve(g_s), s	0.0	15.0	15.0	0.0	0.0	0.0	19.7			7.6		
Cycle Q Clear(g_c), s	0.0	15.0	15.0	0.0	0.0	0.0	19.7			7.6		
Prop In Lane	0.00		0.21	0.00		0.00	1.00			1.00		
Lane Grp Cap(c), veh/h	0	2066	1072	0	3100	0	349			378		
V/C Ratio(X)	0.00	0.47	0.47	0.00	0.29	0.00	0.90			0.39		
Avail Cap(c_a), veh/h	0	2066	1072	0	3100	0	622			674		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	1.00	1.00			1.00		
Upstream Filter(I)	0.00	1.00	1.00	0.00	0.80	0.00	1.00			1.00		
Uniform Delay (d), s/veh	0.0	7.7	7.7	0.0	0.0	0.0	37.6			32.9		
Incr Delay (d2), s/veh	0.0	0.8	1.5	0.0	0.2	0.0	8.5			0.7		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0		
%ile BackOfQ(50%),veh/ln	0.0	4.6	5.0	0.0	0.1	0.0	8.2			3.1		
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	8.5	9.2	0.0	0.2	0.0	46.0			33.5		
LnGrp LOS	A	A	A	A	A	A	D			C		
Approach Vol, veh/h		1471			914							
Approach Delay, s/veh		8.8			0.2							
Approach LOS		A			A							
Timer - Assigned Phs		2	3			6	7					
Phs Duration (G+Y+Rc), s		72.8	27.2			72.8	27.2					
Change Period (Y+Rc), s		5.3	4.6			5.3	4.6					
Max Green Setting (Gmax), s		49.7	40.4			49.7	40.4					
Max Q Clear Time (g_c+I1), s		17.0	21.7			2.0	9.6					
Green Ext Time (p_c), s		22.5	0.9			15.9	0.4					
Intersection Summary												
HCM 6th Ctrl Delay			11.4									
HCM 6th LOS			B									

Movement	EBL2	EBT	EBR	WBL	WBT	WBR	NBR	SBR	SBR2
Lane Configurations									
Traffic Volume (vph)	105	1228	65	55	596	51	66	232	192
Future Volume (vph)	105	1228	65	55	596	51	66	232	192
Ideal Flow (vphpl)	1350	1350	1350	1350	1350	1350	1350	1350	1350
Lane Width	9	10	10	9	10	10	12	10	10
Total Lost time (s)	4.6	5.3		4.0	5.3		4.6	4.6	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.88	1.00
Frpb, ped/bikes	1.00	0.99		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	0.99		1.00	0.99		0.86	0.85	0.85
Flt Protected	0.95	1.00		0.95	1.00		1.00	1.00	1.00
Satd. Flow (prot)	1018	2970		1018	2969		1030	1663	945
Flt Permitted	0.95	1.00		0.95	1.00		1.00	1.00	1.00
Satd. Flow (perm)	1018	2970		1018	2969		1030	1663	945
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	117	1364	72	61	662	57	73	258	213
RTOR Reduction (vph)	0	5	0	0	0	0	0	0	0
Lane Group Flow (vph)	117	1431	0	61	719	0	73	258	213
Confl. Peds. (#/hr)			115			83			
Confl. Bikes (#/hr)			6			6	6	6	
Turn Type	Prot	NA		Prot	NA		Prot	Prot	Free
Protected Phases	5	2		1	6		8	4	
Permitted Phases									Free
Actuated Green, G (s)	15.4	66.6		1.0	51.6		18.5	18.5	100.0
Effective Green, g (s)	15.4	66.6		1.0	51.6		18.5	18.5	100.0
Actuated g/C Ratio	0.15	0.67		0.01	0.52		0.18	0.18	1.00
Clearance Time (s)	4.6	5.3		4.0	5.3		4.6	4.6	
Vehicle Extension (s)	1.5	3.0		1.5	3.0		2.5	2.5	
Lane Grp Cap (vph)	156	1978		10	1532		190	307	945
v/s Ratio Prot	c0.11	c0.48		c0.06	0.24		0.07	c0.16	
v/s Ratio Perm									0.23
v/c Ratio	0.75	0.72		6.10	0.47		0.38	0.84	0.23
Uniform Delay, d1	40.5	10.8		49.5	15.5		35.8	39.3	0.0
Progression Factor	0.63	0.44		0.85	0.91		1.00	1.00	1.00
Incremental Delay, d2	9.0	1.2		2473.5	0.9		0.9	18.1	0.6
Delay (s)	34.6	6.0		2515.4	15.1		36.7	57.4	0.6
Level of Service	C	A		F	B		D	E	A
Approach Delay (s)		8.2			210.6				
Approach LOS		A			F				

Intersection Summary			
HCM 2000 Control Delay	67.6	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	14.5
Intersection Capacity Utilization	54.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1219	76	101	500	0	125	0	91	396	224	78
Future Volume (veh/h)	0	1219	76	101	500	0	125	0	91	396	224	78
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.88	0.99		1.00	1.00		1.00	1.00		0.93
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	0	1616	1616	1616	1616	0	1683	0	1683	1683	1683	1683
Adj Flow Rate, veh/h	0	1354	83	112	556	0	139	0	101	440	249	17
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	2	2	2	2	0	2	0	2	2	2	2
Cap, veh/h	0	2881	177	289	3018	0	0	0	0	662	358	283
Arrive On Green	0.00	1.00	1.00	0.68	0.68	0.00	0.00	0.00	0.00	0.21	0.21	0.21
Sat Flow, veh/h	0	4357	258	317	4557	0		0		3110	1683	1328
Grp Volume(v), veh/h	0	946	491	112	556	0		0.0		440	249	17
Grp Sat Flow(s),veh/h/ln	0	1471	1529	317	1471	0				1555	1683	1328
Q Serve(g_s), s	0.0	0.0	0.0	17.3	4.6	0.0				13.0	13.7	1.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	17.3	4.6	0.0				13.0	13.7	1.0
Prop In Lane	0.00		0.17	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2012	1046	289	3018	0				662	358	283
V/C Ratio(X)	0.00	0.47	0.47	0.39	0.18	0.00				0.66	0.69	0.06
Avail Cap(c_a), veh/h	0	2012	1046	289	3018	0				809	438	345
HCM Platoon Ratio	1.00	2.00	2.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.64	0.64	1.00	1.00	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	7.7	5.7	0.0				36.1	36.4	31.4
Incr Delay (d2), s/veh	0.0	0.5	1.0	3.9	0.1	0.0				1.5	3.6	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
%ile BackOfQ(50%),veh/ln	0.0	0.1	0.3	1.3	1.3	0.0				5.1	6.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.5	1.0	11.6	5.8	0.0				37.6	40.0	31.5
LnGrp LOS	A	A	A	B	A	A				D	D	C
Approach Vol, veh/h		1437			668						706	
Approach Delay, s/veh		0.7			6.8						38.3	
Approach LOS		A			A						D	
Timer - Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		74.7				74.7		25.3				
Change Period (Y+Rc), s		6.3				6.3		4.0				
Max Green Setting (Gmax), s		43.7				43.7		26.0				
Max Q Clear Time (g_c+I1), s		2.0				19.3		15.7				
Green Ext Time (p_c), s		25.8				10.6		2.5				
Intersection Summary												
HCM 6th Ctrl Delay			11.6									
HCM 6th LOS			B									

Notes

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

Intersection												
Int Delay, s/veh	5.6											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	1609	94	0	598	1	0	0	98	0	0	0
Future Vol, veh/h	2	1609	94	0	598	1	0	0	98	0	0	0
Conflicting Peds, #/hr	107	0	128	0	0	107	0	0	128	107	0	107
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	1788	104	0	664	1	0	0	109	0	0	0

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	772	0	0	-	-	0	-	-	1202
Stage 1	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-
Critical Hdwy	5.34	-	-	-	-	-	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.12	-	-	-	-	-	-	-	3.92
Pot Cap-1 Maneuver	504	-	-	0	-	-	0	0	152
Stage 1	-	-	-	0	-	-	0	0	-
Stage 2	-	-	-	0	-	-	0	0	-
Platoon blocked, %		-	-		-	-			
Mov Cap-1 Maneuver	504	-	-	-	-	-	-	0	116
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	0	-
Stage 1	-	-	-	-	-	-	-	0	-
Stage 2	-	-	-	-	-	-	-	0	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	137.6
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBT	WBR
Capacity (veh/h)	116	504	-	-	-	-
HCM Lane V/C Ratio	0.939	0.004	-	-	-	-
HCM Control Delay (s)	137.6	12.2	0	-	-	-
HCM Lane LOS	F	B	A	-	-	-
HCM 95th %tile Q(veh)	6	0	-	-	-	-

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBR
Lane Configurations									
Traffic Volume (vph)	178	330	1051	146	152	597	137	48	127
Future Volume (vph)	178	330	1051	146	152	597	137	48	127
Ideal Flow (vphpl)	1350	1350	1350	1350	1350	1350	1350	1350	1350
Lane Width	12	9	10	9	9	9	9	9	15
Total Lost time (s)		4.6	5.3		4.6	5.3			4.6
Lane Util. Factor		1.00	0.91		1.00	0.91			1.00
Frpb, ped/bikes		1.00	0.97		1.00	0.93			1.00
Flpb, ped/bikes		1.00	1.00		1.00	1.00			1.00
Frt		1.00	0.98		1.00	0.96			0.86
Flt Protected		0.95	1.00		0.95	1.00			1.00
Satd. Flow (prot)		1018	2886		1018	2623			1133
Flt Permitted		0.95	1.00		0.95	1.00			1.00
Satd. Flow (perm)		1018	2886		1018	2623			1133
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	198	367	1168	162	169	663	152	53	141
RTOR Reduction (vph)	0	0	15	0	0	7	0	0	57
Lane Group Flow (vph)	0	565	1315	0	169	861	0	0	84
Confl. Peds. (#/hr)				124			127	127	
Confl. Bikes (#/hr)				8			2	2	
Turn Type	Prot	Prot	NA		Prot	NA			Perm
Protected Phases	5	5	2		1	6			
Permitted Phases									1
Actuated Green, G (s)		42.4	66.2		23.9	47.7			23.9
Effective Green, g (s)		42.4	66.2		23.9	47.7			23.9
Actuated g/C Ratio		0.42	0.66		0.24	0.48			0.24
Clearance Time (s)		4.6	5.3		4.6	5.3			4.6
Vehicle Extension (s)		2.5	5.0		2.5	5.0			2.5
Lane Grp Cap (vph)		431	1910		243	1251			270
v/s Ratio Prot		c0.55	c0.46		0.17	0.33			
v/s Ratio Perm									0.07
v/c Ratio		1.31	0.69		0.70	0.69			0.31
Uniform Delay, d1		28.8	10.5		34.7	20.4			31.3
Progression Factor		1.18	1.10		1.21	0.59			1.00
Incremental Delay, d2		145.6	0.7		6.1	2.5			0.5
Delay (s)		179.4	12.2		48.2	14.4			31.8
Level of Service		F	B		D	B			C
Approach Delay (s)			62.1			19.9			
Approach LOS			E			B			

Intersection Summary			
HCM 2000 Control Delay	46.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	9.9
Intersection Capacity Utilization	78.3%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	105	1053	20	0	721	81	96	65	37	100	55	114
Future Volume (veh/h)	105	1053	20	0	721	81	96	65	37	100	55	114
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.97		0.93	1.00		0.88	1.00		0.98	1.00		0.89
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	1616	1616	1683	0	1683	1683	1683	1683	1683	1616	1751	1683
Adj Flow Rate, veh/h	117	1170	20	0	801	72	107	72	41	111	61	127
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	0	2	2	2	2	2	2	2	2
Cap, veh/h	360	2411	41	0	2292	204	152	95	54	350	398	290
Arrive On Green	1.00	1.00	1.00	0.00	1.00	1.00	0.10	0.10	0.10	0.23	0.23	0.23
Sat Flow, veh/h	532	4460	76	0	4392	378	1603	999	569	1539	1751	1273
Grp Volume(v), veh/h	117	771	419	0	577	296	107	0	113	111	61	127
Grp Sat Flow(s),veh/h/ln	532	1471	1595	0	1532	1554	1603	0	1568	1539	1751	1273
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	6.5	0.0	7.0	6.0	2.8	8.6
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	6.5	0.0	7.0	6.0	2.8	8.6
Prop In Lane	1.00		0.05	0.00		0.24	1.00		0.36	1.00		1.00
Lane Grp Cap(c), veh/h	360	1590	862	0	1656	840	152	0	149	350	398	290
V/C Ratio(X)	0.33	0.49	0.49	0.00	0.35	0.35	0.70	0.00	0.76	0.32	0.15	0.44
Avail Cap(c_a), veh/h	360	1590	862	0	1656	840	253	0	248	474	539	392
HCM Platoon Ratio	2.00	2.00	2.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.69	0.69	0.69	0.00	0.60	0.60	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	43.9	0.0	44.1	32.2	30.9	33.1
Incr Delay (d2), s/veh	1.7	0.7	1.4	0.0	0.3	0.7	5.8	0.0	7.7	0.5	0.2	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.2	0.3	0.0	0.1	0.2	2.8	0.0	3.1	2.3	1.2	2.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	1.7	0.7	1.4	0.0	0.3	0.7	49.7	0.0	51.8	32.7	31.1	34.2
LnGrp LOS	A	A	A	A	A	A	D	A	D	C	C	C
Approach Vol, veh/h		1307			873			220			299	
Approach Delay, s/veh		1.0			0.5			50.8			33.0	
Approach LOS		A			A			D			C	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		59.4		13.7		59.4		26.9				
Change Period (Y+Rc), s		5.3		* 4.2		5.3		4.2				
Max Green Setting (Gmax), s		39.7		* 16		39.7		30.8				
Max Q Clear Time (g_c+I1), s		2.0		9.0		2.0		10.6				
Green Ext Time (p_c), s		22.3		0.5		13.5		1.1				

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

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	907	56	55	723	61	101	419	97	0	593	87
Future Volume (veh/h)	14	907	56	55	723	61	101	419	97	0	593	87
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.93	0.99		0.93	1.00		0.94	1.00		0.93
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	1616	1616	1616	1616	1683	1683	1616	1616	1616	0	1616	1616
Adj Flow Rate, veh/h	16	1008	54	61	803	55	112	466	41	0	659	30
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	0	2	2
Cap, veh/h	258	1758	94	277	1906	130	120	1234	518	0	835	348
Arrive On Green	0.02	0.82	0.82	0.04	0.44	0.44	0.08	0.40	0.40	0.00	0.27	0.27
Sat Flow, veh/h	1539	4268	228	1539	4369	298	1539	3070	1289	0	3151	1278
Grp Volume(v), veh/h	16	694	368	61	562	296	112	466	41	0	659	30
Grp Sat Flow(s),veh/h/ln	1539	1471	1555	1539	1532	1603	1539	1535	1289	0	1535	1278
Q Serve(g_s), s	0.6	7.9	7.9	2.3	12.7	12.8	7.2	10.7	2.0	0.0	19.9	1.7
Cycle Q Clear(g_c), s	0.6	7.9	7.9	2.3	12.7	12.8	7.2	10.7	2.0	0.0	19.9	1.7
Prop In Lane	1.00		0.15	1.00		0.19	1.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	258	1212	641	277	1336	699	120	1234	518	0	835	348
V/C Ratio(X)	0.06	0.57	0.57	0.22	0.42	0.42	0.93	0.38	0.08	0.00	0.79	0.09
Avail Cap(c_a), veh/h	355	1212	641	337	1336	699	120	1314	552	0	915	381
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)	0.43	0.43	0.43	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	17.2	5.9	5.9	16.3	19.5	19.5	45.8	21.1	18.5	0.0	33.7	27.1
Incr Delay (d2), s/veh	0.0	0.9	1.6	0.1	1.0	1.9	62.0	0.3	0.1	0.0	4.7	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	0.2	1.6	1.9	0.8	4.6	5.0	4.8	3.9	1.8	0.0	7.9	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.2	6.7	7.5	16.4	20.4	21.4	107.8	21.4	18.6	0.0	38.4	27.3
LnGrp LOS	B	A	A	B	C	C	F	C	B	A	D	C
Approach Vol, veh/h		1078			919			619			689	
Approach Delay, s/veh		7.1			20.5			36.8			38.0	
Approach LOS		A			C			D			D	

Timer - Assigned Phs	1	2		4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.1	46.5		45.4	5.7	48.9	13.0	32.4
Change Period (Y+Rc), s	4.6	5.3		5.2	4.6	5.3	5.2	5.2
Max Green Setting (Gmax), s	7.4	34.7		42.8	7.4	34.7	7.8	29.8
Max Q Clear Time (g_c+I1), s	4.3	9.9		12.7	2.6	14.8	9.2	21.9
Green Ext Time (p_c), s	0.0	13.5		5.2	0.0	9.6	0.0	3.6

Intersection Summary	
HCM 6th Ctrl Delay	22.8
HCM 6th LOS	C

Notes

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

Intersection	
Intersection Delay, s/veh	12.2
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			✣			✣	
Traffic Vol, veh/h	20	292	9	9	150	43	5	34	13	44	138	52
Future Vol, veh/h	20	292	9	9	150	43	5	34	13	44	138	52
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	22	324	10	10	167	48	6	38	14	49	153	58
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	13.6	10.9	9.5	12
HCM LOS	B	B	A	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	10%	6%	4%	19%
Vol Thru, %	65%	91%	74%	59%
Vol Right, %	25%	3%	21%	22%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	52	321	202	234
LT Vol	5	20	9	44
Through Vol	34	292	150	138
RT Vol	13	9	43	52
Lane Flow Rate	58	357	224	260
Geometry Grp	1	1	1	1
Degree of Util (X)	0.093	0.513	0.328	0.394
Departure Headway (Hd)	5.82	5.181	5.26	5.459
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	614	696	682	658
Service Time	3.87	3.214	3.297	3.496
HCM Lane V/C Ratio	0.094	0.513	0.328	0.395
HCM Control Delay	9.5	13.6	10.9	12
HCM Lane LOS	A	B	B	B
HCM 95th-tile Q	0.3	3	1.4	1.9

Intersection	
Intersection Delay, s/veh	11.6
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	14	326	6	7	180	22	6	86	8	35	51	18
Future Vol, veh/h	14	326	6	7	180	22	6	86	8	35	51	18
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	16	362	7	8	200	24	7	96	9	39	57	20
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	13.3	10.6	9.9	9.9
HCM LOS	B	B	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	6%	4%	3%	34%
Vol Thru, %	86%	94%	86%	49%
Vol Right, %	8%	2%	11%	17%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	100	346	209	104
LT Vol	6	14	7	35
Through Vol	86	326	180	51
RT Vol	8	6	22	18
Lane Flow Rate	111	384	232	116
Geometry Grp	1	1	1	1
Degree of Util (X)	0.175	0.527	0.328	0.181
Departure Headway (Hd)	5.663	4.934	5.079	5.654
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	633	734	711	634
Service Time	3.703	2.942	3.09	3.694
HCM Lane V/C Ratio	0.175	0.523	0.326	0.183
HCM Control Delay	9.9	13.3	10.6	9.9
HCM Lane LOS	A	B	B	A
HCM 95th-tile Q	0.6	3.1	1.4	0.7

Intersection	
Intersection Delay, s/veh	12.2
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥			✥			✥	
Traffic Vol, veh/h	19	315	29	22	160	27	16	35	25	32	86	34
Future Vol, veh/h	19	315	29	22	160	27	16	35	25	32	86	34
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	21	350	32	24	178	30	18	39	28	36	96	38
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	14.1	10.8	9.7	10.6
HCM LOS	B	B	A	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	21%	5%	11%	21%
Vol Thru, %	46%	87%	77%	57%
Vol Right, %	33%	8%	13%	22%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	76	363	209	152
LT Vol	16	19	22	32
Through Vol	35	315	160	86
RT Vol	25	29	27	34
Lane Flow Rate	84	403	232	169
Geometry Grp	1	1	1	1
Degree of Util (X)	0.134	0.557	0.334	0.263
Departure Headway (Hd)	5.718	4.971	5.179	5.608
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	626	726	694	640
Service Time	3.763	2.998	3.21	3.646
HCM Lane V/C Ratio	0.134	0.555	0.334	0.264
HCM Control Delay	9.7	14.1	10.8	10.6
HCM Lane LOS	A	B	B	B
HCM 95th-tile Q	0.5	3.5	1.5	1.1

LOS Worksheets: Future Conditions

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1030	67	17	601	0	256	0	114	72	0	56
Future Volume (veh/h)	0	1030	67	17	601	0	256	0	114	72	0	56
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	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	0	1196	1196	1196	1196	0	1148	0	1196	1244	0	1196
Adj Flow Rate, veh/h	0	1144	67	19	668	0	284	0	59	80	0	19
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	2	2	2	2	0	2	0	2	2	0	2
Cap, veh/h	0	1953	114	69	1850	0	306	0	0	331	0	0
Arrive On Green	0.00	0.62	0.62	1.00	1.00	0.00	0.28	0.00	0.00	0.28	0.00	0.00
Sat Flow, veh/h	0	3252	184	49	3076	0	1094	284		1185	80	
Grp Volume(v), veh/h	0	792	419	243	444	0	284	55.5		80	28.2	
Grp Sat Flow(s),veh/h/ln	0	1088	1151	1046	990	0	1094	E		1185	C	
Q Serve(g_s), s	0.0	21.7	21.7	0.0	0.0	0.0	25.3			5.2		
Cycle Q Clear(g_c), s	0.0	21.7	21.7	0.0	0.0	0.0	25.3			5.2		
Prop In Lane	0.00		0.16	0.08		0.00	1.00			1.00		
Lane Grp Cap(c), veh/h	0	1352	715	689	1231	0	306			331		
V/C Ratio(X)	0.00	0.59	0.59	0.35	0.36	0.00	0.93			0.24		
Avail Cap(c_a), veh/h	0	1352	715	689	1231	0	442			479		
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00	1.00			1.00		
Upstream Filter(I)	0.00	1.00	1.00	0.88	0.88	0.00	1.00			1.00		
Uniform Delay (d), s/veh	0.0	11.3	11.3	0.0	0.0	0.0	35.0			27.8		
Incr Delay (d2), s/veh	0.0	1.9	3.5	1.3	0.7	0.0	20.5			0.4		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0		
%ile BackOfQ(50%),veh/ln	0.0	5.1	5.7	0.2	0.1	0.0	8.4			1.5		
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	13.1	14.8	1.3	0.7	0.0	55.5			28.2		
LnGrp LOS	A	B	B	A	A	A	E			C		
Approach Vol, veh/h		1211			687							
Approach Delay, s/veh		13.7			0.9							
Approach LOS		B			A							
Timer - Assigned Phs		2	3			6	7					
Phs Duration (G+Y+Rc), s		67.4	32.6			67.4	32.6					
Change Period (Y+Rc), s		5.3	4.6			5.3	4.6					
Max Green Setting (Gmax), s		49.7	40.4			49.7	40.4					
Max Q Clear Time (g_c+I1), s		23.7	27.3			2.0	7.2					
Green Ext Time (p_c), s		15.9	0.7			10.9	0.2					
Intersection Summary												
HCM 6th Ctrl Delay			15.6									
HCM 6th LOS			B									

Movement	EBL2	EBT	EBR	WBL	WBT	WBR	NBR	SBR	SBR2
Lane Configurations									
Traffic Volume (vph)	196	953	53	22	575	109	98	103	203
Future Volume (vph)	196	953	53	22	575	109	98	103	203
Ideal Flow (vphpl)	1350	1350	1350	1350	1350	1350	1350	1350	1350
Lane Width	9	10	10	9	10	10	12	10	10
Total Lost time (s)	4.6	5.3		4.0	5.3		4.6	4.6	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.88	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.98		1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.99		1.00	0.98		0.86	0.85	0.85
Flt Protected	0.95	1.00		0.95	1.00		1.00	1.00	1.00
Satd. Flow (prot)	1018	2999		1018	2916		1030	1663	945
Flt Permitted	0.95	1.00		0.95	1.00		1.00	1.00	1.00
Satd. Flow (perm)	1018	2999		1018	2916		1030	1663	945
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	218	1059	59	24	639	121	109	114	226
RTOR Reduction (vph)	0	5	0	0	0	0	0	0	0
Lane Group Flow (vph)	218	1113	0	24	760	0	109	114	226
Confl. Peds. (#/hr)			24			64			
Confl. Bikes (#/hr)			3			3	3	3	
Turn Type	Prot	NA		Prot	NA		Prot	Prot	Free
Protected Phases	5	2		1	6		8	4	
Permitted Phases									Free
Actuated Green, G (s)	15.4	69.0		1.0	54.0		16.1	16.1	100.0
Effective Green, g (s)	15.4	69.0		1.0	54.0		16.1	16.1	100.0
Actuated g/C Ratio	0.15	0.69		0.01	0.54		0.16	0.16	1.00
Clearance Time (s)	4.6	5.3		4.0	5.3		4.6	4.6	
Vehicle Extension (s)	1.5	3.0		1.5	3.0		2.5	2.5	
Lane Grp Cap (vph)	156	2069		10	1574		165	267	945
v/s Ratio Prot	c0.21	c0.37		0.02	0.26		c0.11	0.07	
v/s Ratio Perm									0.24
v/c Ratio	1.40	0.54		2.40	0.48		0.66	0.43	0.24
Uniform Delay, d1	42.3	7.6		49.5	14.3		39.4	37.8	0.0
Progression Factor	0.75	0.49		0.63	1.10		1.00	1.00	1.00
Incremental Delay, d2	205.2	0.8		848.6	1.0		8.6	0.8	0.6
Delay (s)	236.9	4.5		879.9	16.8		48.0	38.6	0.6
Level of Service	F	A		F	B		D	D	A
Approach Delay (s)		42.4			43.2				
Approach LOS		D			D				

Intersection Summary			
HCM 2000 Control Delay	39.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	14.5
Intersection Capacity Utilization	56.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1026	26	8	594	0	30	0	39	249	79	43
Future Volume (veh/h)	0	1026	26	8	594	0	30	0	39	249	79	43
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		1.00	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	0	1148	1148	1148	1148	0	1196	0	1196	1196	1196	1196
Adj Flow Rate, veh/h	0	1140	27	9	660	0	33	0	43	277	88	7
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	2	2	2	2	0	2	0	2	2	2	2
Cap, veh/h	0	2261	54	283	2253	0	0	0	0	394	213	172
Arrive On Green	0.00	1.00	1.00	0.96	0.96	0.00	0.00	0.00	0.00	0.18	0.18	0.18
Sat Flow, veh/h	0	3250	74	294	3238	0		0		2210	1196	964
Grp Volume(v), veh/h	0	757	410	9	660	0		0.0		277	88	7
Grp Sat Flow(s),veh/h/ln	0	1045	1131	294	1045	0				1105	1196	964
Q Serve(g_s), s	0.0	0.0	0.0	0.1	1.3	0.0				11.8	6.5	0.6
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.1	1.3	0.0				11.8	6.5	0.6
Prop In Lane	0.00		0.07	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1502	813	283	2253	0				394	213	172
V/C Ratio(X)	0.00	0.50	0.50	0.03	0.29	0.00				0.70	0.41	0.04
Avail Cap(c_a), veh/h	0	1502	813	283	2253	0				575	311	251
HCM Platoon Ratio	1.00	2.00	2.00	1.33	1.33	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.82	0.82	1.00	1.00	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.6	0.6	0.0				38.6	36.4	34.0
Incr Delay (d2), s/veh	0.0	1.0	1.8	0.2	0.3	0.0				2.3	1.3	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
%ile BackOfQ(50%),veh/ln	0.0	0.2	0.4	0.0	0.2	0.0				3.3	2.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	1.0	1.8	0.8	1.0	0.0				40.9	37.7	34.1
LnGrp LOS	A	A	A	A	A	A				D	D	C
Approach Vol, veh/h		1167			669						372	
Approach Delay, s/veh		1.3			1.0						40.0	
Approach LOS		A			A						D	

Timer - Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		78.2				78.2		21.8				
Change Period (Y+Rc), s		6.3				6.3		4.0				
Max Green Setting (Gmax), s		43.7				43.7		26.0				
Max Q Clear Time (g_c+I1), s		2.0				3.3		13.8				
Green Ext Time (p_c), s		20.0				10.5		1.2				

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

Notes

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

Intersection	
Int Delay, s/veh	2.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	3	1296	29	0	588	3	0	0	126	0	0	0
Future Vol, veh/h	3	1296	29	0	588	3	0	0	126	0	0	0
Conflicting Peds, #/hr	55	0	36	0	0	53	0	0	34	53	0	55
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	1440	32	0	653	3	0	0	140	0	0	0

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	711	0	0	-	-	0	-	-	806
Stage 1	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-
Critical Hdwy	5.34	-	-	-	-	-	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.12	-	-	-	-	-	-	-	3.92
Pot Cap-1 Maneuver	538	-	-	0	-	-	0	0	279
Stage 1	-	-	-	0	-	-	0	0	-
Stage 2	-	-	-	0	-	-	0	0	-
Platoon blocked, %		-	-		-	-			
Mov Cap-1 Maneuver	538	-	-	-	-	-	-	0	260
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	0	-
Stage 1	-	-	-	-	-	-	-	0	-
Stage 2	-	-	-	-	-	-	-	0	-

Approach	EB	WB	NB
HCM Control Delay, s	0.1	0	33.9
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBT	WBR
Capacity (veh/h)	260	538	-	-	-	-
HCM Lane V/C Ratio	0.538	0.006	-	-	-	-
HCM Control Delay (s)	33.9	11.7	0.1	-	-	-
HCM Lane LOS	D	B	A	-	-	-
HCM 95th %tile Q(veh)	2.9	0	-	-	-	-

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBR
Lane Configurations									
Traffic Volume (vph)	395	76	841	28	35	705	275	15	30
Future Volume (vph)	395	76	841	28	35	705	275	15	30
Ideal Flow (vphpl)	1350	1350	1350	1350	1350	1350	1350	1350	1350
Lane Width	12	9	10	9	9	9	9	9	15
Total Lost time (s)		4.6	5.3		4.6	5.3			4.6
Lane Util. Factor		1.00	0.91		1.00	0.91			1.00
Frpb, ped/bikes		1.00	1.00		1.00	0.96			1.00
Flpb, ped/bikes		1.00	1.00		1.00	1.00			1.00
Frt		1.00	1.00		1.00	0.96			0.86
Flt Protected		0.95	1.00		0.95	1.00			1.00
Satd. Flow (prot)		1018	3013		1018	2684			1133
Flt Permitted		0.95	1.00		0.95	1.00			1.00
Satd. Flow (perm)		1018	3013		1018	2684			1133
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	439	84	934	31	39	783	306	17	33
RTOR Reduction (vph)	0	0	3	0	0	2	0	0	27
Lane Group Flow (vph)	0	523	962	0	39	1104	0	0	6
Confl. Peds. (#/hr)				32			54	54	
Confl. Bikes (#/hr)				2			8	8	
Turn Type	Prot	Prot	NA		Prot	NA			Perm
Protected Phases	5	5	2		1	6			
Permitted Phases									1
Actuated Green, G (s)		42.4	70.7		19.4	47.7			19.4
Effective Green, g (s)		42.4	70.7		19.4	47.7			19.4
Actuated g/C Ratio		0.42	0.71		0.19	0.48			0.19
Clearance Time (s)		4.6	5.3		4.6	5.3			4.6
Vehicle Extension (s)		2.5	5.0		2.5	5.0			2.5
Lane Grp Cap (vph)		431	2130		197	1280			219
v/s Ratio Prot		c0.51	0.32		0.04	c0.41			
v/s Ratio Perm									0.01
v/c Ratio		1.21	0.45		0.20	0.86			0.03
Uniform Delay, d1		28.8	6.3		33.8	23.2			32.7
Progression Factor		1.13	1.13		1.25	0.57			1.00
Incremental Delay, d2		112.6	0.6		0.3	6.4			0.0
Delay (s)		145.3	7.7		42.6	19.7			32.7
Level of Service		F	A		D	B			C
Approach Delay (s)			56.0			20.5			
Approach LOS			E			C			

Intersection Summary			
HCM 2000 Control Delay	40.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.03		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	9.9
Intersection Capacity Utilization	81.7%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	73	787	34	0	790	93	84	84	30	53	74	72
Future Volume (veh/h)	73	787	34	0	790	93	84	84	30	53	74	72
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.95	1.00		0.92	1.00		0.98	1.00		0.90
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	1148	1148	1196	0	1196	1196	1196	1196	1196	1148	1244	1196
Adj Flow Rate, veh/h	81	874	31	0	878	92	93	93	33	59	82	80
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	0	2	2	2	2	2	2	2	2
Cap, veh/h	256	1625	58	0	1559	162	149	110	39	228	259	191
Arrive On Green	1.00	1.00	1.00	0.00	1.00	1.00	0.13	0.13	0.13	0.21	0.21	0.21
Sat Flow, veh/h	351	3102	110	0	3084	310	1139	839	298	1094	1244	916
Grp Volume(v), veh/h	81	588	317	0	641	329	93	0	126	59	82	80
Grp Sat Flow(s),veh/h/ln	351	1045	1122	0	1088	1109	1139	0	1136	1094	1244	916
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	7.7	0.0	10.8	4.5	5.6	7.6
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	7.7	0.0	10.8	4.5	5.6	7.6
Prop In Lane	1.00		0.10	0.00		0.28	1.00		0.26	1.00		1.00
Lane Grp Cap(c), veh/h	256	1095	588	0	1141	581	149	0	149	228	259	191
V/C Ratio(X)	0.32	0.54	0.54	0.00	0.56	0.57	0.62	0.00	0.85	0.26	0.32	0.42
Avail Cap(c_a), veh/h	256	1095	588	0	1141	581	180	0	180	337	383	282
HCM Platoon Ratio	2.00	2.00	2.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.91	0.91	0.91	0.00	0.53	0.53	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	41.1	0.0	42.5	33.1	33.5	34.3
Incr Delay (d2), s/veh	2.9	1.7	3.2	0.0	1.1	2.1	4.7	0.0	26.1	0.6	0.7	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.3	0.5	0.0	0.2	0.3	2.4	0.0	4.1	1.2	1.7	1.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	2.9	1.7	3.2	0.0	1.1	2.1	45.9	0.0	68.6	33.7	34.2	35.8
LnGrp LOS	A	A	A	A	A	A	D	A	E	C	C	D
Approach Vol, veh/h		986			970			219			221	
Approach Delay, s/veh		2.3			1.4			59.0			34.7	
Approach LOS		A			A			E			C	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	57.7	17.3	57.7	25.0
Change Period (Y+Rc), s	5.3	* 4.2	5.3	4.2
Max Green Setting (Gmax), s	39.7	* 16	39.7	30.8
Max Q Clear Time (g_c+I1), s	2.0	12.8	2.0	9.6
Green Ext Time (p_c), s	17.1	0.3	15.3	0.9

Intersection Summary	
HCM 6th Ctrl Delay	10.1
HCM 6th LOS	B

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	32	902	67	49	810	56	89	504	70	5	383	62
Future Volume (veh/h)	32	902	67	49	810	56	89	504	70	5	383	62
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.95	1.00		0.97	0.99		0.92
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	1148	1148	1148	1148	1196	1196	1148	1148	1148	1196	1148	1148
Adj Flow Rate, veh/h	36	1002	63	54	900	53	99	560	31	6	426	25
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	172	1257	79	195	1355	80	85	857	370	39	558	237
Arrive On Green	0.05	0.84	0.84	0.04	0.43	0.43	0.08	0.39	0.39	0.26	0.26	0.26
Sat Flow, veh/h	1094	3005	189	1094	3143	184	1094	2182	942	8	2122	899
Grp Volume(v), veh/h	36	696	369	54	623	330	99	560	31	231	201	25
Grp Sat Flow(s),veh/h/ln	1094	1045	1104	1094	1088	1150	1094	1091	942	1137	993	899
Q Serve(g_s), s	1.9	16.3	16.4	2.8	22.8	22.9	7.8	21.0	2.1	0.0	18.7	2.1
Cycle Q Clear(g_c), s	1.9	16.3	16.4	2.8	22.8	22.9	7.8	21.0	2.1	18.6	18.7	2.1
Prop In Lane	1.00		0.17	1.00		0.16	1.00		1.00	0.03		1.00
Lane Grp Cap(c), veh/h	172	874	462	195	939	496	85	857	370	336	261	237
V/C Ratio(X)	0.21	0.80	0.80	0.28	0.66	0.67	1.16	0.65	0.08	0.69	0.77	0.11
Avail Cap(c_a), veh/h	226	874	462	235	939	496	85	934	403	375	296	268
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)	0.73	0.73	0.73	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.2	6.1	6.1	17.2	22.7	22.7	46.1	24.8	19.0	34.0	34.0	27.9
Incr Delay (d2), s/veh	0.2	5.5	10.1	0.3	3.7	6.9	147.2	1.7	0.1	5.3	11.5	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	2.1	2.8	0.7	6.1	6.9	5.6	5.6	0.5	5.7	5.3	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.3	11.6	16.2	17.5	26.3	29.6	193.3	26.5	19.2	39.4	45.5	28.2
LnGrp LOS	B	B	B	B	C	C	F	C	B	D	D	C
Approach Vol, veh/h		1101			1007			690			457	
Approach Delay, s/veh		13.4			26.9			50.1			41.4	
Approach LOS		B			C			D			D	

Timer - Assigned Phs	1	2		4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.4	47.1		44.5	7.1	48.4	13.0	31.5
Change Period (Y+Rc), s	4.6	5.3		5.2	4.6	5.3	5.2	5.2
Max Green Setting (Gmax), s	7.4	34.7		42.8	7.4	34.7	7.8	29.8
Max Q Clear Time (g_c+I1), s	4.8	18.4		23.0	3.9	24.9	9.8	20.7
Green Ext Time (p_c), s	0.0	10.2		5.4	0.0	6.3	0.0	2.4

Intersection Summary		
HCM 6th Ctrl Delay		29.3
HCM 6th LOS		C

Notes

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

Intersection	
Intersection Delay, s/veh	10.5
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥			✥			✥	
Traffic Vol, veh/h	10	170	7	7	257	19	9	46	5	6	42	26
Future Vol, veh/h	10	170	7	7	257	19	9	46	5	6	42	26
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	13	213	9	9	321	24	11	58	6	8	53	33
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	10	11.5	9.2	9.1
HCM LOS	A	B	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	15%	5%	2%	8%
Vol Thru, %	77%	91%	91%	57%
Vol Right, %	8%	4%	7%	35%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	60	187	283	74
LT Vol	9	10	7	6
Through Vol	46	170	257	42
RT Vol	5	7	19	26
Lane Flow Rate	75	234	354	92
Geometry Grp	1	1	1	1
Degree of Util (X)	0.112	0.309	0.453	0.134
Departure Headway (Hd)	5.399	4.764	4.61	5.198
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	658	750	778	684
Service Time	3.485	2.827	2.665	3.28
HCM Lane V/C Ratio	0.114	0.312	0.455	0.135
HCM Control Delay	9.2	10	11.5	9.1
HCM Lane LOS	A	A	B	A
HCM 95th-tile Q	0.4	1.3	2.4	0.5

Intersection	
Intersection Delay, s/veh	10.8
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			✣			✣	
Traffic Vol, veh/h	10	166	5	9	267	12	7	93	13	11	18	4
Future Vol, veh/h	10	166	5	9	267	12	7	93	13	11	18	4
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	13	208	6	11	334	15	9	116	16	14	23	5
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	10	11.8	9.8	9
HCM LOS	A	B	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	6%	6%	3%	33%
Vol Thru, %	82%	92%	93%	55%
Vol Right, %	12%	3%	4%	12%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	113	181	288	33
LT Vol	7	10	9	11
Through Vol	93	166	267	18
RT Vol	13	5	12	4
Lane Flow Rate	141	226	360	41
Geometry Grp	1	1	1	1
Degree of Util (X)	0.207	0.304	0.467	0.064
Departure Headway (Hd)	5.287	4.831	4.669	5.612
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	672	738	767	642
Service Time	3.374	2.901	2.73	3.612
HCM Lane V/C Ratio	0.21	0.306	0.469	0.064
HCM Control Delay	9.8	10	11.8	9
HCM Lane LOS	A	A	B	A
HCM 95th-tile Q	0.8	1.3	2.5	0.2

Intersection	
Intersection Delay, s/veh	10.2
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥			✥			✥	
Traffic Vol, veh/h	4	180	8	16	256	4	14	24	18	8	22	21
Future Vol, veh/h	4	180	8	16	256	4	14	24	18	8	22	21
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	225	10	20	320	5	18	30	23	10	28	26
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.8	11.1	8.9	8.7
HCM LOS	A	B	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	25%	2%	6%	16%
Vol Thru, %	43%	94%	93%	43%
Vol Right, %	32%	4%	1%	41%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	56	192	276	51
LT Vol	14	4	16	8
Through Vol	24	180	256	22
RT Vol	18	8	4	21
Lane Flow Rate	70	240	345	64
Geometry Grp	1	1	1	1
Degree of Util (X)	0.101	0.309	0.436	0.091
Departure Headway (Hd)	5.206	4.64	4.55	5.145
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	684	773	790	692
Service Time	3.274	2.687	2.593	3.213
HCM Lane V/C Ratio	0.102	0.31	0.437	0.092
HCM Control Delay	8.9	9.8	11.1	8.7
HCM Lane LOS	A	A	B	A
HCM 95th-tile Q	0.3	1.3	2.2	0.3

HCM 6th Signalized Intersection Summary
1: S Linden Dr & Wilshire Blvd 06/22/2023

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1322	134	28	1020	0	310	0	69	138	0	69
Future Volume (veh/h)	0	1322	134	28	1020	0	310	0	69	138	0	69
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.92	1.00		1.00	1.00		1.00	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	0	1683	1683	1683	1683	0	1616	0	1683	1751	0	1683
Adj Flow Rate, veh/h	0	1469	140	31	1133	0	344	0	51	153	0	19
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	2	2	2	2	0	2	0	2	2	0	2
Cap, veh/h	0	2767	264	82	2672	0	380	0	0	411	0	0
Arrive On Green	0.00	0.65	0.65	1.00	1.00	0.00	0.25	0.00	0.00	0.25	0.00	0.00
Sat Flow, veh/h	0	4380	403	65	4221	0	1539	344		1667	153	
Grp Volume(v), veh/h	0	1064	545	384	780	0	344	47.4		153	31.8	
Grp Sat Flow(s),veh/h/ln	0	1532	1568	1360	1394	0	1539	D		1667	C	
Q Serve(g_s), s	0.0	18.4	18.4	0.0	0.0	0.0	21.7			7.6		
Cycle Q Clear(g_c), s	0.0	18.4	18.4	0.0	0.0	0.0	21.7			7.6		
Prop In Lane	0.00		0.26	0.08		0.00	1.00			1.00		
Lane Grp Cap(c), veh/h	0	2005	1026	929	1824	0	380			411		
V/C Ratio(X)	0.00	0.53	0.53	0.41	0.43	0.00	0.91			0.37		
Avail Cap(c_a), veh/h	0	2005	1026	929	1824	0	622			674		
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00	1.00			1.00		
Upstream Filter(I)	0.00	1.00	1.00	0.68	0.68	0.00	1.00			1.00		
Uniform Delay (d), s/veh	0.0	9.2	9.2	0.0	0.0	0.0	36.5			31.2		
Incr Delay (d2), s/veh	0.0	1.0	2.0	0.9	0.5	0.0	10.9			0.6		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0		
%ile BackOfQ(50%),veh/ln	0.0	5.7	6.2	0.2	0.1	0.0	9.2			3.1		
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	10.2	11.1	0.9	0.5	0.0	47.4			31.8		
LnGrp LOS	A	B	B	A	A	A	D			C		
Approach Vol, veh/h		1609			1164							
Approach Delay, s/veh		10.5			0.6							
Approach LOS		B			A							
Timer - Assigned Phs		2	3			6	7					
Phs Duration (G+Y+Rc), s		70.7	29.3			70.7	29.3					
Change Period (Y+Rc), s		5.3	4.6			5.3	4.6					
Max Green Setting (Gmax), s		49.7	40.4			49.7	40.4					
Max Q Clear Time (g_c+I1), s		20.4	23.7			2.0	9.6					
Green Ext Time (p_c), s		22.4	1.0			22.4	0.4					
Intersection Summary												
HCM 6th Ctrl Delay			11.9									
HCM 6th LOS			B									

Movement	EBL2	EBT	EBR	WBL	WBT	WBR	NBR	SBR	SBR2
Lane Configurations									
Traffic Volume (vph)	108	1340	67	57	801	41	83	252	198
Future Volume (vph)	108	1340	67	57	801	41	83	252	198
Ideal Flow (vphpl)	1350	1350	1350	1350	1350	1350	1350	1350	1350
Lane Width	9	10	10	9	10	10	12	10	10
Total Lost time (s)	4.6	5.3		4.0	5.3		4.6	4.6	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.88	1.00
Frpb, ped/bikes	1.00	0.99		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	0.99		1.00	0.99		0.86	0.85	0.85
Flt Protected	0.95	1.00		0.95	1.00		1.00	1.00	1.00
Satd. Flow (prot)	1018	2974		1018	2994		1030	1663	945
Flt Permitted	0.95	1.00		0.95	1.00		1.00	1.00	1.00
Satd. Flow (perm)	1018	2974		1018	2994		1030	1663	945
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	120	1489	74	63	890	46	92	280	220
RTOR Reduction (vph)	0	5	0	0	0	0	0	0	0
Lane Group Flow (vph)	120	1558	0	63	936	0	92	280	220
Confl. Peds. (#/hr)			115			83			
Confl. Bikes (#/hr)			6			6	6	6	
Turn Type	Prot	NA		Prot	NA		Prot	Prot	Free
Protected Phases	5	2		1	6		8	4	
Permitted Phases									Free
Actuated Green, G (s)	15.4	65.9		1.0	50.9		19.2	19.2	100.0
Effective Green, g (s)	15.4	65.9		1.0	50.9		19.2	19.2	100.0
Actuated g/C Ratio	0.15	0.66		0.01	0.51		0.19	0.19	1.00
Clearance Time (s)	4.6	5.3		4.0	5.3		4.6	4.6	
Vehicle Extension (s)	1.5	3.0		1.5	3.0		2.5	2.5	
Lane Grp Cap (vph)	156	1959		10	1523		197	319	945
v/s Ratio Prot	0.12	c0.52		c0.06	0.31		0.09	c0.17	
v/s Ratio Perm									0.23
v/c Ratio	0.77	0.80		6.30	0.61		0.47	0.88	0.23
Uniform Delay, d1	40.6	12.2		49.5	17.5		35.9	39.3	0.0
Progression Factor	0.61	0.51		0.64	0.99		1.00	1.00	1.00
Incremental Delay, d2	7.0	1.2		2556.0	1.6		1.3	22.6	0.6
Delay (s)	31.9	7.5		2587.5	19.0		37.1	61.8	0.6
Level of Service	C	A		F	B		D	E	A
Approach Delay (s)		9.2			181.0				
Approach LOS		A			F				

Intersection Summary			
HCM 2000 Control Delay	66.3	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	14.5
Intersection Capacity Utilization	61.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1406	19	20	773	0	46	0	55	399	222	80
Future Volume (veh/h)	0	1406	19	20	773	0	46	0	55	399	222	80
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.88	0.99		1.00	1.00		1.00	1.00		0.93
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	0	1616	1616	1616	1616	0	1683	0	1683	1683	1683	1683
Adj Flow Rate, veh/h	0	1562	20	22	859	0	51	0	61	443	247	19
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	2	2	2	2	0	2	0	2	2	2	2
Cap, veh/h	0	3068	39	261	3021	0	0	0	0	660	357	282
Arrive On Green	0.00	1.00	1.00	0.91	0.91	0.00	0.00	0.00	0.00	0.21	0.21	0.21
Sat Flow, veh/h	0	4626	57	276	4557	0		0		3110	1683	1327
Grp Volume(v), veh/h	0	1025	557	22	859	0		0.0		443	247	19
Grp Sat Flow(s),veh/h/ln	0	1471	1597	276	1471	0				1555	1683	1327
Q Serve(g_s), s	0.0	0.0	0.0	0.8	2.3	0.0				13.1	13.5	1.1
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.8	2.3	0.0				13.1	13.5	1.1
Prop In Lane	0.00		0.04	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2014	1093	261	3021	0				660	357	282
V/C Ratio(X)	0.00	0.51	0.51	0.08	0.28	0.00				0.67	0.69	0.07
Avail Cap(c_a), veh/h	0	2014	1093	261	3021	0				809	438	345
HCM Platoon Ratio	1.00	2.00	2.00	1.33	1.33	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.54	0.54	1.00	1.00	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	1.4	1.5	0.0				36.2	36.4	31.5
Incr Delay (d2), s/veh	0.0	0.5	0.9	0.6	0.2	0.0				1.6	3.5	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
%ile BackOfQ(50%),veh/ln	0.0	0.1	0.3	0.1	0.6	0.0				5.1	5.9	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.5	0.9	2.1	1.7	0.0				37.8	39.8	31.6
LnGrp LOS	A	A	A	A	A	A				D	D	C
Approach Vol, veh/h		1582			881						709	
Approach Delay, s/veh		0.6			1.8						38.3	
Approach LOS		A			A						D	

Timer - Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		74.8				74.8		25.2				
Change Period (Y+Rc), s		6.3				6.3		4.0				
Max Green Setting (Gmax), s		43.7				43.7		26.0				
Max Q Clear Time (g_c+I1), s		2.0				4.3		15.5				
Green Ext Time (p_c), s		28.5				14.9		2.5				

Intersection Summary			
HCM 6th Ctrl Delay			9.4
HCM 6th LOS			A

Notes

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

Intersection	
Int Delay, s/veh	6.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	1766	91	0	790	1	0	0	96	0	0	0
Future Vol, veh/h	2	1766	91	0	790	1	0	0	96	0	0	0
Conflicting Peds, #/hr	107	0	128	0	0	107	0	0	128	107	0	107
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	1962	101	0	878	1	0	0	107	0	0	0

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	986	0	0	-	-	0	-	-	1288
Stage 1	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-
Critical Hdwy	5.34	-	-	-	-	-	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.12	-	-	-	-	-	-	-	3.92
Pot Cap-1 Maneuver	398	-	-	0	-	-	0	0	133
Stage 1	-	-	-	0	-	-	0	0	-
Stage 2	-	-	-	0	-	-	0	0	-
Platoon blocked, %		-	-		-	-			
Mov Cap-1 Maneuver	398	-	-	-	-	-	-	0	~ 101
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	0	-
Stage 1	-	-	-	-	-	-	-	0	-
Stage 2	-	-	-	-	-	-	-	0	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	184
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBT	WBR
Capacity (veh/h)	101	398	-	-	-	-
HCM Lane V/C Ratio	1.056	0.006	-	-	-	-
HCM Control Delay (s)	184	14.1	0	-	-	-
HCM Lane LOS	F	B	A	-	-	-
HCM 95th %tile Q(veh)	6.7	0	-	-	-	-

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

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBR
Lane Configurations									
Traffic Volume (vph)	183	338	1250	88	58	789	141	49	69
Future Volume (vph)	183	338	1250	88	58	789	141	49	69
Ideal Flow (vphpl)	1350	1350	1350	1350	1350	1350	1350	1350	1350
Lane Width	12	9	10	9	9	9	9	9	15
Total Lost time (s)		4.6	5.3		4.6	5.3			4.6
Lane Util. Factor		1.00	0.91		1.00	0.91			1.00
Frpb, ped/bikes		1.00	0.98		1.00	0.94			1.00
Flpb, ped/bikes		1.00	1.00		1.00	1.00			1.00
Frt		1.00	0.99		1.00	0.97			0.86
Flt Protected		0.95	1.00		0.95	1.00			1.00
Satd. Flow (prot)		1018	2954		1018	2676			1133
Flt Permitted		0.95	1.00		0.95	1.00			1.00
Satd. Flow (perm)		1018	2954		1018	2676			1133
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	203	376	1389	98	64	877	157	54	77
RTOR Reduction (vph)	0	0	6	0	0	6	0	0	60
Lane Group Flow (vph)	0	579	1481	0	64	1082	0	0	17
Confl. Peds. (#/hr)				124			127	127	
Confl. Bikes (#/hr)				8			2	2	
Turn Type	Prot	Prot	NA		Prot	NA			Perm
Protected Phases	5	5	2		1	6			
Permitted Phases									1
Actuated Green, G (s)		42.4	70.4		19.7	47.7			19.7
Effective Green, g (s)		42.4	70.4		19.7	47.7			19.7
Actuated g/C Ratio		0.42	0.70		0.20	0.48			0.20
Clearance Time (s)		4.6	5.3		4.6	5.3			4.6
Vehicle Extension (s)		2.5	5.0		2.5	5.0			2.5
Lane Grp Cap (vph)		431	2079		200	1276			223
v/s Ratio Prot		c0.57	0.50		0.06	c0.40			
v/s Ratio Perm									0.01
v/c Ratio		1.34	0.71		0.32	0.85			0.08
Uniform Delay, d1		28.8	8.8		34.4	23.0			32.7
Progression Factor		1.10	1.05		1.26	0.56			1.00
Incremental Delay, d2		160.2	0.8		0.5	5.0			0.1
Delay (s)		192.0	10.0		44.0	17.9			32.8
Level of Service		F	B		D	B			C
Approach Delay (s)			61.0			19.3			
Approach LOS			E			B			

Intersection Summary			
HCM 2000 Control Delay	45.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.08		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	9.9
Intersection Capacity Utilization	85.1%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	106	1193	21	0	848	108	99	68	38	115	58	88
Future Volume (veh/h)	106	1193	21	0	848	108	99	68	38	115	58	88
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		0.93	1.00		0.88	1.00		0.98	1.00		0.89
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	1616	1616	1683	0	1683	1683	1683	1683	1683	1616	1751	1683
Adj Flow Rate, veh/h	118	1326	21	0	942	102	110	76	42	128	64	98
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	0	2	2	2	2	2	2	2	2
Cap, veh/h	320	2425	38	0	2252	243	157	99	55	342	389	282
Arrive On Green	1.00	1.00	1.00	0.00	1.00	1.00	0.10	0.10	0.10	0.22	0.22	0.22
Sat Flow, veh/h	456	4467	71	0	4299	447	1603	1011	559	1539	1751	1270
Grp Volume(v), veh/h	118	873	474	0	694	350	110	0	118	128	64	98
Grp Sat Flow(s),veh/h/ln	456	1471	1597	0	1532	1531	1603	0	1570	1539	1751	1270
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	6.6	0.0	7.3	7.1	3.0	6.5
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	6.6	0.0	7.3	7.1	3.0	6.5
Prop In Lane	1.00		0.04	0.00		0.29	1.00		0.36	1.00		1.00
Lane Grp Cap(c), veh/h	320	1597	867	0	1663	831	157	0	154	342	389	282
V/C Ratio(X)	0.37	0.55	0.55	0.00	0.42	0.42	0.70	0.00	0.77	0.37	0.16	0.35
Avail Cap(c_a), veh/h	320	1597	867	0	1663	831	253	0	248	474	539	391
HCM Platoon Ratio	2.00	2.00	2.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.69	0.69	0.69	0.00	0.40	0.40	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	43.7	0.0	44.0	33.0	31.4	32.8
Incr Delay (d2), s/veh	2.3	0.9	1.7	0.0	0.3	0.6	5.5	0.0	7.7	0.7	0.2	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.2	0.4	0.0	0.1	0.1	2.9	0.0	3.2	2.7	1.3	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	2.3	0.9	1.7	0.0	0.3	0.6	49.2	0.0	51.7	33.7	31.6	33.5
LnGrp LOS	A	A	A	A	A	A	D	A	D	C	C	C
Approach Vol, veh/h		1465			1044			228			290	
Approach Delay, s/veh		1.3			0.4			50.5			33.2	
Approach LOS		A			A			D			C	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		59.6		14.0		59.6		26.4				
Change Period (Y+Rc), s		5.3		* 4.2		5.3		4.2				
Max Green Setting (Gmax), s		39.7		* 16		39.7		30.8				
Max Q Clear Time (g_c+I1), s		2.0		9.3		2.0		9.1				
Green Ext Time (p_c), s		25.4		0.5		16.8		1.1				

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

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	19	1044	64	57	868	68	110	441	100	5	620	91
Future Volume (veh/h)	19	1044	64	57	868	68	110	441	100	5	620	91
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.93	0.99		0.93	1.00		0.94	0.97		0.93
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	1616	1616	1616	1616	1683	1683	1616	1616	1616	1683	1616	1616
Adj Flow Rate, veh/h	21	1160	63	63	964	63	122	490	44	6	689	34
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	217	1726	94	242	1876	122	120	1252	526	39	833	356
Arrive On Green	0.03	0.81	0.81	0.04	0.43	0.43	0.08	0.41	0.41	0.28	0.28	0.28
Sat Flow, veh/h	1539	4264	231	1539	4384	286	1539	3070	1290	7	2997	1280
Grp Volume(v), veh/h	21	800	423	63	673	354	122	490	44	372	323	34
Grp Sat Flow(s),veh/h/ln	1539	1471	1554	1539	1532	1606	1539	1535	1290	1607	1397	1280
Q Serve(g_s), s	0.8	11.4	11.4	2.4	16.1	16.2	7.8	11.2	2.1	1.9	21.7	2.0
Cycle Q Clear(g_c), s	0.8	11.4	11.4	2.4	16.1	16.2	7.8	11.2	2.1	21.6	21.7	2.0
Prop In Lane	1.00		0.15	1.00		0.18	1.00		1.00	0.02		1.00
Lane Grp Cap(c), veh/h	217	1190	629	242	1311	687	120	1252	526	483	388	356
V/C Ratio(X)	0.10	0.67	0.67	0.26	0.51	0.52	1.02	0.39	0.08	0.77	0.83	0.10
Avail Cap(c_a), veh/h	311	1190	629	300	1311	687	120	1314	552	515	416	381
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)	0.22	0.22	0.22	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.9	6.8	6.8	17.1	21.0	21.0	46.1	20.9	18.1	33.9	33.9	26.8
Incr Delay (d2), s/veh	0.0	0.7	1.3	0.2	1.4	2.8	86.6	0.3	0.1	7.2	13.4	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	2.0	2.2	0.8	5.9	6.4	5.9	4.1	0.6	9.4	8.8	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.0	7.4	8.0	17.3	22.4	23.8	132.7	21.1	18.2	41.1	47.3	26.9
LnGrp LOS	B	A	A	B	C	C	F	C	B	D	D	C
Approach Vol, veh/h		1244			1090			656			729	
Approach Delay, s/veh		7.8			22.6			41.7			43.2	
Approach LOS		A			C			D			D	
Timer - Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.2	45.8		46.0	5.9	48.1	13.0	33.0				
Change Period (Y+Rc), s	4.6	5.3		5.2	4.6	5.3	5.2	5.2				
Max Green Setting (Gmax), s	7.4	34.7		42.8	7.4	34.7	7.8	29.8				
Max Q Clear Time (g_c+I1), s	4.4	13.4		13.2	2.8	18.2	9.8	23.7				
Green Ext Time (p_c), s	0.0	14.0		5.5	0.0	10.0	0.0	2.9				

Intersection Summary		
HCM 6th Ctrl Delay		25.0
HCM 6th LOS		C

Notes

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

Intersection	
Intersection Delay, s/veh	12.3
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	316	9	9	167	26	5	27	13	39	136	48
Future Vol, veh/h	10	316	9	9	167	26	5	27	13	39	136	48
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	351	10	10	186	29	6	30	14	43	151	53
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	13.8	10.9	9.4	11.8
HCM LOS	B	B	A	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	11%	3%	4%	17%
Vol Thru, %	60%	94%	83%	61%
Vol Right, %	29%	3%	13%	22%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	45	335	202	223
LT Vol	5	10	9	39
Through Vol	27	316	167	136
RT Vol	13	9	26	48
Lane Flow Rate	50	372	224	248
Geometry Grp	1	1	1	1
Degree of Util (X)	0.081	0.529	0.328	0.377
Departure Headway (Hd)	5.808	5.116	5.266	5.473
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	616	703	682	657
Service Time	3.858	3.149	3.304	3.51
HCM Lane V/C Ratio	0.081	0.529	0.328	0.377
HCM Control Delay	9.4	13.8	10.9	11.8
HCM Lane LOS	A	B	B	B
HCM 95th-tile Q	0.3	3.1	1.4	1.8

Intersection	
Intersection Delay, s/veh	11.9
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥			✥			✥	
Traffic Vol, veh/h	13	341	10	7	180	21	7	82	8	34	50	18
Future Vol, veh/h	13	341	10	7	180	21	7	82	8	34	50	18
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	14	379	11	8	200	23	8	91	9	38	56	20
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	13.8	10.6	9.9	10
HCM LOS	B	B	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	7%	4%	3%	33%
Vol Thru, %	85%	94%	87%	49%
Vol Right, %	8%	3%	10%	18%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	97	364	208	102
LT Vol	7	13	7	34
Through Vol	82	341	180	50
RT Vol	8	10	21	18
Lane Flow Rate	108	404	231	113
Geometry Grp	1	1	1	1
Degree of Util (X)	0.171	0.553	0.326	0.179
Departure Headway (Hd)	5.704	4.921	5.075	5.689
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	628	736	710	630
Service Time	3.746	2.921	3.106	3.731
HCM Lane V/C Ratio	0.172	0.549	0.325	0.179
HCM Control Delay	9.9	13.8	10.6	10
HCM Lane LOS	A	B	B	A
HCM 95th-tile Q	0.6	3.4	1.4	0.6

Intersection	
Intersection Delay, s/veh	12.1
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			✣			✣	
Traffic Vol, veh/h	10	337	30	23	163	10	16	29	26	19	82	29
Future Vol, veh/h	10	337	30	23	163	10	16	29	26	19	82	29
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	374	33	26	181	11	18	32	29	21	91	32
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	14	10.5	9.5	10.2
HCM LOS	B	B	A	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	23%	3%	12%	15%
Vol Thru, %	41%	89%	83%	63%
Vol Right, %	37%	8%	5%	22%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	71	377	196	130
LT Vol	16	10	23	19
Through Vol	29	337	163	82
RT Vol	26	30	10	29
Lane Flow Rate	79	419	218	144
Geometry Grp	1	1	1	1
Degree of Util (X)	0.123	0.566	0.31	0.223
Departure Headway (Hd)	5.621	4.864	5.128	5.558
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	637	746	701	646
Service Time	3.661	2.864	3.158	3.594
HCM Lane V/C Ratio	0.124	0.562	0.311	0.223
HCM Control Delay	9.5	14	10.5	10.2
HCM Lane LOS	A	B	B	B
HCM 95th-tile Q	0.4	3.6	1.3	0.8

LOS Worksheets: Future Plus Conceptual Plan Conditions

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1091	67	17	628	0	256	0	114	72	0	56
Future Volume (veh/h)	0	1091	67	17	628	0	256	0	114	72	0	56
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	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	0	1196	1196	1196	1196	0	1148	0	1196	1244	0	1196
Adj Flow Rate, veh/h	0	1212	67	19	698	0	284	0	59	80	0	19
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	2	2	2	2	0	2	0	2	2	0	2
Cap, veh/h	0	1961	108	67	1835	0	306	0	0	331	0	0
Arrive On Green	0.00	0.62	0.62	1.00	1.00	0.00	0.28	0.00	0.00	0.28	0.00	0.00
Sat Flow, veh/h	0	3264	174	45	3052	0	1094	284		1185	80	
Grp Volume(v), veh/h	0	836	443	249	468	0	284	55.5		80	28.2	
Grp Sat Flow(s),veh/h/ln	0	1088	1154	1018	990	0	1094	E		1185	C	
Q Serve(g_s), s	0.0	23.6	23.6	1.1	0.0	0.0	25.3			5.2		
Cycle Q Clear(g_c), s	0.0	23.6	23.6	24.7	0.0	0.0	25.3			5.2		
Prop In Lane	0.00		0.15	0.08		0.00	1.00			1.00		
Lane Grp Cap(c), veh/h	0	1352	717	671	1231	0	306			331		
V/C Ratio(X)	0.00	0.62	0.62	0.37	0.38	0.00	0.93			0.24		
Avail Cap(c_a), veh/h	0	1352	717	671	1231	0	442			479		
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00	1.00			1.00		
Upstream Filter(I)	0.00	1.00	1.00	0.86	0.86	0.00	1.00			1.00		
Uniform Delay (d), s/veh	0.0	11.6	11.6	0.0	0.0	0.0	35.0			27.8		
Incr Delay (d2), s/veh	0.0	2.1	4.0	1.4	0.8	0.0	20.5			0.4		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0		
%ile BackOfQ(50%),veh/ln	0.0	5.6	6.3	0.3	0.1	0.0	8.4			1.5		
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	13.8	15.6	1.4	0.8	0.0	55.5			28.2		
LnGrp LOS	A	B	B	A	A	A	E			C		
Approach Vol, veh/h		1279			717							
Approach Delay, s/veh		14.4			1.0							
Approach LOS		B			A							
Timer - Assigned Phs		2	3			6	7					
Phs Duration (G+Y+Rc), s		67.4	32.6			67.4	32.6					
Change Period (Y+Rc), s		5.3	4.6			5.3	4.6					
Max Green Setting (Gmax), s		49.7	40.4			49.7	40.4					
Max Q Clear Time (g_c+I1), s		25.6	27.3			26.7	7.2					
Green Ext Time (p_c), s		15.9	0.7			8.9	0.2					
Intersection Summary												
HCM 6th Ctrl Delay			15.7									
HCM 6th LOS			B									

Movement	EBL2	EBT	EBR	WBL	WBT	WBR	NBR	SBR	SBR2
Lane Configurations									
Traffic Volume (vph)	196	1014	53	22	602	113	96	103	203
Future Volume (vph)	196	1014	53	22	602	113	96	103	203
Ideal Flow (vphpl)	1350	1350	1350	1350	1350	1350	1350	1350	1350
Lane Width	9	10	10	9	10	10	12	10	10
Total Lost time (s)	4.6	5.3		4.0	5.3		4.6	4.6	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.88	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.98		1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.99		1.00	0.98		0.86	0.85	0.85
Flt Protected	0.95	1.00		0.95	1.00		1.00	1.00	1.00
Satd. Flow (prot)	1018	3001		1018	2917		1030	1663	945
Flt Permitted	0.95	1.00		0.95	1.00		1.00	1.00	1.00
Satd. Flow (perm)	1018	3001		1018	2917		1030	1663	945
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	218	1127	59	24	669	126	107	114	226
RTOR Reduction (vph)	0	5	0	0	0	0	0	0	0
Lane Group Flow (vph)	218	1181	0	24	795	0	107	114	226
Confl. Peds. (#/hr)			24			64			
Confl. Bikes (#/hr)			3			3	3	3	
Turn Type	Prot	NA		Prot	NA		Prot	Prot	Free
Protected Phases	5	2		1	6		8	4	
Permitted Phases									Free
Actuated Green, G (s)	15.4	69.1		1.0	54.1		16.0	16.0	100.0
Effective Green, g (s)	15.4	69.1		1.0	54.1		16.0	16.0	100.0
Actuated g/C Ratio	0.15	0.69		0.01	0.54		0.16	0.16	1.00
Clearance Time (s)	4.6	5.3		4.0	5.3		4.6	4.6	
Vehicle Extension (s)	1.5	3.0		1.5	3.0		2.5	2.5	
Lane Grp Cap (vph)	156	2073		10	1578		164	266	945
v/s Ratio Prot	c0.21	c0.39		0.02	0.27		c0.10	0.07	
v/s Ratio Perm									0.24
v/c Ratio	1.40	0.57		2.40	0.50		0.65	0.43	0.24
Uniform Delay, d1	42.3	7.9		49.5	14.5		39.4	37.9	0.0
Progression Factor	0.74	0.47		0.67	1.14		1.00	1.00	1.00
Incremental Delay, d2	203.8	0.8		847.3	1.1		8.0	0.8	0.6
Delay (s)	235.0	4.5		880.5	17.6		47.4	38.7	0.6
Level of Service	F	A		F	B		D	D	A
Approach Delay (s)		40.3			42.9				
Approach LOS		D			D				

Intersection Summary			
HCM 2000 Control Delay	38.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	14.5
Intersection Capacity Utilization	57.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1055	56	49	594	0	61	0	44	254	84	43
Future Volume (veh/h)	0	1055	56	49	594	0	61	0	44	254	84	43
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		1.00	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	0	1148	1148	1148	1148	0	1196	0	1196	1196	1196	1196
Adj Flow Rate, veh/h	0	1172	60	54	660	0	68	0	49	282	93	7
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	2	2	2	2	0	2	0	2	2	2	2
Cap, veh/h	0	2184	112	270	2247	0	0	0	0	398	215	174
Arrive On Green	0.00	1.00	1.00	0.95	0.95	0.00	0.00	0.00	0.00	0.18	0.18	0.18
Sat Flow, veh/h	0	3150	156	277	3238	0		0		2210	1196	964
Grp Volume(v), veh/h	0	804	428	54	660	0		0.0		282	93	7
Grp Sat Flow(s),veh/h/ln	0	1045	1112	277	1045	0				1105	1196	964
Q Serve(g_s), s	0.0	0.0	0.0	1.2	1.4	0.0				12.0	6.9	0.6
Cycle Q Clear(g_c), s	0.0	0.0	0.0	1.2	1.4	0.0				12.0	6.9	0.6
Prop In Lane	0.00		0.14	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1498	797	270	2247	0				398	215	174
V/C Ratio(X)	0.00	0.54	0.54	0.20	0.29	0.00				0.71	0.43	0.04
Avail Cap(c_a), veh/h	0	1498	797	270	2247	0				575	311	251
HCM Platoon Ratio	1.00	2.00	2.00	1.33	1.33	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.79	0.79	1.00	1.00	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.7	0.7	0.0				38.5	36.4	33.9
Incr Delay (d2), s/veh	0.0	1.1	2.0	1.7	0.3	0.0				2.3	1.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.2	0.5	0.2	0.3	0.0				3.4	2.1	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	1.1	2.0	2.3	1.0	0.0				40.9	37.8	33.9
LnGrp LOS	A	A	A	A	A	A				D	D	C
Approach Vol, veh/h		1232			714						382	
Approach Delay, s/veh		1.4			1.1						40.0	
Approach LOS		A			A						D	
Timer - Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		78.0				78.0		22.0				
Change Period (Y+Rc), s		6.3				6.3		4.0				
Max Green Setting (Gmax), s		43.7				43.7		26.0				
Max Q Clear Time (g_c+I1), s		2.0				3.4		14.0				
Green Ext Time (p_c), s		21.4				12.9		1.3				
Intersection Summary												
HCM 6th Ctrl Delay			7.7									
HCM 6th LOS			A									

Notes

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

Intersection	
Int Delay, s/veh	2.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	3	1335	29	0	629	3	0	0	139	0	0	0
Future Vol, veh/h	3	1335	29	0	629	3	0	0	139	0	0	0
Conflicting Peds, #/hr	55	0	36	0	0	53	0	0	34	53	0	55
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	1483	32	0	699	3	0	0	154	0	0	0

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	757	0	0	-	-	0	-	-	828
Stage 1	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-
Critical Hdwy	5.34	-	-	-	-	-	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.12	-	-	-	-	-	-	-	3.92
Pot Cap-1 Maneuver	512	-	-	0	-	-	0	0	270
Stage 1	-	-	-	0	-	-	0	0	-
Stage 2	-	-	-	0	-	-	0	0	-
Platoon blocked, %		-	-		-	-			
Mov Cap-1 Maneuver	512	-	-	-	-	-	-	0	251
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	0	-
Stage 1	-	-	-	-	-	-	-	0	-
Stage 2	-	-	-	-	-	-	-	0	-

Approach	EB	WB	NB
HCM Control Delay, s	0.2	0	39.9
HCM LOS			E

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBT	WBR
Capacity (veh/h)	251	512	-	-	-	-
HCM Lane V/C Ratio	0.615	0.007	-	-	-	-
HCM Control Delay (s)	39.9	12.1	0.2	-	-	-
HCM Lane LOS	E	B	A	-	-	-
HCM 95th %tile Q(veh)	3.7	0	-	-	-	-

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBR
Lane Configurations									
Traffic Volume (vph)	395	79	854	64	85	746	275	15	54
Future Volume (vph)	395	79	854	64	85	746	275	15	54
Ideal Flow (vphpl)	1350	1350	1350	1350	1350	1350	1350	1350	1350
Lane Width	12	9	10	9	9	9	9	9	15
Total Lost time (s)		4.6	5.3		4.6	5.3			4.6
Lane Util. Factor		1.00	0.91		1.00	0.91			1.00
Frpb, ped/bikes		1.00	0.99		1.00	0.96			1.00
Flpb, ped/bikes		1.00	1.00		1.00	1.00			1.00
Frt		1.00	0.99		1.00	0.96			0.86
Flt Protected		0.95	1.00		0.95	1.00			1.00
Satd. Flow (prot)		1018	2986		1018	2694			1133
Flt Permitted		0.95	1.00		0.95	1.00			1.00
Satd. Flow (perm)		1018	2986		1018	2694			1133
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	439	88	949	71	94	829	306	17	60
RTOR Reduction (vph)	0	0	6	0	0	2	0	0	48
Lane Group Flow (vph)	0	527	1014	0	94	1150	0	0	12
Confl. Peds. (#/hr)				32			54	54	
Confl. Bikes (#/hr)				2			8	8	
Turn Type	Prot	Prot	NA		Prot	NA			Perm
Protected Phases	5	5	2		1	6			
Permitted Phases									1
Actuated Green, G (s)		42.4	69.9		20.2	47.7			20.2
Effective Green, g (s)		42.4	69.9		20.2	47.7			20.2
Actuated g/C Ratio		0.42	0.70		0.20	0.48			0.20
Clearance Time (s)		4.6	5.3		4.6	5.3			4.6
Vehicle Extension (s)		2.5	5.0		2.5	5.0			2.5
Lane Grp Cap (vph)		431	2087		205	1285			228
v/s Ratio Prot		c0.52	0.34		0.09	c0.43			
v/s Ratio Perm									0.01
v/c Ratio		1.22	0.49		0.46	0.90			0.05
Uniform Delay, d1		28.8	6.9		35.1	23.9			32.2
Progression Factor		1.14	1.16		1.23	0.59			1.00
Incremental Delay, d2		115.8	0.6		0.9	7.8			0.1
Delay (s)		148.7	8.6		44.0	21.8			32.3
Level of Service		F	A		D	C			C
Approach Delay (s)			56.3			23.5			
Approach LOS			E			C			

Intersection Summary			
HCM 2000 Control Delay	41.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.05		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	9.9
Intersection Capacity Utilization	83.2%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	79	818	34	0	861	93	84	84	30	53	74	91
Future Volume (veh/h)	79	818	34	0	861	93	84	84	30	53	74	91
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.95	1.00		0.92	1.00		0.98	1.00		0.91
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	1148	1148	1196	0	1196	1196	1196	1196	1196	1148	1244	1196
Adj Flow Rate, veh/h	88	909	31	0	957	92	93	93	33	59	82	101
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	0	2	2	2	2	2	2	2	2
Cap, veh/h	240	1599	54	0	1546	148	149	110	39	238	271	200
Arrive On Green	1.00	1.00	1.00	0.00	1.00	1.00	0.13	0.13	0.13	0.22	0.22	0.22
Sat Flow, veh/h	326	3107	106	0	3112	288	1139	839	298	1094	1244	919
Grp Volume(v), veh/h	88	611	329	0	692	357	93	0	126	59	82	101
Grp Sat Flow(s),veh/h/ln	326	1045	1123	0	1088	1115	1139	0	1136	1094	1244	919
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	7.7	0.0	10.8	4.5	5.5	9.7
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	7.7	0.0	10.8	4.5	5.5	9.7
Prop In Lane	1.00		0.09	0.00		0.26	1.00		0.26	1.00		1.00
Lane Grp Cap(c), veh/h	240	1075	578	0	1120	574	149	0	149	238	271	200
V/C Ratio(X)	0.37	0.57	0.57	0.00	0.62	0.62	0.62	0.00	0.85	0.25	0.30	0.50
Avail Cap(c_a), veh/h	240	1075	578	0	1120	574	180	0	180	337	383	283
HCM Platoon Ratio	2.00	2.00	2.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.89	0.89	0.89	0.00	0.44	0.44	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	41.1	0.0	42.5	32.3	32.8	34.4
Incr Delay (d2), s/veh	3.8	1.9	3.6	0.0	1.1	2.2	4.7	0.0	26.1	0.5	0.6	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.3	0.6	0.0	0.2	0.4	2.4	0.0	4.1	1.2	1.7	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	3.8	1.9	3.6	0.0	1.1	2.2	45.9	0.0	68.6	32.9	33.4	36.3
LnGrp LOS	A	A	A	A	A	A	D	A	E	C	C	D
Approach Vol, veh/h		1028			1049			219			242	
Approach Delay, s/veh		2.6			1.5			59.0			34.5	
Approach LOS		A			A			E			C	

Timer - Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		56.8		17.3		56.8		26.0
Change Period (Y+Rc), s		5.3		* 4.2		5.3		4.2
Max Green Setting (Gmax), s		39.7		* 16		39.7		30.8
Max Q Clear Time (g_c+I1), s		2.0		12.8		2.0		11.7
Green Ext Time (p_c), s		18.3		0.3		16.8		0.9

Intersection Summary	
HCM 6th Ctrl Delay	10.1
HCM 6th LOS	B

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	32	933	67	49	880	56	89	504	70	5	383	63
Future Volume (veh/h)	32	933	67	49	880	56	89	504	70	5	383	63
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.95	1.00		0.97	0.99		0.92
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	1148	1148	1148	1148	1196	1196	1148	1148	1148	1196	1148	1148
Adj Flow Rate, veh/h	36	1037	63	54	978	53	99	560	31	6	426	26
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	158	1260	76	187	1362	74	85	857	370	39	558	237
Arrive On Green	0.05	0.84	0.84	0.04	0.43	0.43	0.08	0.39	0.39	0.26	0.26	0.26
Sat Flow, veh/h	1094	3012	183	1094	3160	171	1094	2182	942	8	2122	899
Grp Volume(v), veh/h	36	719	381	54	673	358	99	560	31	231	201	26
Grp Sat Flow(s),veh/h/ln	1094	1045	1105	1094	1088	1154	1094	1091	942	1137	993	899
Q Serve(g_s), s	1.9	18.0	18.1	2.8	25.5	25.6	7.8	21.0	2.1	0.0	18.7	2.2
Cycle Q Clear(g_c), s	1.9	18.0	18.1	2.8	25.5	25.6	7.8	21.0	2.1	18.6	18.7	2.2
Prop In Lane	1.00		0.17	1.00		0.15	1.00		1.00	0.03		1.00
Lane Grp Cap(c), veh/h	158	874	462	187	939	497	85	857	370	336	261	237
V/C Ratio(X)	0.23	0.82	0.82	0.29	0.72	0.72	1.16	0.65	0.08	0.69	0.77	0.11
Avail Cap(c_a), veh/h	212	874	462	227	939	497	85	934	403	375	296	268
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)	0.69	0.69	0.69	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.8	6.2	6.2	17.6	23.4	23.5	46.1	24.8	19.0	34.0	34.0	28.0
Incr Delay (d2), s/veh	0.2	6.1	11.0	0.3	4.7	8.7	147.2	1.7	0.1	5.3	11.5	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	2.2	3.0	0.7	6.9	7.9	5.6	5.6	0.5	5.7	5.3	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.0	12.3	17.3	17.9	28.1	32.1	193.3	26.5	19.2	39.4	45.5	28.3
LnGrp LOS	B	B	B	B	C	C	F	C	B	D	D	C
Approach Vol, veh/h		1136			1085			690			458	
Approach Delay, s/veh		14.2			28.9			50.1			41.4	
Approach LOS		B			C			D			D	

Timer - Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.4	47.1		44.5	7.1	48.4	13.0	31.5				
Change Period (Y+Rc), s	4.6	5.3		5.2	4.6	5.3	5.2	5.2				
Max Green Setting (Gmax), s	7.4	34.7		42.8	7.4	34.7	7.8	29.8				
Max Q Clear Time (g_c+I1), s	4.8	20.1		23.0	3.9	27.6	9.8	20.7				
Green Ext Time (p_c), s	0.0	9.6		5.4	0.0	5.1	0.0	2.4				

Intersection Summary			
HCM 6th Ctrl Delay			30.0
HCM 6th LOS			C

Notes

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

Intersection	
Intersection Delay, s/veh	10.6
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥			✥			✥	
Traffic Vol, veh/h	15	173	7	7	259	17	9	51	5	5	44	29
Future Vol, veh/h	15	173	7	7	259	17	9	51	5	5	44	29
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	19	216	9	9	324	21	11	64	6	6	55	36
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	10.2	11.6	9.3	9.2
HCM LOS	B	B	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	14%	8%	2%	6%
Vol Thru, %	78%	89%	92%	56%
Vol Right, %	8%	4%	6%	37%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	65	195	283	78
LT Vol	9	15	7	5
Through Vol	51	173	259	44
RT Vol	5	7	17	29
Lane Flow Rate	81	244	354	98
Geometry Grp	1	1	1	1
Degree of Util (X)	0.123	0.325	0.458	0.141
Departure Headway (Hd)	5.439	4.807	4.661	5.223
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	652	741	768	679
Service Time	3.533	2.875	2.722	3.315
HCM Lane V/C Ratio	0.124	0.329	0.461	0.144
HCM Control Delay	9.3	10.2	11.6	9.2
HCM Lane LOS	A	B	B	A
HCM 95th-tile Q	0.4	1.4	2.4	0.5

Intersection	
Intersection Delay, s/veh	11
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥			✥			✥	
Traffic Vol, veh/h	9	169	5	9	268	23	6	95	13	16	19	4
Future Vol, veh/h	9	169	5	9	268	23	6	95	13	16	19	4
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	211	6	11	335	29	8	119	16	20	24	5
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	10.2	12.2	9.9	9.2
HCM LOS	B	B	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	5%	5%	3%	41%
Vol Thru, %	83%	92%	89%	49%
Vol Right, %	11%	3%	8%	10%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	114	183	300	39
LT Vol	6	9	9	16
Through Vol	95	169	268	19
RT Vol	13	5	23	4
Lane Flow Rate	142	229	375	49
Geometry Grp	1	1	1	1
Degree of Util (X)	0.211	0.31	0.488	0.077
Departure Headway (Hd)	5.341	4.877	4.681	5.695
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	664	730	765	633
Service Time	3.438	2.956	2.749	3.695
HCM Lane V/C Ratio	0.214	0.314	0.49	0.077
HCM Control Delay	9.9	10.2	12.2	9.2
HCM Lane LOS	A	B	B	A
HCM 95th-tile Q	0.8	1.3	2.7	0.2

Intersection	
Intersection Delay, s/veh	10.7
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			✣			✣	
Traffic Vol, veh/h	9	183	8	16	266	14	14	28	18	13	24	23
Future Vol, veh/h	9	183	8	16	266	14	14	28	18	13	24	23
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	229	10	20	333	18	18	35	23	16	30	29
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	10.1	11.7	9.1	9
HCM LOS	B	B	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	23%	4%	5%	22%
Vol Thru, %	47%	92%	90%	40%
Vol Right, %	30%	4%	5%	38%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	60	200	296	60
LT Vol	14	9	16	13
Through Vol	28	183	266	24
RT Vol	18	8	14	23
Lane Flow Rate	75	250	370	75
Geometry Grp	1	1	1	1
Degree of Util (X)	0.111	0.328	0.472	0.11
Departure Headway (Hd)	5.325	4.729	4.597	5.273
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	667	755	781	674
Service Time	3.407	2.788	2.65	3.354
HCM Lane V/C Ratio	0.112	0.331	0.474	0.111
HCM Control Delay	9.1	10.1	11.7	9
HCM Lane LOS	A	B	B	A
HCM 95th-tile Q	0.4	1.4	2.6	0.4

HCM 6th Signalized Intersection Summary
1: S Linden Dr & Wilshire Blvd

06/22/2023

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1368	134	28	1083	0	310	0	69	138	0	69
Future Volume (veh/h)	0	1368	134	28	1083	0	310	0	69	138	0	69
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.92	1.00		1.00	1.00		1.00	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	0	1683	1683	1683	1683	0	1616	0	1683	1751	0	1683
Adj Flow Rate, veh/h	0	1520	140	31	1203	0	344	0	51	153	0	19
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	2	2	2	2	0	2	0	2	2	0	2
Cap, veh/h	0	2777	256	78	2681	0	380	0	0	411	0	0
Arrive On Green	0.00	0.65	0.65	1.00	1.00	0.00	0.25	0.00	0.00	0.25	0.00	0.00
Sat Flow, veh/h	0	4396	391	60	4235	0	1539	344		1667	153	
Grp Volume(v), veh/h	0	1097	563	408	826	0	344	47.4		153	31.8	
Grp Sat Flow(s),veh/h/ln	0	1532	1571	1369	1394	0	1539	D		1667	C	
Q Serve(g_s), s	0.0	19.3	19.3	0.0	0.0	0.0	21.7			7.6		
Cycle Q Clear(g_c), s	0.0	19.3	19.3	0.0	0.0	0.0	21.7			7.6		
Prop In Lane	0.00		0.25	0.08		0.00	1.00			1.00		
Lane Grp Cap(c), veh/h	0	2005	1028	935	1824	0	380			411		
V/C Ratio(X)	0.00	0.55	0.55	0.44	0.45	0.00	0.91			0.37		
Avail Cap(c_a), veh/h	0	2005	1028	935	1824	0	622			674		
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00	1.00			1.00		
Upstream Filter(I)	0.00	1.00	1.00	0.63	0.63	0.00	1.00			1.00		
Uniform Delay (d), s/veh	0.0	9.3	9.3	0.0	0.0	0.0	36.5			31.2		
Incr Delay (d2), s/veh	0.0	1.1	2.1	0.9	0.5	0.0	10.9			0.6		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0		
%ile BackOfQ(50%),veh/ln	0.0	6.0	6.5	0.2	0.1	0.0	9.2			3.1		
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	10.4	11.4	0.9	0.5	0.0	47.4			31.8		
LnGrp LOS	A	B	B	A	A	A	D			C		
Approach Vol, veh/h		1660			1234							
Approach Delay, s/veh		10.7			0.7							
Approach LOS		B			A							
Timer - Assigned Phs		2	3			6	7					
Phs Duration (G+Y+Rc), s		70.7	29.3			70.7	29.3					
Change Period (Y+Rc), s		5.3	4.6			5.3	4.6					
Max Green Setting (Gmax), s		49.7	40.4			49.7	40.4					
Max Q Clear Time (g_c+I1), s		21.3	23.7			2.0	9.6					
Green Ext Time (p_c), s		22.4	1.0			24.2	0.4					
Intersection Summary												
HCM 6th Ctrl Delay			11.7									
HCM 6th LOS			B									

Movement	EBL2	EBT	EBR	WBL	WBT	WBR	NBR	SBR	SBR2
Lane Configurations									
Traffic Volume (vph)	108	1386	67	57	864	50	68	252	198
Future Volume (vph)	108	1386	67	57	864	50	68	252	198
Ideal Flow (vphpl)	1350	1350	1350	1350	1350	1350	1350	1350	1350
Lane Width	9	10	10	9	10	10	12	10	10
Total Lost time (s)	4.6	5.3		4.0	5.3		4.6	4.6	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.88	1.00
Frpb, ped/bikes	1.00	0.99		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	0.99		1.00	0.99		0.86	0.85	0.85
Flt Protected	0.95	1.00		0.95	1.00		1.00	1.00	1.00
Satd. Flow (prot)	1018	2976		1018	2989		1030	1663	945
Flt Permitted	0.95	1.00		0.95	1.00		1.00	1.00	1.00
Satd. Flow (perm)	1018	2976		1018	2989		1030	1663	945
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	120	1540	74	63	960	56	76	280	220
RTOR Reduction (vph)	0	5	0	0	0	0	0	0	0
Lane Group Flow (vph)	120	1609	0	63	1016	0	76	280	220
Confl. Peds. (#/hr)			115			83			
Confl. Bikes (#/hr)			6			6	6	6	
Turn Type	Prot	NA		Prot	NA		Prot	Prot	Free
Protected Phases	5	2		1	6		8	4	
Permitted Phases									Free
Actuated Green, G (s)	15.4	65.9		1.0	50.9		19.2	19.2	100.0
Effective Green, g (s)	15.4	65.9		1.0	50.9		19.2	19.2	100.0
Actuated g/C Ratio	0.15	0.66		0.01	0.51		0.19	0.19	1.00
Clearance Time (s)	4.6	5.3		4.0	5.3		4.6	4.6	
Vehicle Extension (s)	1.5	3.0		1.5	3.0		2.5	2.5	
Lane Grp Cap (vph)	156	1961		10	1521		197	319	945
v/s Ratio Prot	0.12	c0.54		c0.06	0.34		0.07	c0.17	
v/s Ratio Perm									0.23
v/c Ratio	0.77	0.82		6.30	0.67		0.39	0.88	0.23
Uniform Delay, d1	40.6	12.7		49.5	18.3		35.3	39.3	0.0
Progression Factor	0.60	0.55		0.71	1.03		1.00	1.00	1.00
Incremental Delay, d2	5.9	1.2		2541.2	1.8		0.9	22.6	0.6
Delay (s)	30.4	8.1		2576.6	20.6		36.2	61.8	0.6
Level of Service	C	A		F	C		D	E	A
Approach Delay (s)		9.7			169.9				
Approach LOS		A			F				

Intersection Summary			
HCM 2000 Control Delay	65.0	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	14.5
Intersection Capacity Utilization	63.4%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1412	44	51	773	0	118	0	59	401	225	80
Future Volume (veh/h)	0	1412	44	51	773	0	118	0	59	401	225	80
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.88	0.99		1.00	1.00		1.00	1.00		0.93
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	0	1616	1616	1616	1616	0	1683	0	1683	1683	1683	1683
Adj Flow Rate, veh/h	0	1569	48	57	859	0	131	0	66	446	250	19
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	2	2	2	2	0	2	0	2	2	2	2
Cap, veh/h	0	2993	92	255	3016	0	0	0	0	664	359	283
Arrive On Green	0.00	1.00	1.00	0.91	0.91	0.00	0.00	0.00	0.00	0.21	0.21	0.21
Sat Flow, veh/h	0	4523	134	267	4557	0		0		3110	1683	1328
Grp Volume(v), veh/h	0	1054	563	57	859	0		0.0		446	250	19
Grp Sat Flow(s),veh/h/ln	0	1471	1571	267	1471	0				1555	1683	1328
Q Serve(g_s), s	0.0	0.0	0.0	2.7	2.4	0.0				13.2	13.7	1.1
Cycle Q Clear(g_c), s	0.0	0.0	0.0	2.7	2.4	0.0				13.2	13.7	1.1
Prop In Lane	0.00		0.09	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2011	1074	255	3016	0				664	359	283
V/C Ratio(X)	0.00	0.52	0.52	0.22	0.28	0.00				0.67	0.70	0.07
Avail Cap(c_a), veh/h	0	2011	1074	255	3016	0				809	438	345
HCM Platoon Ratio	1.00	2.00	2.00	1.33	1.33	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.50	0.50	1.00	1.00	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	1.6	1.5	0.0				36.1	36.3	31.4
Incr Delay (d2), s/veh	0.0	0.5	0.9	2.0	0.2	0.0				1.6	3.7	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.1	0.3	0.2	0.6	0.0				5.1	6.0	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.5	0.9	3.6	1.8	0.0				37.8	40.0	31.5
LnGrp LOS	A	A	A	A	A	A				D	D	C
Approach Vol, veh/h		1617			916						715	
Approach Delay, s/veh		0.6			1.9						38.4	
Approach LOS		A			A						D	
Timer - Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		74.7				74.7		25.3				
Change Period (Y+Rc), s		6.3				6.3		4.0				
Max Green Setting (Gmax), s		43.7				43.7		26.0				
Max Q Clear Time (g_c+I1), s		2.0				4.7		15.7				
Green Ext Time (p_c), s		29.2				16.8		2.5				

Intersection Summary			
HCM 6th Ctrl Delay			9.3
HCM 6th LOS			A

Notes

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

Intersection												
Int Delay, s/veh	21											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	1776	93	0	821	1	0	0	149	0	0	0
Future Vol, veh/h	2	1776	93	0	821	1	0	0	149	0	0	0
Conflicting Peds, #/hr	107	0	128	0	0	107	0	0	128	107	0	107
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	1973	103	0	912	1	0	0	166	0	0	0

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	1020	0	0	-	-	0	-	-	1294
Stage 1	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-
Critical Hdwy	5.34	-	-	-	-	-	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.12	-	-	-	-	-	-	-	3.92
Pot Cap-1 Maneuver	383	-	-	0	-	-	0	0	~ 132
Stage 1	-	-	-	0	-	-	0	0	-
Stage 2	-	-	-	0	-	-	0	0	-
Platoon blocked, %		-	-		-	-			
Mov Cap-1 Maneuver	383	-	-	-	-	-	-	0	~ 101
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	0	-
Stage 1	-	-	-	-	-	-	-	0	-
Stage 2	-	-	-	-	-	-	-	0	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	$ 401.2
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBT	WBR
Capacity (veh/h)	101	383	-	-	-	-
HCM Lane V/C Ratio	1.639	0.006	-	-	-	-
HCM Control Delay (s)	$ 401.2	14.5	0	-	-	-
HCM Lane LOS	F	B	A	-	-	-
HCM 95th %tile Q(veh)	12.9	0	-	-	-	-

Notes

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

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBR
Lane Configurations									
Traffic Volume (vph)	183	342	1288	109	97	820	141	49	108
Future Volume (vph)	183	342	1288	109	97	820	141	49	108
Ideal Flow (vphpl)	1350	1350	1350	1350	1350	1350	1350	1350	1350
Lane Width	12	9	10	9	9	9	9	9	15
Total Lost time (s)		4.6	5.3		4.6	5.3			4.6
Lane Util. Factor		1.00	0.91		1.00	0.91			1.00
Frpb, ped/bikes		1.00	0.98		1.00	0.94			1.00
Flpb, ped/bikes		1.00	1.00		1.00	1.00			1.00
Frt		1.00	0.99		1.00	0.97			0.86
Flt Protected		0.95	1.00		0.95	1.00			1.00
Satd. Flow (prot)		1018	2940		1018	2684			1133
Flt Permitted		0.95	1.00		0.95	1.00			1.00
Satd. Flow (perm)		1018	2940		1018	2684			1133
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	203	380	1431	121	108	911	157	54	120
RTOR Reduction (vph)	0	0	8	0	0	5	0	0	59
Lane Group Flow (vph)	0	583	1544	0	108	1117	0	0	62
Confl. Peds. (#/hr)				124			127	127	
Confl. Bikes (#/hr)				8			2	2	
Turn Type	Prot	Prot	NA		Prot	NA			Perm
Protected Phases	5	5	2		1	6			
Permitted Phases									1
Actuated Green, G (s)		42.4	68.1		22.0	47.7			22.0
Effective Green, g (s)		42.4	68.1		22.0	47.7			22.0
Actuated g/C Ratio		0.42	0.68		0.22	0.48			0.22
Clearance Time (s)		4.6	5.3		4.6	5.3			4.6
Vehicle Extension (s)		2.5	5.0		2.5	5.0			2.5
Lane Grp Cap (vph)		431	2002		223	1280			249
v/s Ratio Prot		c0.57	0.53		0.11	c0.42			
v/s Ratio Perm									0.05
v/c Ratio		1.35	0.77		0.48	0.87			0.25
Uniform Delay, d1		28.8	10.7		34.0	23.4			32.2
Progression Factor		1.16	1.07		1.23	0.56			1.00
Incremental Delay, d2		160.1	0.3		0.8	5.6			0.4
Delay (s)		193.5	11.8		42.7	18.7			32.5
Level of Service		F	B		D	B			C
Approach Delay (s)			61.4			20.8			
Approach LOS			E			C			

Intersection Summary			
HCM 2000 Control Delay	46.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.10		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	9.9
Intersection Capacity Utilization	86.4%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	120	1256	21	0	903	108	99	68	38	115	58	103
Future Volume (veh/h)	120	1256	21	0	903	108	99	68	38	115	58	103
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		0.93	1.00		0.88	1.00		0.98	1.00		0.89
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	1616	1616	1683	0	1683	1683	1683	1683	1683	1616	1751	1683
Adj Flow Rate, veh/h	133	1396	21	0	1003	102	110	76	42	128	64	114
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	0	2	2	2	2	2	2	2	2
Cap, veh/h	305	2417	36	0	2259	229	157	99	55	345	393	285
Arrive On Green	1.00	1.00	1.00	0.00	1.00	1.00	0.10	0.10	0.10	0.22	0.22	0.22
Sat Flow, veh/h	431	4472	67	0	4330	423	1603	1011	559	1539	1751	1271
Grp Volume(v), veh/h	133	918	499	0	734	371	110	0	118	128	64	114
Grp Sat Flow(s),veh/h/ln	431	1471	1598	0	1532	1539	1603	0	1570	1539	1751	1271
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	6.6	0.0	7.3	7.0	2.9	7.6
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	6.6	0.0	7.3	7.0	2.9	7.6
Prop In Lane	1.00		0.04	0.00		0.28	1.00		0.36	1.00		1.00
Lane Grp Cap(c), veh/h	305	1590	864	0	1656	832	157	0	154	345	393	285
V/C Ratio(X)	0.44	0.58	0.58	0.00	0.44	0.45	0.70	0.00	0.77	0.37	0.16	0.40
Avail Cap(c_a), veh/h	305	1590	864	0	1656	832	253	0	248	474	539	392
HCM Platoon Ratio	2.00	2.00	2.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.59	0.59	0.59	0.00	0.33	0.33	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	43.7	0.0	44.0	32.8	31.2	33.1
Incr Delay (d2), s/veh	2.7	0.9	1.7	0.0	0.3	0.6	5.5	0.0	7.7	0.7	0.2	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.2	0.4	0.0	0.1	0.1	2.9	0.0	3.2	2.7	1.3	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	2.7	0.9	1.7	0.0	0.3	0.6	49.2	0.0	51.7	33.5	31.4	34.0
LnGrp LOS	A	A	A	A	A	A	D	A	D	C	C	C
Approach Vol, veh/h		1550			1105			228			306	
Approach Delay, s/veh		1.3			0.4			50.5			33.2	
Approach LOS		A			A			D			C	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	59.4	14.0	59.4	26.6
Change Period (Y+Rc), s	5.3	* 4.2	5.3	4.2
Max Green Setting (Gmax), s	39.7	* 16	39.7	30.8
Max Q Clear Time (g_c+I1), s	2.0	9.3	2.0	9.6
Green Ext Time (p_c), s	27.0	0.5	18.0	1.1

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

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	19	1107	64	57	921	68	110	441	100	5	620	93
Future Volume (veh/h)	19	1107	64	57	921	68	110	441	100	5	620	93
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.93	0.99		0.93	1.00		0.94	0.97		0.93
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	1616	1616	1616	1616	1683	1683	1616	1616	1616	1683	1616	1616
Adj Flow Rate, veh/h	21	1230	63	63	1023	63	122	490	44	6	689	36
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	205	1732	89	229	1884	116	120	1253	526	39	833	356
Arrive On Green	0.03	0.81	0.81	0.04	0.43	0.43	0.08	0.41	0.41	0.28	0.28	0.28
Sat Flow, veh/h	1539	4279	219	1539	4403	271	1539	3070	1290	7	2997	1280
Grp Volume(v), veh/h	21	845	448	63	711	375	122	490	44	372	323	36
Grp Sat Flow(s),veh/h/ln	1539	1471	1557	1539	1532	1610	1539	1535	1290	1607	1397	1280
Q Serve(g_s), s	0.8	12.9	12.9	2.4	17.3	17.4	7.8	11.2	2.1	1.9	21.7	2.1
Cycle Q Clear(g_c), s	0.8	12.9	12.9	2.4	17.3	17.4	7.8	11.2	2.1	21.6	21.7	2.1
Prop In Lane	1.00		0.14	1.00		0.17	1.00		1.00	0.02		1.00
Lane Grp Cap(c), veh/h	205	1190	630	229	1311	689	120	1253	526	483	388	356
V/C Ratio(X)	0.10	0.71	0.71	0.28	0.54	0.54	1.02	0.39	0.08	0.77	0.83	0.10
Avail Cap(c_a), veh/h	299	1190	630	287	1311	689	120	1314	552	515	416	381
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)	0.11	0.11	0.11	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.1	6.9	6.9	17.3	21.3	21.3	46.1	20.9	18.1	33.9	33.9	26.8
Incr Delay (d2), s/veh	0.0	0.4	0.8	0.2	1.6	3.1	86.6	0.3	0.1	7.2	13.4	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	2.1	2.3	0.8	6.3	6.9	5.9	4.1	0.6	9.4	8.8	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.1	7.3	7.7	17.5	22.9	24.4	132.7	21.1	18.2	41.0	47.3	27.0
LnGrp LOS	B	A	A	B	C	C	F	C	B	D	D	C
Approach Vol, veh/h		1314			1149			656			731	
Approach Delay, s/veh		7.6			23.1			41.7			43.1	
Approach LOS		A			C			D			D	

Timer - Assigned Phs	1	2		4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.2	45.8		46.0	5.9	48.1	13.0	33.0
Change Period (Y+Rc), s	4.6	5.3		5.2	4.6	5.3	5.2	5.2
Max Green Setting (Gmax), s	7.4	34.7		42.8	7.4	34.7	7.8	29.8
Max Q Clear Time (g_c+I1), s	4.4	14.9		13.2	2.8	19.4	9.8	23.7
Green Ext Time (p_c), s	0.0	13.9		5.5	0.0	9.9	0.0	2.9

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

Notes

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

Intersection	
Intersection Delay, s/veh	12.5
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥			✥			✥	
Traffic Vol, veh/h	14	315	9	9	172	23	5	31	13	34	143	54
Future Vol, veh/h	14	315	9	9	172	23	5	31	13	34	143	54
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	16	350	10	10	191	26	6	34	14	38	159	60
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	14.1	11.1	9.5	12.1
HCM LOS	B	B	A	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	10%	4%	4%	15%
Vol Thru, %	63%	93%	84%	62%
Vol Right, %	27%	3%	11%	23%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	49	338	204	231
LT Vol	5	14	9	34
Through Vol	31	315	172	143
RT Vol	13	9	23	54
Lane Flow Rate	54	376	227	257
Geometry Grp	1	1	1	1
Degree of Util (X)	0.089	0.539	0.336	0.392
Departure Headway (Hd)	5.872	5.171	5.333	5.495
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	608	699	673	655
Service Time	3.927	3.207	3.374	3.535
HCM Lane V/C Ratio	0.089	0.538	0.337	0.392
HCM Control Delay	9.5	14.1	11.1	12.1
HCM Lane LOS	A	B	B	B
HCM 95th-tile Q	0.3	3.2	1.5	1.9

Intersection	
Intersection Delay, s/veh	12.2
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			✣			✣	
Traffic Vol, veh/h	14	338	6	7	182	31	6	85	8	49	52	19
Future Vol, veh/h	14	338	6	7	182	31	6	85	8	49	52	19
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	16	376	7	8	202	34	7	94	9	54	58	21
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	14.1	10.9	10.1	10.4
HCM LOS	B	B	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	6%	4%	3%	41%
Vol Thru, %	86%	94%	83%	43%
Vol Right, %	8%	2%	14%	16%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	99	358	220	120
LT Vol	6	14	7	49
Through Vol	85	338	182	52
RT Vol	8	6	31	19
Lane Flow Rate	110	398	244	133
Geometry Grp	1	1	1	1
Degree of Util (X)	0.177	0.556	0.349	0.213
Departure Headway (Hd)	5.791	5.033	5.135	5.764
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	618	720	699	621
Service Time	3.839	3.033	3.171	3.811
HCM Lane V/C Ratio	0.178	0.553	0.349	0.214
HCM Control Delay	10.1	14.1	10.9	10.4
HCM Lane LOS	B	B	B	B
HCM 95th-tile Q	0.6	3.5	1.6	0.8

Intersection	
Intersection Delay, s/veh	12.7
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥			✥			✥	
Traffic Vol, veh/h	13	346	30	23	171	16	16	31	26	28	86	33
Future Vol, veh/h	13	346	30	23	171	16	16	31	26	28	86	33
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	14	384	33	26	190	18	18	34	29	31	96	37
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	15	10.9	9.7	10.7
HCM LOS	B	B	A	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	22%	3%	11%	19%
Vol Thru, %	42%	89%	81%	59%
Vol Right, %	36%	8%	8%	22%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	73	389	210	147
LT Vol	16	13	23	28
Through Vol	31	346	171	86
RT Vol	26	30	16	33
Lane Flow Rate	81	432	233	163
Geometry Grp	1	1	1	1
Degree of Util (X)	0.13	0.595	0.339	0.257
Departure Headway (Hd)	5.773	4.952	5.225	5.671
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	620	730	688	632
Service Time	3.821	2.98	3.261	3.714
HCM Lane V/C Ratio	0.131	0.592	0.339	0.258
HCM Control Delay	9.7	15	10.9	10.7
HCM Lane LOS	A	B	B	B
HCM 95th-tile Q	0.4	4	1.5	1

LOS Worksheets: Future Plus Conceptual Plan Conditions with Via Closure

FEHR PEERS

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1091	67	17	628	0	256	0	114	72	0	56
Future Volume (veh/h)	0	1091	67	17	628	0	256	0	114	72	0	56
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	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	0	1196	1196	1196	1196	0	1148	0	1196	1244	0	1196
Adj Flow Rate, veh/h	0	1212	67	19	698	0	284	0	59	80	0	19
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	2	2	2	2	0	2	0	2	2	0	2
Cap, veh/h	0	1961	108	67	1835	0	306	0	0	331	0	0
Arrive On Green	0.00	0.62	0.62	1.00	1.00	0.00	0.28	0.00	0.00	0.28	0.00	0.00
Sat Flow, veh/h	0	3264	174	45	3052	0	1094	284		1185	80	
Grp Volume(v), veh/h	0	836	443	249	468	0	284	55.5		80	28.2	
Grp Sat Flow(s),veh/h/ln	0	1088	1154	1018	990	0	1094	E		1185	C	
Q Serve(g_s), s	0.0	23.6	23.6	1.1	0.0	0.0	25.3			5.2		
Cycle Q Clear(g_c), s	0.0	23.6	23.6	24.7	0.0	0.0	25.3			5.2		
Prop In Lane	0.00		0.15	0.08		0.00	1.00			1.00		
Lane Grp Cap(c), veh/h	0	1352	717	671	1231	0	306			331		
V/C Ratio(X)	0.00	0.62	0.62	0.37	0.38	0.00	0.93			0.24		
Avail Cap(c_a), veh/h	0	1352	717	671	1231	0	442			479		
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00	1.00			1.00		
Upstream Filter(I)	0.00	1.00	1.00	0.86	0.86	0.00	1.00			1.00		
Uniform Delay (d), s/veh	0.0	11.6	11.6	0.0	0.0	0.0	35.0			27.8		
Incr Delay (d2), s/veh	0.0	2.1	4.0	1.4	0.8	0.0	20.5			0.4		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0		
%ile BackOfQ(50%),veh/ln	0.0	5.6	6.3	0.3	0.1	0.0	8.4			1.5		
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	13.8	15.6	1.4	0.8	0.0	55.5			28.2		
LnGrp LOS	A	B	B	A	A	A	E			C		
Approach Vol, veh/h		1279			717							
Approach Delay, s/veh		14.4			1.0							
Approach LOS		B			A							
Timer - Assigned Phs		2	3			6	7					
Phs Duration (G+Y+Rc), s		67.4	32.6			67.4	32.6					
Change Period (Y+Rc), s		5.3	4.6			5.3	4.6					
Max Green Setting (Gmax), s		49.7	40.4			49.7	40.4					
Max Q Clear Time (g_c+I1), s		25.6	27.3			26.7	7.2					
Green Ext Time (p_c), s		15.9	0.7			8.9	0.2					
Intersection Summary												
HCM 6th Ctrl Delay			15.7									
HCM 6th LOS			B									

Movement	EBL2	EBT	EBR	WBL	WBT	WBR	NBR	SBR	SBR2
Lane Configurations									
Traffic Volume (vph)	196	1014	53	22	602	113	96	103	203
Future Volume (vph)	196	1014	53	22	602	113	96	103	203
Ideal Flow (vphpl)	1350	1350	1350	1350	1350	1350	1350	1350	1350
Lane Width	9	10	10	9	10	10	12	10	10
Total Lost time (s)	4.6	5.3		4.0	5.3		4.6	4.6	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.88	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.98		1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.99		1.00	0.98		0.86	0.85	0.85
Flt Protected	0.95	1.00		0.95	1.00		1.00	1.00	1.00
Satd. Flow (prot)	1018	3001		1018	2917		1030	1663	945
Flt Permitted	0.95	1.00		0.95	1.00		1.00	1.00	1.00
Satd. Flow (perm)	1018	3001		1018	2917		1030	1663	945
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	218	1127	59	24	669	126	107	114	226
RTOR Reduction (vph)	0	5	0	0	0	0	0	0	0
Lane Group Flow (vph)	218	1181	0	24	795	0	107	114	226
Confl. Peds. (#/hr)			24			64			
Confl. Bikes (#/hr)			3			3	3	3	
Turn Type	Prot	NA		Prot	NA		Prot	Prot	Free
Protected Phases	5	2		1	6		8	4	
Permitted Phases									Free
Actuated Green, G (s)	15.4	69.1		1.0	54.1		16.0	16.0	100.0
Effective Green, g (s)	15.4	69.1		1.0	54.1		16.0	16.0	100.0
Actuated g/C Ratio	0.15	0.69		0.01	0.54		0.16	0.16	1.00
Clearance Time (s)	4.6	5.3		4.0	5.3		4.6	4.6	
Vehicle Extension (s)	1.5	3.0		1.5	3.0		2.5	2.5	
Lane Grp Cap (vph)	156	2073		10	1578		164	266	945
v/s Ratio Prot	c0.21	c0.39		0.02	0.27		c0.10	0.07	
v/s Ratio Perm									0.24
v/c Ratio	1.40	0.57		2.40	0.50		0.65	0.43	0.24
Uniform Delay, d1	42.3	7.9		49.5	14.5		39.4	37.9	0.0
Progression Factor	0.74	0.47		0.66	1.14		1.00	1.00	1.00
Incremental Delay, d2	203.8	0.8		847.3	1.1		8.0	0.8	0.6
Delay (s)	235.0	4.5		880.2	17.6		47.4	38.7	0.6
Level of Service	F	A		F	B		D	D	A
Approach Delay (s)		40.3			42.9				
Approach LOS		D			D				

Intersection Summary			
HCM 2000 Control Delay	37.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	14.5
Intersection Capacity Utilization	57.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1055	56	49	594	0	61	0	54	254	84	43
Future Volume (veh/h)	0	1055	56	49	594	0	61	0	54	254	84	43
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		1.00	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	0	1148	1148	1148	1148	0	1196	0	1196	1196	1196	1196
Adj Flow Rate, veh/h	0	1172	60	54	660	0	68	0	60	282	93	7
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	2	2	2	2	0	2	0	2	2	2	2
Cap, veh/h	0	2184	112	270	2247	0	0	0	0	398	215	174
Arrive On Green	0.00	1.00	1.00	0.95	0.95	0.00	0.00	0.00	0.00	0.18	0.18	0.18
Sat Flow, veh/h	0	3150	156	277	3238	0		0		2210	1196	964
Grp Volume(v), veh/h	0	804	428	54	660	0		0.0		282	93	7
Grp Sat Flow(s),veh/h/ln	0	1045	1112	277	1045	0				1105	1196	964
Q Serve(g_s), s	0.0	0.0	0.0	1.2	1.4	0.0				12.0	6.9	0.6
Cycle Q Clear(g_c), s	0.0	0.0	0.0	1.2	1.4	0.0				12.0	6.9	0.6
Prop In Lane	0.00		0.14	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1498	797	270	2247	0				398	215	174
V/C Ratio(X)	0.00	0.54	0.54	0.20	0.29	0.00				0.71	0.43	0.04
Avail Cap(c_a), veh/h	0	1498	797	270	2247	0				575	311	251
HCM Platoon Ratio	1.00	2.00	2.00	1.33	1.33	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.79	0.79	1.00	1.00	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.7	0.7	0.0				38.5	36.4	33.9
Incr Delay (d2), s/veh	0.0	1.1	2.0	1.7	0.3	0.0				2.3	1.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.2	0.5	0.2	0.3	0.0				3.4	2.1	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	1.1	2.0	2.3	1.0	0.0				40.9	37.8	33.9
LnGrp LOS	A	A	A	A	A	A				D	D	C
Approach Vol, veh/h		1232			714						382	
Approach Delay, s/veh		1.4			1.1						40.0	
Approach LOS		A			A						D	

Timer - Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		78.0				78.0		22.0
Change Period (Y+Rc), s		6.3				6.3		4.0
Max Green Setting (Gmax), s		43.7				43.7		26.0
Max Q Clear Time (g_c+I1), s		2.0				3.4		14.0
Green Ext Time (p_c), s		21.4				12.9		1.3

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

Notes

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

Intersection	
Int Delay, s/veh	2.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	3	1345	29	0	629	3	0	0	129	0	0	0
Future Vol, veh/h	3	1345	29	0	629	3	0	0	129	0	0	0
Conflicting Peds, #/hr	55	0	36	0	0	53	0	0	34	53	0	55
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	1494	32	0	699	3	0	0	143	0	0	0

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	757	0	0	-	-	0	-	-	833
Stage 1	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-
Critical Hdwy	5.34	-	-	-	-	-	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.12	-	-	-	-	-	-	-	3.92
Pot Cap-1 Maneuver	512	-	-	0	-	-	0	0	268
Stage 1	-	-	-	0	-	-	0	0	-
Stage 2	-	-	-	0	-	-	0	0	-
Platoon blocked, %		-	-		-	-			
Mov Cap-1 Maneuver	512	-	-	-	-	-	-	0	250
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	0	-
Stage 1	-	-	-	-	-	-	-	0	-
Stage 2	-	-	-	-	-	-	-	0	-

Approach	EB	WB	NB
HCM Control Delay, s	0.2	0	37.1
HCM LOS			E

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBT	WBR
Capacity (veh/h)	250	512	-	-	-	-
HCM Lane V/C Ratio	0.573	0.007	-	-	-	-
HCM Control Delay (s)	37.1	12.1	0.2	-	-	-
HCM Lane LOS	E	B	A	-	-	-
HCM 95th %tile Q(veh)	3.2	0	-	-	-	-

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBR
Lane Configurations									
Traffic Volume (vph)	395	79	854	64	85	746	275	15	54
Future Volume (vph)	395	79	854	64	85	746	275	15	54
Ideal Flow (vphpl)	1350	1350	1350	1350	1350	1350	1350	1350	1350
Lane Width	12	9	10	9	9	9	9	9	15
Total Lost time (s)		4.6	5.3		4.6	5.3			4.6
Lane Util. Factor		1.00	0.91		1.00	0.91			1.00
Frpb, ped/bikes		1.00	0.99		1.00	0.96			1.00
Flpb, ped/bikes		1.00	1.00		1.00	1.00			1.00
Frt		1.00	0.99		1.00	0.96			0.86
Flt Protected		0.95	1.00		0.95	1.00			1.00
Satd. Flow (prot)		1018	2986		1018	2694			1133
Flt Permitted		0.95	1.00		0.95	1.00			1.00
Satd. Flow (perm)		1018	2986		1018	2694			1133
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	439	88	949	71	94	829	306	17	60
RTOR Reduction (vph)	0	0	6	0	0	2	0	0	48
Lane Group Flow (vph)	0	527	1014	0	94	1150	0	0	12
Confl. Peds. (#/hr)				32			54	54	
Confl. Bikes (#/hr)				2			8	8	
Turn Type	Prot	Prot	NA		Prot	NA			Perm
Protected Phases	5	5	2		1	6			
Permitted Phases									1
Actuated Green, G (s)		42.4	69.9		20.2	47.7			20.2
Effective Green, g (s)		42.4	69.9		20.2	47.7			20.2
Actuated g/C Ratio		0.42	0.70		0.20	0.48			0.20
Clearance Time (s)		4.6	5.3		4.6	5.3			4.6
Vehicle Extension (s)		2.5	5.0		2.5	5.0			2.5
Lane Grp Cap (vph)		431	2087		205	1285			228
v/s Ratio Prot		c0.52	0.34		0.09	c0.43			
v/s Ratio Perm									0.01
v/c Ratio		1.22	0.49		0.46	0.90			0.05
Uniform Delay, d1		28.8	6.9		35.1	23.9			32.2
Progression Factor		1.14	1.16		1.23	0.59			1.00
Incremental Delay, d2		115.7	0.6		0.9	7.8			0.1
Delay (s)		148.4	8.6		44.0	21.8			32.3
Level of Service		F	A		D	C			C
Approach Delay (s)			56.2			23.5			
Approach LOS			E			C			

Intersection Summary			
HCM 2000 Control Delay	41.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.05		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	9.9
Intersection Capacity Utilization	83.2%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	79	818	34	0	861	93	84	84	30	53	74	91
Future Volume (veh/h)	79	818	34	0	861	93	84	84	30	53	74	91
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.95	1.00		0.92	1.00		0.98	1.00		0.91
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	1148	1148	1196	0	1196	1196	1196	1196	1196	1148	1244	1196
Adj Flow Rate, veh/h	88	909	31	0	957	92	93	93	33	59	82	101
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	0	2	2	2	2	2	2	2	2
Cap, veh/h	240	1599	54	0	1546	148	149	110	39	238	271	200
Arrive On Green	1.00	1.00	1.00	0.00	1.00	1.00	0.13	0.13	0.13	0.22	0.22	0.22
Sat Flow, veh/h	326	3107	106	0	3112	288	1139	839	298	1094	1244	919
Grp Volume(v), veh/h	88	611	329	0	692	357	93	0	126	59	82	101
Grp Sat Flow(s),veh/h/ln	326	1045	1123	0	1088	1115	1139	0	1136	1094	1244	919
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	7.7	0.0	10.8	4.5	5.5	9.7
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	7.7	0.0	10.8	4.5	5.5	9.7
Prop In Lane	1.00		0.09	0.00		0.26	1.00		0.26	1.00		1.00
Lane Grp Cap(c), veh/h	240	1075	578	0	1120	574	149	0	149	238	271	200
V/C Ratio(X)	0.37	0.57	0.57	0.00	0.62	0.62	0.62	0.00	0.85	0.25	0.30	0.50
Avail Cap(c_a), veh/h	240	1075	578	0	1120	574	180	0	180	337	383	283
HCM Platoon Ratio	2.00	2.00	2.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.89	0.89	0.89	0.00	0.44	0.44	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	41.1	0.0	42.5	32.3	32.8	34.4
Incr Delay (d2), s/veh	3.8	1.9	3.6	0.0	1.1	2.2	4.7	0.0	26.1	0.5	0.6	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.3	0.6	0.0	0.2	0.4	2.4	0.0	4.1	1.2	1.7	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	3.8	1.9	3.6	0.0	1.1	2.2	45.9	0.0	68.6	32.9	33.4	36.3
LnGrp LOS	A	A	A	A	A	A	D	A	E	C	C	D
Approach Vol, veh/h		1028			1049			219			242	
Approach Delay, s/veh		2.6			1.5			59.0			34.5	
Approach LOS		A			A			E			C	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	56.8	17.3	56.8	26.0
Change Period (Y+Rc), s	5.3	* 4.2	5.3	4.2
Max Green Setting (Gmax), s	39.7	* 16	39.7	30.8
Max Q Clear Time (g_c+I1), s	2.0	12.8	2.0	11.7
Green Ext Time (p_c), s	18.3	0.3	16.8	0.9

Intersection Summary	
HCM 6th Ctrl Delay	10.1
HCM 6th LOS	B

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	32	933	67	49	880	56	89	504	70	5	383	63
Future Volume (veh/h)	32	933	67	49	880	56	89	504	70	5	383	63
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.95	1.00		0.97	0.99		0.92
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	1148	1148	1148	1148	1196	1196	1148	1148	1148	1196	1148	1148
Adj Flow Rate, veh/h	36	1037	63	54	978	53	99	560	31	6	426	26
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	158	1260	76	187	1362	74	85	857	370	39	558	237
Arrive On Green	0.05	0.84	0.84	0.04	0.43	0.43	0.08	0.39	0.39	0.26	0.26	0.26
Sat Flow, veh/h	1094	3012	183	1094	3160	171	1094	2182	942	8	2122	899
Grp Volume(v), veh/h	36	719	381	54	673	358	99	560	31	231	201	26
Grp Sat Flow(s),veh/h/ln	1094	1045	1105	1094	1088	1154	1094	1091	942	1137	993	899
Q Serve(g_s), s	1.9	18.0	18.1	2.8	25.5	25.6	7.8	21.0	2.1	0.0	18.7	2.2
Cycle Q Clear(g_c), s	1.9	18.0	18.1	2.8	25.5	25.6	7.8	21.0	2.1	18.6	18.7	2.2
Prop In Lane	1.00		0.17	1.00		0.15	1.00		1.00	0.03		1.00
Lane Grp Cap(c), veh/h	158	874	462	187	939	497	85	857	370	336	261	237
V/C Ratio(X)	0.23	0.82	0.82	0.29	0.72	0.72	1.16	0.65	0.08	0.69	0.77	0.11
Avail Cap(c_a), veh/h	212	874	462	227	939	497	85	934	403	375	296	268
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)	0.69	0.69	0.69	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.8	6.2	6.2	17.6	23.4	23.5	46.1	24.8	19.0	34.0	34.0	28.0
Incr Delay (d2), s/veh	0.2	6.1	11.0	0.3	4.7	8.7	147.2	1.7	0.1	5.3	11.5	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	2.2	3.0	0.7	6.9	7.9	5.6	5.6	0.5	5.7	5.3	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.0	12.3	17.3	17.9	28.1	32.1	193.3	26.5	19.2	39.4	45.5	28.3
LnGrp LOS	B	B	B	B	C	C	F	C	B	D	D	C
Approach Vol, veh/h		1136			1085			690			458	
Approach Delay, s/veh		14.2			28.9			50.1			41.4	
Approach LOS		B			C			D			D	

Timer - Assigned Phs	1	2	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.4	47.1	44.5	7.1	48.4	13.0	31.5
Change Period (Y+Rc), s	4.6	5.3	5.2	4.6	5.3	5.2	5.2
Max Green Setting (Gmax), s	7.4	34.7	42.8	7.4	34.7	7.8	29.8
Max Q Clear Time (g_c+I1), s	4.8	20.1	23.0	3.9	27.6	9.8	20.7
Green Ext Time (p_c), s	0.0	9.6	5.4	0.0	5.1	0.0	2.4

Intersection Summary	
HCM 6th Ctrl Delay	30.0
HCM 6th LOS	C

Notes

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

Intersection	
Intersection Delay, s/veh	10.9
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥			✥			✥	
Traffic Vol, veh/h	15	173	7	7	259	28	9	51	5	9	44	29
Future Vol, veh/h	15	173	7	7	259	28	9	51	5	9	44	29
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	19	216	9	9	324	35	11	64	6	11	55	36
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	10.3	12	9.4	9.3
HCM LOS	B	B	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	14%	8%	2%	11%
Vol Thru, %	78%	89%	88%	54%
Vol Right, %	8%	4%	10%	35%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	65	195	294	82
LT Vol	9	15	7	9
Through Vol	51	173	259	44
RT Vol	5	7	28	29
Lane Flow Rate	81	244	368	102
Geometry Grp	1	1	1	1
Degree of Util (X)	0.126	0.328	0.476	0.153
Departure Headway (Hd)	5.584	4.841	4.659	5.377
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	645	734	764	671
Service Time	3.588	2.925	2.734	3.377
HCM Lane V/C Ratio	0.126	0.332	0.482	0.152
HCM Control Delay	9.4	10.3	12	9.3
HCM Lane LOS	A	B	B	A
HCM 95th-tile Q	0.4	1.4	2.6	0.5

Intersection	
Intersection Delay, s/veh	11
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	9	173	5	9	279	12	6	95	13	12	19	4
Future Vol, veh/h	9	173	5	9	279	12	6	95	13	12	19	4
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	216	6	11	349	15	8	119	16	15	24	5
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	10.2	12.2	9.9	9.1
HCM LOS	B	B	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	5%	5%	3%	34%
Vol Thru, %	83%	93%	93%	54%
Vol Right, %	11%	3%	4%	11%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	114	187	300	35
LT Vol	6	9	9	12
Through Vol	95	173	279	19
RT Vol	13	5	12	4
Lane Flow Rate	142	234	375	44
Geometry Grp	1	1	1	1
Degree of Util (X)	0.212	0.316	0.489	0.069
Departure Headway (Hd)	5.346	4.864	4.695	5.688
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	664	732	761	634
Service Time	3.439	2.942	2.763	3.688
HCM Lane V/C Ratio	0.214	0.32	0.493	0.069
HCM Control Delay	9.9	10.2	12.2	9.1
HCM Lane LOS	A	B	B	A
HCM 95th-tile Q	0.8	1.4	2.7	0.2

Intersection	
Intersection Delay, s/veh	10.7
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	9	183	8	16	266	14	14	28	18	13	24	23
Future Vol, veh/h	9	183	8	16	266	14	14	28	18	13	24	23
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	229	10	20	333	18	18	35	23	16	30	29
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	10.1	11.7	9.1	9
HCM LOS	B	B	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	23%	4%	5%	22%
Vol Thru, %	47%	92%	90%	40%
Vol Right, %	30%	4%	5%	38%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	60	200	296	60
LT Vol	14	9	16	13
Through Vol	28	183	266	24
RT Vol	18	8	14	23
Lane Flow Rate	75	250	370	75
Geometry Grp	1	1	1	1
Degree of Util (X)	0.111	0.328	0.472	0.11
Departure Headway (Hd)	5.325	4.729	4.597	5.273
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	667	755	781	674
Service Time	3.407	2.788	2.65	3.354
HCM Lane V/C Ratio	0.112	0.331	0.474	0.111
HCM Control Delay	9.1	10.1	11.7	9
HCM Lane LOS	A	B	B	A
HCM 95th-tile Q	0.4	1.4	2.6	0.4

HCM 6th Signalized Intersection Summary
1: S Linden Dr & Wilshire Blvd

06/22/2023

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1368	134	28	1083	0	310	0	69	138	0	69
Future Volume (veh/h)	0	1368	134	28	1083	0	310	0	69	138	0	69
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.92	1.00		1.00	1.00		1.00	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	0	1683	1683	1683	1683	0	1616	0	1683	1751	0	1683
Adj Flow Rate, veh/h	0	1520	140	31	1203	0	344	0	51	153	0	19
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	2	2	2	2	0	2	0	2	2	0	2
Cap, veh/h	0	2777	256	78	2681	0	380	0	0	411	0	0
Arrive On Green	0.00	0.65	0.65	1.00	1.00	0.00	0.25	0.00	0.00	0.25	0.00	0.00
Sat Flow, veh/h	0	4396	391	60	4235	0	1539	344		1667	153	
Grp Volume(v), veh/h	0	1097	563	408	826	0	344	47.4		153	31.8	
Grp Sat Flow(s),veh/h/ln	0	1532	1571	1369	1394	0	1539	D		1667	C	
Q Serve(g_s), s	0.0	19.3	19.3	0.0	0.0	0.0	21.7			7.6		
Cycle Q Clear(g_c), s	0.0	19.3	19.3	0.0	0.0	0.0	21.7			7.6		
Prop In Lane	0.00		0.25	0.08		0.00	1.00			1.00		
Lane Grp Cap(c), veh/h	0	2005	1028	935	1824	0	380			411		
V/C Ratio(X)	0.00	0.55	0.55	0.44	0.45	0.00	0.91			0.37		
Avail Cap(c_a), veh/h	0	2005	1028	935	1824	0	622			674		
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00	1.00			1.00		
Upstream Filter(I)	0.00	1.00	1.00	0.63	0.63	0.00	1.00			1.00		
Uniform Delay (d), s/veh	0.0	9.3	9.3	0.0	0.0	0.0	36.5			31.2		
Incr Delay (d2), s/veh	0.0	1.1	2.1	0.9	0.5	0.0	10.9			0.6		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0		
%ile BackOfQ(50%),veh/ln	0.0	6.0	6.5	0.2	0.1	0.0	9.2			3.1		
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	10.4	11.4	0.9	0.5	0.0	47.4			31.8		
LnGrp LOS	A	B	B	A	A	A	D			C		
Approach Vol, veh/h		1660			1234							
Approach Delay, s/veh		10.7			0.7							
Approach LOS		B			A							
Timer - Assigned Phs		2	3			6	7					
Phs Duration (G+Y+Rc), s		70.7	29.3			70.7	29.3					
Change Period (Y+Rc), s		5.3	4.6			5.3	4.6					
Max Green Setting (Gmax), s		49.7	40.4			49.7	40.4					
Max Q Clear Time (g_c+I1), s		21.3	23.7			2.0	9.6					
Green Ext Time (p_c), s		22.4	1.0			24.2	0.4					
Intersection Summary												
HCM 6th Ctrl Delay			11.7									
HCM 6th LOS			B									

Movement	EBL2	EBT	EBR	WBL	WBT	WBR	NBR	SBR	SBR2
Lane Configurations									
Traffic Volume (vph)	108	1386	67	57	864	50	68	252	198
Future Volume (vph)	108	1386	67	57	864	50	68	252	198
Ideal Flow (vphpl)	1350	1350	1350	1350	1350	1350	1350	1350	1350
Lane Width	9	10	10	9	10	10	12	10	10
Total Lost time (s)	4.6	5.3		4.0	5.3		4.6	4.6	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.88	1.00
Frpb, ped/bikes	1.00	0.99		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	0.99		1.00	0.99		0.86	0.85	0.85
Flt Protected	0.95	1.00		0.95	1.00		1.00	1.00	1.00
Satd. Flow (prot)	1018	2976		1018	2989		1030	1663	945
Flt Permitted	0.95	1.00		0.95	1.00		1.00	1.00	1.00
Satd. Flow (perm)	1018	2976		1018	2989		1030	1663	945
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	120	1540	74	63	960	56	76	280	220
RTOR Reduction (vph)	0	5	0	0	0	0	0	0	0
Lane Group Flow (vph)	120	1609	0	63	1016	0	76	280	220
Confl. Peds. (#/hr)			115			83			
Confl. Bikes (#/hr)			6			6	6	6	
Turn Type	Prot	NA		Prot	NA		Prot	Prot	Free
Protected Phases	5	2		1	6		8	4	
Permitted Phases									Free
Actuated Green, G (s)	15.4	65.9		1.0	50.9		19.2	19.2	100.0
Effective Green, g (s)	15.4	65.9		1.0	50.9		19.2	19.2	100.0
Actuated g/C Ratio	0.15	0.66		0.01	0.51		0.19	0.19	1.00
Clearance Time (s)	4.6	5.3		4.0	5.3		4.6	4.6	
Vehicle Extension (s)	1.5	3.0		1.5	3.0		2.5	2.5	
Lane Grp Cap (vph)	156	1961		10	1521		197	319	945
v/s Ratio Prot	0.12	c0.54		c0.06	0.34		0.07	c0.17	
v/s Ratio Perm									0.23
v/c Ratio	0.77	0.82		6.30	0.67		0.39	0.88	0.23
Uniform Delay, d1	40.6	12.7		49.5	18.3		35.3	39.3	0.0
Progression Factor	0.60	0.55		0.71	1.03		1.00	1.00	1.00
Incremental Delay, d2	5.9	1.2		2540.1	1.8		0.9	22.6	0.6
Delay (s)	30.4	8.1		2575.5	20.6		36.2	61.8	0.6
Level of Service	C	A		F	C		D	E	A
Approach Delay (s)		9.7			169.8				
Approach LOS		A			F				

Intersection Summary			
HCM 2000 Control Delay	65.0	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	14.5
Intersection Capacity Utilization	63.4%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↱		↰	↑↑↑		↰		↱	↰↰	↑	↱
Traffic Volume (veh/h)	0	1412	44	51	773	0	118	0	107	401	225	80
Future Volume (veh/h)	0	1412	44	51	773	0	118	0	107	401	225	80
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.88	0.99		1.00	1.00		1.00	1.00		0.93
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	0	1616	1616	1616	1616	0	1683	0	1683	1683	1683	1683
Adj Flow Rate, veh/h	0	1569	48	57	859	0	131	0	119	446	250	19
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	2	2	2	2	0	2	0	2	2	2	2
Cap, veh/h	0	2993	92	255	3016	0	0	0	0	664	359	283
Arrive On Green	0.00	1.00	1.00	0.91	0.91	0.00	0.00	0.00	0.00	0.21	0.21	0.21
Sat Flow, veh/h	0	4523	134	267	4557	0		0		3110	1683	1328
Grp Volume(v), veh/h	0	1054	563	57	859	0		0.0		446	250	19
Grp Sat Flow(s),veh/h/ln	0	1471	1571	267	1471	0				1555	1683	1328
Q Serve(g_s), s	0.0	0.0	0.0	2.7	2.4	0.0				13.2	13.7	1.1
Cycle Q Clear(g_c), s	0.0	0.0	0.0	2.7	2.4	0.0				13.2	13.7	1.1
Prop In Lane	0.00		0.09	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2011	1074	255	3016	0				664	359	283
V/C Ratio(X)	0.00	0.52	0.52	0.22	0.28	0.00				0.67	0.70	0.07
Avail Cap(c_a), veh/h	0	2011	1074	255	3016	0				809	438	345
HCM Platoon Ratio	1.00	2.00	2.00	1.33	1.33	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.50	0.50	1.00	1.00	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	1.6	1.5	0.0				36.1	36.3	31.4
Incr Delay (d2), s/veh	0.0	0.5	0.9	2.0	0.2	0.0				1.6	3.7	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.1	0.3	0.2	0.6	0.0				5.1	6.0	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.5	0.9	3.6	1.8	0.0				37.8	40.0	31.5
LnGrp LOS	A	A	A	A	A	A				D	D	C
Approach Vol, veh/h		1617			916						715	
Approach Delay, s/veh		0.6			1.9						38.4	
Approach LOS		A			A						D	

Timer - Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		74.7				74.7		25.3				
Change Period (Y+Rc), s		6.3				6.3		4.0				
Max Green Setting (Gmax), s		43.7				43.7		26.0				
Max Q Clear Time (g_c+I1), s		2.0				4.7		15.7				
Green Ext Time (p_c), s		29.2				16.8		2.5				

Intersection Summary			
HCM 6th Ctrl Delay			9.3
HCM 6th LOS			A

Notes

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

Intersection	
Int Delay, s/veh	8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	1824	93	0	821	1	0	0	101	0	0	0
Future Vol, veh/h	2	1824	93	0	821	1	0	0	101	0	0	0
Conflicting Peds, #/hr	107	0	128	0	0	107	0	0	128	107	0	107
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	2027	103	0	912	1	0	0	112	0	0	0

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	1020	0	0	-	-	0	-	-	1321
Stage 1	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-
Critical Hdwy	5.34	-	-	-	-	-	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.12	-	-	-	-	-	-	-	3.92
Pot Cap-1 Maneuver	383	-	-	0	-	-	0	0	126
Stage 1	-	-	-	0	-	-	0	0	-
Stage 2	-	-	-	0	-	-	0	0	-
Platoon blocked, %		-	-		-	-			
Mov Cap-1 Maneuver	383	-	-	-	-	-	-	0	~ 96
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	0	-
Stage 1	-	-	-	-	-	-	-	0	-
Stage 2	-	-	-	-	-	-	-	0	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	226
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBT	WBR
Capacity (veh/h)	96	383	-	-	-	-
HCM Lane V/C Ratio	1.169	0.006	-	-	-	-
HCM Control Delay (s)	226	14.5	0	-	-	-
HCM Lane LOS	F	B	A	-	-	-
HCM 95th %tile Q(veh)	7.6	0	-	-	-	-

Notes

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

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBR
Lane Configurations									
Traffic Volume (vph)	183	342	1288	109	97	820	141	49	108
Future Volume (vph)	183	342	1288	109	97	820	141	49	108
Ideal Flow (vphpl)	1350	1350	1350	1350	1350	1350	1350	1350	1350
Lane Width	12	9	10	9	9	9	9	9	15
Total Lost time (s)		4.6	5.3		4.6	5.3			4.6
Lane Util. Factor		1.00	0.91		1.00	0.91			1.00
Frpb, ped/bikes		1.00	0.98		1.00	0.94			1.00
Flpb, ped/bikes		1.00	1.00		1.00	1.00			1.00
Frt		1.00	0.99		1.00	0.97			0.86
Flt Protected		0.95	1.00		0.95	1.00			1.00
Satd. Flow (prot)		1018	2940		1018	2684			1133
Flt Permitted		0.95	1.00		0.95	1.00			1.00
Satd. Flow (perm)		1018	2940		1018	2684			1133
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	203	380	1431	121	108	911	157	54	120
RTOR Reduction (vph)	0	0	8	0	0	5	0	0	59
Lane Group Flow (vph)	0	583	1544	0	108	1117	0	0	62
Confl. Peds. (#/hr)				124			127	127	
Confl. Bikes (#/hr)				8			2	2	
Turn Type	Prot	Prot	NA		Prot	NA			Perm
Protected Phases	5	5	2		1	6			
Permitted Phases									1
Actuated Green, G (s)		42.4	68.1		22.0	47.7			22.0
Effective Green, g (s)		42.4	68.1		22.0	47.7			22.0
Actuated g/C Ratio		0.42	0.68		0.22	0.48			0.22
Clearance Time (s)		4.6	5.3		4.6	5.3			4.6
Vehicle Extension (s)		2.5	5.0		2.5	5.0			2.5
Lane Grp Cap (vph)		431	2002		223	1280			249
v/s Ratio Prot		c0.57	0.53		0.11	c0.42			
v/s Ratio Perm									0.05
v/c Ratio		1.35	0.77		0.48	0.87			0.25
Uniform Delay, d1		28.8	10.7		34.0	23.4			32.2
Progression Factor		1.14	1.08		1.23	0.56			1.00
Incremental Delay, d2		160.1	0.3		0.8	5.6			0.4
Delay (s)		192.9	11.8		42.7	18.7			32.5
Level of Service		F	B		D	B			C
Approach Delay (s)			61.3			20.8			
Approach LOS			E			C			

Intersection Summary			
HCM 2000 Control Delay	46.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.10		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	9.9
Intersection Capacity Utilization	86.4%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	120	1256	21	0	903	108	99	68	38	115	58	103
Future Volume (veh/h)	120	1256	21	0	903	108	99	68	38	115	58	103
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		0.93	1.00		0.88	1.00		0.98	1.00		0.89
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	1616	1616	1683	0	1683	1683	1683	1683	1683	1616	1751	1683
Adj Flow Rate, veh/h	133	1396	21	0	1003	102	110	76	42	128	64	114
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	0	2	2	2	2	2	2	2	2
Cap, veh/h	305	2417	36	0	2259	229	157	99	55	345	393	285
Arrive On Green	1.00	1.00	1.00	0.00	1.00	1.00	0.10	0.10	0.10	0.22	0.22	0.22
Sat Flow, veh/h	431	4472	67	0	4330	423	1603	1011	559	1539	1751	1271
Grp Volume(v), veh/h	133	918	499	0	734	371	110	0	118	128	64	114
Grp Sat Flow(s),veh/h/ln	431	1471	1598	0	1532	1539	1603	0	1570	1539	1751	1271
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	6.6	0.0	7.3	7.0	2.9	7.6
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	6.6	0.0	7.3	7.0	2.9	7.6
Prop In Lane	1.00		0.04	0.00		0.28	1.00		0.36	1.00		1.00
Lane Grp Cap(c), veh/h	305	1590	864	0	1656	832	157	0	154	345	393	285
V/C Ratio(X)	0.44	0.58	0.58	0.00	0.44	0.45	0.70	0.00	0.77	0.37	0.16	0.40
Avail Cap(c_a), veh/h	305	1590	864	0	1656	832	253	0	248	474	539	392
HCM Platoon Ratio	2.00	2.00	2.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.59	0.59	0.59	0.00	0.33	0.33	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	43.7	0.0	44.0	32.8	31.2	33.1
Incr Delay (d2), s/veh	2.7	0.9	1.7	0.0	0.3	0.6	5.5	0.0	7.7	0.7	0.2	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.2	0.4	0.0	0.1	0.1	2.9	0.0	3.2	2.7	1.3	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	2.7	0.9	1.7	0.0	0.3	0.6	49.2	0.0	51.7	33.5	31.4	34.0
LnGrp LOS	A	A	A	A	A	A	D	A	D	C	C	C
Approach Vol, veh/h		1550			1105			228			306	
Approach Delay, s/veh		1.3			0.4			50.5			33.2	
Approach LOS		A			A			D			C	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		59.4		14.0		59.4		26.6				
Change Period (Y+Rc), s		5.3		* 4.2		5.3		4.2				
Max Green Setting (Gmax), s		39.7		* 16		39.7		30.8				
Max Q Clear Time (g_c+I1), s		2.0		9.3		2.0		9.6				
Green Ext Time (p_c), s		27.0		0.5		18.0		1.1				
Intersection Summary												
HCM 6th Ctrl Delay			7.6									
HCM 6th LOS			A									

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	19	1107	64	57	921	68	110	441	100	5	620	93
Future Volume (veh/h)	19	1107	64	57	921	68	110	441	100	5	620	93
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.93	0.99		0.93	1.00		0.94	0.97		0.93
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	1616	1616	1616	1616	1683	1683	1616	1616	1616	1683	1616	1616
Adj Flow Rate, veh/h	21	1230	63	63	1023	63	122	490	44	6	689	36
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	205	1732	89	229	1884	116	120	1253	526	39	833	356
Arrive On Green	0.03	0.81	0.81	0.04	0.43	0.43	0.08	0.41	0.41	0.28	0.28	0.28
Sat Flow, veh/h	1539	4279	219	1539	4403	271	1539	3070	1290	7	2997	1280
Grp Volume(v), veh/h	21	845	448	63	711	375	122	490	44	372	323	36
Grp Sat Flow(s),veh/h/ln	1539	1471	1557	1539	1532	1610	1539	1535	1290	1607	1397	1280
Q Serve(g_s), s	0.8	12.9	12.9	2.4	17.3	17.4	7.8	11.2	2.1	1.9	21.7	2.1
Cycle Q Clear(g_c), s	0.8	12.9	12.9	2.4	17.3	17.4	7.8	11.2	2.1	21.6	21.7	2.1
Prop In Lane	1.00		0.14	1.00		0.17	1.00		1.00	0.02		1.00
Lane Grp Cap(c), veh/h	205	1190	630	229	1311	689	120	1253	526	483	388	356
V/C Ratio(X)	0.10	0.71	0.71	0.28	0.54	0.54	1.02	0.39	0.08	0.77	0.83	0.10
Avail Cap(c_a), veh/h	299	1190	630	287	1311	689	120	1314	552	515	416	381
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)	0.11	0.11	0.11	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.1	6.9	6.9	17.3	21.3	21.3	46.1	20.9	18.1	33.9	33.9	26.8
Incr Delay (d2), s/veh	0.0	0.4	0.8	0.2	1.6	3.1	86.6	0.3	0.1	7.2	13.4	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	2.1	2.3	0.8	6.3	6.9	5.9	4.1	0.6	9.4	8.8	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.1	7.3	7.7	17.5	22.9	24.4	132.7	21.1	18.2	41.0	47.3	27.0
LnGrp LOS	B	A	A	B	C	C	F	C	B	D	D	C
Approach Vol, veh/h		1314			1149			656			731	
Approach Delay, s/veh		7.6			23.1			41.7			43.1	
Approach LOS		A			C			D			D	

Timer - Assigned Phs	1	2		4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.2	45.8		46.0	5.9	48.1	13.0	33.0
Change Period (Y+Rc), s	4.6	5.3		5.2	4.6	5.3	5.2	5.2
Max Green Setting (Gmax), s	7.4	34.7		42.8	7.4	34.7	7.8	29.8
Max Q Clear Time (g_c+I1), s	4.4	14.9		13.2	2.8	19.4	9.8	23.7
Green Ext Time (p_c), s	0.0	13.9		5.5	0.0	9.9	0.0	2.9

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

Notes

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

Intersection	
Intersection Delay, s/veh	12.9
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			✣			✣	
Traffic Vol, veh/h	14	315	9	9	172	33	5	31	13	48	143	54
Future Vol, veh/h	14	315	9	9	172	33	5	31	13	48	143	54
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	16	350	10	10	191	37	6	34	14	53	159	60
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	14.5	11.4	9.6	12.6
HCM LOS	B	B	A	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	10%	4%	4%	20%
Vol Thru, %	63%	93%	80%	58%
Vol Right, %	27%	3%	15%	22%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	49	338	214	245
LT Vol	5	14	9	48
Through Vol	31	315	172	143
RT Vol	13	9	33	54
Lane Flow Rate	54	376	238	272
Geometry Grp	1	1	1	1
Degree of Util (X)	0.09	0.547	0.355	0.42
Departure Headway (Hd)	5.958	5.248	5.375	5.557
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	599	687	668	648
Service Time	4.02	3.288	3.42	3.601
HCM Lane V/C Ratio	0.09	0.547	0.356	0.42
HCM Control Delay	9.6	14.5	11.4	12.6
HCM Lane LOS	A	B	B	B
HCM 95th-tile Q	0.3	3.3	1.6	2.1

Intersection	
Intersection Delay, s/veh	12.3
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	14	352	6	7	192	21	6	85	8	35	52	19
Future Vol, veh/h	14	352	6	7	192	21	6	85	8	35	52	19
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	16	391	7	8	213	23	7	94	9	39	58	21
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	14.4	10.9	10.1	10.2
HCM LOS	B	B	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	6%	4%	3%	33%
Vol Thru, %	86%	95%	87%	49%
Vol Right, %	8%	2%	10%	18%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	99	372	220	106
LT Vol	6	14	7	35
Through Vol	85	352	192	52
RT Vol	8	6	21	19
Lane Flow Rate	110	413	244	118
Geometry Grp	1	1	1	1
Degree of Util (X)	0.177	0.572	0.348	0.189
Departure Headway (Hd)	5.787	4.983	5.127	5.765
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	619	727	702	622
Service Time	3.833	2.983	3.163	3.81
HCM Lane V/C Ratio	0.178	0.568	0.348	0.19
HCM Control Delay	10.1	14.4	10.9	10.2
HCM Lane LOS	B	B	B	B
HCM 95th-tile Q	0.6	3.7	1.6	0.7

Intersection	
Intersection Delay, s/veh	12.7
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥			✥			✥	
Traffic Vol, veh/h	13	346	30	23	171	16	16	31	26	28	86	33
Future Vol, veh/h	13	346	30	23	171	16	16	31	26	28	86	33
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	14	384	33	26	190	18	18	34	29	31	96	37
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	15	10.9	9.7	10.7
HCM LOS	B	B	A	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	22%	3%	11%	19%
Vol Thru, %	42%	89%	81%	59%
Vol Right, %	36%	8%	8%	22%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	73	389	210	147
LT Vol	16	13	23	28
Through Vol	31	346	171	86
RT Vol	26	30	16	33
Lane Flow Rate	81	432	233	163
Geometry Grp	1	1	1	1
Degree of Util (X)	0.13	0.595	0.339	0.257
Departure Headway (Hd)	5.773	4.952	5.225	5.671
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	620	730	688	632
Service Time	3.821	2.98	3.261	3.714
HCM Lane V/C Ratio	0.131	0.592	0.339	0.258
HCM Control Delay	9.7	15	10.9	10.7
HCM Lane LOS	A	B	B	B
HCM 95th-tile Q	0.4	4	1.5	1

LOS Worksheets: Future Plus Scenario 2 Specific Plan Buildout Conditions

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1165	67	17	690	0	256	0	114	72	0	56
Future Volume (veh/h)	0	1165	67	17	690	0	256	0	114	72	0	56
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	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	0	1196	1196	1196	1196	0	1148	0	1196	1244	0	1196
Adj Flow Rate, veh/h	0	1294	67	19	767	0	284	0	59	80	0	19
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	2	2	2	2	0	2	0	2	2	0	2
Cap, veh/h	0	1969	102	63	1832	0	306	0	0	331	0	0
Arrive On Green	0.00	0.62	0.62	1.00	1.00	0.00	0.28	0.00	0.00	0.28	0.00	0.00
Sat Flow, veh/h	0	3277	164	39	3046	0	1094	284		1185	80	
Grp Volume(v), veh/h	0	889	472	270	516	0	284	55.5		80	28.2	
Grp Sat Flow(s),veh/h/ln	0	1088	1156	1006	990	0	1094	E		1185	C	
Q Serve(g_s), s	0.0	26.1	26.1	2.1	0.0	0.0	25.3			5.2		
Cycle Q Clear(g_c), s	0.0	26.1	26.1	28.2	0.0	0.0	25.3			5.2		
Prop In Lane	0.00		0.14	0.07		0.00	1.00			1.00		
Lane Grp Cap(c), veh/h	0	1352	718	663	1231	0	306			331		
V/C Ratio(X)	0.00	0.66	0.66	0.41	0.42	0.00	0.93			0.24		
Avail Cap(c_a), veh/h	0	1352	718	663	1231	0	442			479		
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00	1.00			1.00		
Upstream Filter(I)	0.00	1.00	1.00	0.83	0.83	0.00	1.00			1.00		
Uniform Delay (d), s/veh	0.0	12.1	12.1	0.1	0.0	0.0	35.0			27.8		
Incr Delay (d2), s/veh	0.0	2.5	4.7	1.5	0.9	0.0	20.5			0.4		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0		
%ile BackOfQ(50%),veh/ln	0.0	6.2	7.0	0.3	0.1	0.0	8.4			1.5		
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	14.6	16.8	1.6	0.9	0.0	55.5			28.2		
LnGrp LOS	A	B	B	A	A	A	E			C		
Approach Vol, veh/h		1361			786							
Approach Delay, s/veh		15.4			1.1							
Approach LOS		B			A							
Timer - Assigned Phs		2	3			6	7					
Phs Duration (G+Y+Rc), s		67.4	32.6			67.4	32.6					
Change Period (Y+Rc), s		5.3	4.6			5.3	4.6					
Max Green Setting (Gmax), s		49.7	40.4			49.7	40.4					
Max Q Clear Time (g_c+I1), s		28.1	27.3			30.2	7.2					
Green Ext Time (p_c), s		15.4	0.7			8.9	0.2					
Intersection Summary												
HCM 6th Ctrl Delay			15.9									
HCM 6th LOS			B									

Movement	EBL2	EBT	EBR	WBL	WBT	WBR	NBR	SBR	SBR2
Lane Configurations									
Traffic Volume (vph)	196	1088	53	22	664	123	96	103	203
Future Volume (vph)	196	1088	53	22	664	123	96	103	203
Ideal Flow (vphpl)	1350	1350	1350	1350	1350	1350	1350	1350	1350
Lane Width	9	10	10	9	10	10	12	10	10
Total Lost time (s)	4.6	5.3		4.0	5.3		4.6	4.6	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.88	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.98		1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.99		1.00	0.98		0.86	0.85	0.85
Flt Protected	0.95	1.00		0.95	1.00		1.00	1.00	1.00
Satd. Flow (prot)	1018	3003		1018	2918		1030	1663	945
Flt Permitted	0.95	1.00		0.95	1.00		1.00	1.00	1.00
Satd. Flow (perm)	1018	3003		1018	2918		1030	1663	945
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	218	1209	59	24	738	137	107	114	226
RTOR Reduction (vph)	0	5	0	0	0	0	0	0	0
Lane Group Flow (vph)	218	1263	0	24	875	0	107	114	226
Confl. Peds. (#/hr)			24			64			
Confl. Bikes (#/hr)			3			3	3	3	
Turn Type	Prot	NA		Prot	NA		Prot	Prot	Free
Protected Phases	5	2		1	6		8	4	
Permitted Phases									Free
Actuated Green, G (s)	15.4	69.1		1.0	54.1		16.0	16.0	100.0
Effective Green, g (s)	15.4	69.1		1.0	54.1		16.0	16.0	100.0
Actuated g/C Ratio	0.15	0.69		0.01	0.54		0.16	0.16	1.00
Clearance Time (s)	4.6	5.3		4.0	5.3		4.6	4.6	
Vehicle Extension (s)	1.5	3.0		1.5	3.0		2.5	2.5	
Lane Grp Cap (vph)	156	2075		10	1578		164	266	945
v/s Ratio Prot	c0.21	c0.42		0.02	0.30		c0.10	0.07	
v/s Ratio Perm									0.24
v/c Ratio	1.40	0.61		2.40	0.55		0.65	0.43	0.24
Uniform Delay, d1	42.3	8.2		49.5	15.0		39.4	37.9	0.0
Progression Factor	0.72	0.46		0.75	1.17		1.00	1.00	1.00
Incremental Delay, d2	202.1	0.9		836.0	1.2		8.0	0.8	0.6
Delay (s)	232.6	4.6		873.2	18.8		47.4	38.7	0.6
Level of Service	F	A		F	B		D	D	A
Approach Delay (s)		38.1			41.6				
Approach LOS		D			D				

Intersection Summary			
HCM 2000 Control Delay	36.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	14.5
Intersection Capacity Utilization	59.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1084	101	115	594	0	133	0	55	259	91	43
Future Volume (veh/h)	0	1084	101	115	594	0	133	0	55	259	91	43
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		1.00	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	0	1148	1148	1148	1148	0	1196	0	1196	1196	1196	1196
Adj Flow Rate, veh/h	0	1204	110	128	660	0	148	0	61	288	101	7
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	2	2	2	2	0	2	0	2	2	2	2
Cap, veh/h	0	2080	190	255	2240	0	0	0	0	403	218	176
Arrive On Green	0.00	1.00	1.00	0.71	0.71	0.00	0.00	0.00	0.00	0.18	0.18	0.18
Sat Flow, veh/h	0	3014	266	256	3238	0		0		2210	1196	965
Grp Volume(v), veh/h	0	864	450	128	660	0		0.0		288	101	7
Grp Sat Flow(s),veh/h/ln	0	1045	1087	256	1045	0				1105	1196	965
Q Serve(g_s), s	0.0	0.0	0.0	28.6	7.6	0.0				12.3	7.5	0.6
Cycle Q Clear(g_c), s	0.0	0.0	0.0	28.6	7.6	0.0				12.3	7.5	0.6
Prop In Lane	0.00		0.24	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1493	777	255	2240	0				403	218	176
V/C Ratio(X)	0.00	0.58	0.58	0.50	0.29	0.00				0.71	0.46	0.04
Avail Cap(c_a), veh/h	0	1493	777	255	2240	0				575	311	251
HCM Platoon Ratio	1.00	2.00	2.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.75	0.75	1.00	1.00	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	8.1	5.2	0.0				38.4	36.5	33.7
Incr Delay (d2), s/veh	0.0	1.2	2.4	6.9	0.3	0.0				2.4	1.5	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
%ile BackOfQ(50%),veh/ln	0.0	0.3	0.5	1.8	1.5	0.0				3.5	2.3	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	1.2	2.4	15.1	5.5	0.0				40.8	38.0	33.8
LnGrp LOS	A	A	A	B	A	A				D	D	C
Approach Vol, veh/h		1314			788						396	
Approach Delay, s/veh		1.6			7.0						40.0	
Approach LOS		A			A						D	

Timer - Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		77.8				77.8		22.2
Change Period (Y+Rc), s		6.3				6.3		4.0
Max Green Setting (Gmax), s		43.7				43.7		26.0
Max Q Clear Time (g_c+I1), s		2.0				30.6		14.3
Green Ext Time (p_c), s		23.3				8.4		1.3

Intersection Summary			
HCM 6th Ctrl Delay			9.4
HCM 6th LOS			A

Notes

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

Intersection	
Int Delay, s/veh	5.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	3	1376	34	0	695	3	0	0	182	0	0	0
Future Vol, veh/h	3	1376	34	0	695	3	0	0	182	0	0	0
Conflicting Peds, #/hr	55	0	36	0	0	53	0	0	34	53	0	55
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	1529	38	0	772	3	0	0	202	0	0	0

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	830	0	0	-	-	0	-	-	854
Stage 1	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-
Critical Hdwy	5.34	-	-	-	-	-	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.12	-	-	-	-	-	-	-	3.92
Pot Cap-1 Maneuver	472	-	-	0	-	-	0	0	259
Stage 1	-	-	-	0	-	-	0	0	-
Stage 2	-	-	-	0	-	-	0	0	-
Platoon blocked, %		-	-		-	-			
Mov Cap-1 Maneuver	472	-	-	-	-	-	-	0	241
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	0	-
Stage 1	-	-	-	-	-	-	-	0	-
Stage 2	-	-	-	-	-	-	-	0	-

Approach	EB	WB	NB
HCM Control Delay, s	0.2	0	67.1
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBT	WBR
Capacity (veh/h)	241	472	-	-	-	-
HCM Lane V/C Ratio	0.839	0.007	-	-	-	-
HCM Control Delay (s)	67.1	12.7	0.2	-	-	-
HCM Lane LOS	F	B	A	-	-	-
HCM 95th %tile Q(veh)	6.6	0	-	-	-	-

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBR
Lane Configurations									
Traffic Volume (vph)	398	85	900	94	130	812	275	15	91
Future Volume (vph)	398	85	900	94	130	812	275	15	91
Ideal Flow (vphpl)	1350	1350	1350	1350	1350	1350	1350	1350	1350
Lane Width	12	9	10	9	9	9	9	9	15
Total Lost time (s)		4.6	5.3		4.6	5.3			4.6
Lane Util. Factor		1.00	0.91		1.00	0.91			1.00
Frpb, ped/bikes		1.00	0.99		1.00	0.96			1.00
Flpb, ped/bikes		1.00	1.00		1.00	1.00			1.00
Frt		1.00	0.99		1.00	0.96			0.86
Flt Protected		0.95	1.00		0.95	1.00			1.00
Satd. Flow (prot)		1018	2969		1018	2707			1133
Flt Permitted		0.95	1.00		0.95	1.00			1.00
Satd. Flow (perm)		1018	2969		1018	2707			1133
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	442	94	1000	104	144	902	306	17	101
RTOR Reduction (vph)	0	0	10	0	0	2	0	0	78
Lane Group Flow (vph)	0	536	1094	0	144	1223	0	0	23
Confl. Peds. (#/hr)				32			54	54	
Confl. Bikes (#/hr)				2			8	8	
Turn Type	Prot	Prot	NA		Prot	NA			Perm
Protected Phases	5	5	2		1	6			
Permitted Phases									1
Actuated Green, G (s)		42.4	67.0		23.1	47.7			23.1
Effective Green, g (s)		42.4	67.0		23.1	47.7			23.1
Actuated g/C Ratio		0.42	0.67		0.23	0.48			0.23
Clearance Time (s)		4.6	5.3		4.6	5.3			4.6
Vehicle Extension (s)		2.5	5.0		2.5	5.0			2.5
Lane Grp Cap (vph)		431	1989		235	1291			261
v/s Ratio Prot		c0.53	0.37		0.14	c0.45			
v/s Ratio Perm									0.02
v/c Ratio		1.24	0.55		0.61	0.95			0.09
Uniform Delay, d1		28.8	8.6		34.4	25.0			30.2
Progression Factor		1.23	1.13		1.22	0.60			1.00
Incremental Delay, d2		122.7	0.8		2.7	11.5			0.1
Delay (s)		157.9	10.5		44.8	26.4			30.3
Level of Service		F	B		D	C			C
Approach Delay (s)			58.7			28.3			
Approach LOS			E			C			

Intersection Summary			
HCM 2000 Control Delay	44.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.09		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	9.9
Intersection Capacity Utilization	85.9%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	91	888	34	0	952	93	84	84	30	53	74	112
Future Volume (veh/h)	91	888	34	0	952	93	84	84	30	53	74	112
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.95	1.00		0.92	1.00		0.98	1.00		0.91
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	1148	1148	1196	0	1196	1196	1196	1196	1196	1148	1244	1196
Adj Flow Rate, veh/h	101	987	31	0	1058	92	93	93	33	59	82	124
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	0	2	2	2	2	2	2	2	2
Cap, veh/h	222	1571	49	0	1530	133	149	110	39	249	284	211
Arrive On Green	1.00	1.00	1.00	0.00	1.00	1.00	0.13	0.13	0.13	0.23	0.23	0.23
Sat Flow, veh/h	297	3117	98	0	3143	263	1139	839	298	1094	1244	923
Grp Volume(v), veh/h	101	661	357	0	758	392	93	0	126	59	82	124
Grp Sat Flow(s),veh/h/ln	297	1045	1125	0	1088	1121	1139	0	1136	1094	1244	923
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	7.7	0.0	10.8	4.4	5.4	12.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	7.7	0.0	10.8	4.4	5.4	12.0
Prop In Lane	1.00		0.09	0.00		0.23	1.00		0.26	1.00		1.00
Lane Grp Cap(c), veh/h	222	1054	567	0	1097	565	149	0	149	249	284	211
V/C Ratio(X)	0.46	0.63	0.63	0.00	0.69	0.69	0.62	0.00	0.85	0.24	0.29	0.59
Avail Cap(c_a), veh/h	222	1054	567	0	1097	565	180	0	180	337	383	284
HCM Platoon Ratio	2.00	2.00	2.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.83	0.83	0.83	0.00	0.32	0.32	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	41.1	0.0	42.5	31.5	31.9	34.4
Incr Delay (d2), s/veh	5.5	2.4	4.4	0.0	1.2	2.3	4.7	0.0	26.1	0.5	0.6	2.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.3	0.7	0.0	0.2	0.4	2.4	0.0	4.1	1.2	1.7	2.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	5.5	2.4	4.4	0.0	1.2	2.3	45.9	0.0	68.6	32.0	32.4	37.0
LnGrp LOS	A	A	A	A	A	A	D	A	E	C	C	D
Approach Vol, veh/h		1119			1150			219			265	
Approach Delay, s/veh		3.3			1.5			59.0			34.5	
Approach LOS		A			A			E			C	

Timer - Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		55.7		17.3		55.7		27.0
Change Period (Y+Rc), s		5.3		* 4.2		5.3		4.2
Max Green Setting (Gmax), s		39.7		* 16		39.7		30.8
Max Q Clear Time (g_c+I1), s		2.0		12.8		2.0		14.0
Green Ext Time (p_c), s		20.6		0.3		18.8		1.0

Intersection Summary			
HCM 6th Ctrl Delay			10.0
HCM 6th LOS			A

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	32	1003	67	49	967	56	89	504	70	5	383	67
Future Volume (veh/h)	32	1003	67	49	967	56	89	504	70	5	383	67
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.95	1.00		0.97	0.99		0.92
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	1148	1148	1148	1148	1196	1196	1148	1148	1148	1196	1148	1148
Adj Flow Rate, veh/h	36	1114	63	54	1074	53	99	560	31	6	426	30
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	142	1266	72	168	1370	68	85	858	371	39	558	237
Arrive On Green	0.05	0.84	0.84	0.04	0.43	0.43	0.08	0.39	0.39	0.26	0.26	0.26
Sat Flow, veh/h	1094	3027	171	1094	3177	157	1094	2182	943	8	2122	899
Grp Volume(v), veh/h	36	769	408	54	735	392	99	560	31	231	201	30
Grp Sat Flow(s),veh/h/ln	1094	1045	1108	1094	1088	1157	1094	1091	943	1137	993	899
Q Serve(g_s), s	1.9	22.8	22.9	2.8	29.0	29.1	7.8	21.0	2.1	0.0	18.7	2.5
Cycle Q Clear(g_c), s	1.9	22.8	22.9	2.8	29.0	29.1	7.8	21.0	2.1	18.6	18.7	2.5
Prop In Lane	1.00		0.15	1.00		0.14	1.00		1.00	0.03		1.00
Lane Grp Cap(c), veh/h	142	874	463	168	938	499	85	858	371	336	261	237
V/C Ratio(X)	0.25	0.88	0.88	0.32	0.78	0.78	1.16	0.65	0.08	0.69	0.77	0.13
Avail Cap(c_a), veh/h	196	874	463	208	938	499	85	934	403	375	296	268
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)	0.61	0.61	0.61	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.9	6.6	6.6	18.8	24.4	24.5	46.1	24.8	19.0	34.0	34.0	28.1
Incr Delay (d2), s/veh	0.2	8.0	13.9	0.4	6.5	11.7	147.2	1.7	0.1	5.3	11.4	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	2.6	3.5	0.7	8.0	9.3	5.6	5.6	0.5	5.7	5.3	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.1	14.6	20.5	19.2	31.0	36.2	193.3	26.5	19.2	39.3	45.5	28.4
LnGrp LOS	C	B	C	B	C	D	F	C	B	D	D	C
Approach Vol, veh/h		1213			1181			690			462	
Approach Delay, s/veh		16.8			32.2			50.1			41.3	
Approach LOS		B			C			D			D	
Timer - Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.4	47.1		44.5	7.1	48.4	13.0	31.5				
Change Period (Y+Rc), s	4.6	5.3		5.2	4.6	5.3	5.2	5.2				
Max Green Setting (Gmax), s	7.4	34.7		42.8	7.4	34.7	7.8	29.8				
Max Q Clear Time (g_c+I1), s	4.8	24.9		23.0	3.9	31.1	9.8	20.7				
Green Ext Time (p_c), s	0.0	7.3		5.4	0.0	2.9	0.0	2.5				
Intersection Summary												
HCM 6th Ctrl Delay			31.6									
HCM 6th LOS			C									
Notes												

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

Intersection	
Intersection Delay, s/veh	11
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	22	178	7	7	264	17	9	56	5	5	50	35
Future Vol, veh/h	22	178	7	7	264	17	9	56	5	5	50	35
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	28	223	9	9	330	21	11	70	6	6	63	44
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	10.7	12.1	9.5	9.5
HCM LOS	B	B	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	13%	11%	2%	6%
Vol Thru, %	80%	86%	92%	56%
Vol Right, %	7%	3%	6%	39%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	70	207	288	90
LT Vol	9	22	7	5
Through Vol	56	178	264	50
RT Vol	5	7	17	35
Lane Flow Rate	88	259	360	112
Geometry Grp	1	1	1	1
Degree of Util (X)	0.137	0.352	0.475	0.169
Departure Headway (Hd)	5.646	4.892	4.747	5.396
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	639	724	749	668
Service Time	3.651	2.989	2.835	3.4
HCM Lane V/C Ratio	0.138	0.358	0.481	0.168
HCM Control Delay	9.5	10.7	12.1	9.5
HCM Lane LOS	A	B	B	A
HCM 95th-tile Q	0.5	1.6	2.6	0.6

Intersection	
Intersection Delay, s/veh	11.6
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			✣			✣	
Traffic Vol, veh/h	10	173	5	9	272	40	6	99	13	27	20	5
Future Vol, veh/h	10	173	5	9	272	40	6	99	13	27	20	5
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	13	216	6	11	340	50	8	124	16	34	25	6
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	10.6	13.1	10.2	9.5
HCM LOS	B	B	B	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	5%	5%	3%	52%
Vol Thru, %	84%	92%	85%	38%
Vol Right, %	11%	3%	12%	10%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	118	188	321	52
LT Vol	6	10	9	27
Through Vol	99	173	272	20
RT Vol	13	5	40	5
Lane Flow Rate	148	235	401	65
Geometry Grp	1	1	1	1
Degree of Util (X)	0.228	0.333	0.528	0.105
Departure Headway (Hd)	5.572	5.094	4.734	5.842
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	646	710	750	615
Service Time	3.588	3.094	2.834	3.862
HCM Lane V/C Ratio	0.229	0.331	0.535	0.106
HCM Control Delay	10.2	10.6	13.1	9.5
HCM Lane LOS	B	B	B	A
HCM 95th-tile Q	0.9	1.5	3.1	0.4

Intersection	
Intersection Delay, s/veh	11.5
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥			✥			✥	
Traffic Vol, veh/h	13	194	8	16	283	23	14	31	18	22	28	27
Future Vol, veh/h	13	194	8	16	283	23	14	31	18	22	28	27
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	16	243	10	20	354	29	18	39	23	28	35	34
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	10.7	12.9	9.4	9.5
HCM LOS	B	B	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	22%	6%	5%	29%
Vol Thru, %	49%	90%	88%	36%
Vol Right, %	29%	4%	7%	35%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	63	215	322	77
LT Vol	14	13	16	22
Through Vol	31	194	283	28
RT Vol	18	8	23	27
Lane Flow Rate	79	269	402	96
Geometry Grp	1	1	1	1
Degree of Util (X)	0.123	0.363	0.524	0.148
Departure Headway (Hd)	5.617	4.861	4.691	5.554
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	642	731	761	649
Service Time	3.62	2.95	2.771	3.558
HCM Lane V/C Ratio	0.123	0.368	0.528	0.148
HCM Control Delay	9.4	10.7	12.9	9.5
HCM Lane LOS	A	B	B	A
HCM 95th-tile Q	0.4	1.7	3.1	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1450	134	28	1118	0	310	0	69	138	0	69
Future Volume (veh/h)	0	1450	134	28	1118	0	310	0	69	138	0	69
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.92	1.00		1.00	1.00		1.00	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	0	1683	1683	1683	1683	0	1616	0	1683	1751	0	1683
Adj Flow Rate, veh/h	0	1611	140	31	1242	0	344	0	51	153	0	19
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	2	2	2	2	0	2	0	2	2	0	2
Cap, veh/h	0	2794	242	76	2673	0	380	0	0	411	0	0
Arrive On Green	0.00	0.65	0.65	1.00	1.00	0.00	0.25	0.00	0.00	0.25	0.00	0.00
Sat Flow, veh/h	0	4422	370	57	4223	0	1539	344		1667	153	
Grp Volume(v), veh/h	0	1155	596	418	855	0	344	47.4		153	31.8	
Grp Sat Flow(s),veh/h/ln	0	1532	1577	1354	1394	0	1539	D		1667	C	
Q Serve(g_s), s	0.0	20.9	21.0	0.0	0.0	0.0	21.7			7.6		
Cycle Q Clear(g_c), s	0.0	20.9	21.0	0.0	0.0	0.0	21.7			7.6		
Prop In Lane	0.00		0.23	0.07		0.00	1.00			1.00		
Lane Grp Cap(c), veh/h	0	2005	1032	925	1824	0	380			411		
V/C Ratio(X)	0.00	0.58	0.58	0.45	0.47	0.00	0.91			0.37		
Avail Cap(c_a), veh/h	0	2005	1032	925	1824	0	622			674		
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00	1.00			1.00		
Upstream Filter(I)	0.00	1.00	1.00	0.60	0.60	0.00	1.00			1.00		
Uniform Delay (d), s/veh	0.0	9.6	9.6	0.0	0.0	0.0	36.5			31.2		
Incr Delay (d2), s/veh	0.0	1.2	2.4	1.0	0.5	0.0	10.9			0.6		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0		
%ile BackOfQ(50%),veh/ln	0.0	6.6	7.1	0.2	0.1	0.0	9.2			3.1		
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	10.8	12.0	1.0	0.5	0.0	47.4			31.8		
LnGrp LOS	A	B	B	A	A	A	D			C		
Approach Vol, veh/h		1751			1273							
Approach Delay, s/veh		11.2			0.7							
Approach LOS		B			A							
Timer - Assigned Phs		2	3			6	7					
Phs Duration (G+Y+Rc), s		70.7	29.3			70.7	29.3					
Change Period (Y+Rc), s		5.3	4.6			5.3	4.6					
Max Green Setting (Gmax), s		49.7	40.4			49.7	40.4					
Max Q Clear Time (g_c+I1), s		23.0	23.7			2.0	9.6					
Green Ext Time (p_c), s		22.0	1.0			25.3	0.4					
Intersection Summary												
HCM 6th Ctrl Delay			11.8									
HCM 6th LOS			B									

Movement	EBL2	EBT	EBR	WBL	WBT	WBR	NBR	SBR	SBR2
Lane Configurations									
Traffic Volume (vph)	108	1468	67	57	899	57	68	252	198
Future Volume (vph)	108	1468	67	57	899	57	68	252	198
Ideal Flow (vphpl)	1350	1350	1350	1350	1350	1350	1350	1350	1350
Lane Width	9	10	10	9	10	10	12	10	10
Total Lost time (s)	4.6	5.3		4.0	5.3		4.6	4.6	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.88	1.00
Frpb, ped/bikes	1.00	0.99		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	0.99		1.00	0.99		0.86	0.85	0.85
Flt Protected	0.95	1.00		0.95	1.00		1.00	1.00	1.00
Satd. Flow (prot)	1018	2979		1018	2986		1030	1663	945
Flt Permitted	0.95	1.00		0.95	1.00		1.00	1.00	1.00
Satd. Flow (perm)	1018	2979		1018	2986		1030	1663	945
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	120	1631	74	63	999	63	76	280	220
RTOR Reduction (vph)	0	5	0	0	0	0	0	0	0
Lane Group Flow (vph)	120	1700	0	63	1062	0	76	280	220
Confl. Peds. (#/hr)			115			83			
Confl. Bikes (#/hr)			6			6	6	6	
Turn Type	Prot	NA		Prot	NA		Prot	Prot	Free
Protected Phases	5	2		1	6		8	4	
Permitted Phases									Free
Actuated Green, G (s)	15.4	65.9		1.0	50.9		19.2	19.2	100.0
Effective Green, g (s)	15.4	65.9		1.0	50.9		19.2	19.2	100.0
Actuated g/C Ratio	0.15	0.66		0.01	0.51		0.19	0.19	1.00
Clearance Time (s)	4.6	5.3		4.0	5.3		4.6	4.6	
Vehicle Extension (s)	1.5	3.0		1.5	3.0		2.5	2.5	
Lane Grp Cap (vph)	156	1963		10	1519		197	319	945
v/s Ratio Prot	0.12	c0.57		c0.06	0.36		0.07	c0.17	
v/s Ratio Perm									0.23
v/c Ratio	0.77	0.87		6.30	0.70		0.39	0.88	0.23
Uniform Delay, d1	40.6	13.5		49.5	18.7		35.3	39.3	0.0
Progression Factor	0.59	0.60		0.75	1.06		1.00	1.00	1.00
Incremental Delay, d2	1.9	0.5		2528.1	1.9		0.9	22.6	0.6
Delay (s)	25.8	8.6		2565.3	21.8		36.2	61.8	0.6
Level of Service	C	A		F	C		D	E	A
Approach Delay (s)		9.7			164.2				
Approach LOS		A			F				

Intersection Summary			
HCM 2000 Control Delay	63.2	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	14.5
Intersection Capacity Utilization	64.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↱		↰	↑↑↑		↰		↱	↰↰	↑	↱
Traffic Volume (veh/h)	0	1452	86	114	773	0	160	0	65	408	232	80
Future Volume (veh/h)	0	1452	86	114	773	0	160	0	65	408	232	80
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.88	0.99		1.00	1.00		1.00	1.00		0.93
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	0	1616	1616	1616	1616	0	1683	0	1683	1683	1683	1683
Adj Flow Rate, veh/h	0	1613	95	127	859	0	178	0	72	453	258	19
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	2	2	2	2	0	2	0	2	2	2	2
Cap, veh/h	0	2876	169	239	3004	0	0	0	0	672	364	287
Arrive On Green	0.00	1.00	1.00	0.91	0.91	0.00	0.00	0.00	0.00	0.22	0.22	0.22
Sat Flow, veh/h	0	4370	249	245	4557	0		0		3110	1683	1329
Grp Volume(v), veh/h	0	1123	585	127	859	0		0.0		453	258	19
Grp Sat Flow(s),veh/h/ln	0	1471	1532	245	1471	0				1555	1683	1329
Q Serve(g_s), s	0.0	0.0	0.0	15.8	2.5	0.0				13.4	14.2	1.1
Cycle Q Clear(g_c), s	0.0	0.0	0.0	15.8	2.5	0.0				13.4	14.2	1.1
Prop In Lane	0.00		0.16	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2002	1043	239	3004	0				672	364	287
V/C Ratio(X)	0.00	0.56	0.56	0.53	0.29	0.00				0.67	0.71	0.07
Avail Cap(c_a), veh/h	0	2002	1043	239	3004	0				809	438	345
HCM Platoon Ratio	1.00	2.00	2.00	1.33	1.33	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.42	0.42	1.00	1.00	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	2.3	1.6	0.0				36.0	36.3	31.2
Incr Delay (d2), s/veh	0.0	0.5	0.9	8.2	0.2	0.0				1.7	4.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.1	0.3	0.8	0.6	0.0				5.2	6.2	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.5	0.9	10.5	1.9	0.0				37.7	40.4	31.3
LnGrp LOS	A	A	A	B	A	A				D	D	C
Approach Vol, veh/h		1708			986						730	
Approach Delay, s/veh		0.6			3.0						38.5	
Approach LOS		A			A						D	
Timer - Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		74.4				74.4		25.6				
Change Period (Y+Rc), s		6.3				6.3		4.0				
Max Green Setting (Gmax), s		43.7				43.7		26.0				
Max Q Clear Time (g_c+I1), s		2.0				17.8		16.2				
Green Ext Time (p_c), s		30.9				16.2		2.5				

Intersection Summary			
HCM 6th Ctrl Delay			9.4
HCM 6th LOS			A

Notes

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

Intersection	
Int Delay, s/veh	30.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	1822	101	0	884	1	0	0	168	0	0	0
Future Vol, veh/h	2	1822	101	0	884	1	0	0	168	0	0	0
Conflicting Peds, #/hr	107	0	128	0	0	107	0	0	128	107	0	107
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	2024	112	0	982	1	0	0	187	0	0	0

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	1090	0	0	-	-	0	-	-	1324
Stage 1	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-
Critical Hdwy	5.34	-	-	-	-	-	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.12	-	-	-	-	-	-	-	3.92
Pot Cap-1 Maneuver	354	-	-	0	-	-	0	0	~ 126
Stage 1	-	-	-	0	-	-	0	0	-
Stage 2	-	-	-	0	-	-	0	0	-
Platoon blocked, %		-	-		-	-			
Mov Cap-1 Maneuver	354	-	-	-	-	-	-	0	~ 96
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	0	-
Stage 1	-	-	-	-	-	-	-	0	-
Stage 2	-	-	-	-	-	-	-	0	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	$ 534.2
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBT	WBR
Capacity (veh/h)	96	354	-	-	-	-
HCM Lane V/C Ratio	1.944	0.006	-	-	-	-
HCM Control Delay (s)	$ 534.2	15.2	0	-	-	-
HCM Lane LOS	F	C	A	-	-	-
HCM 95th %tile Q(veh)	15.8	0	-	-	-	-

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

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBR
Lane Configurations									
Traffic Volume (vph)	185	345	1308	149	159	883	141	49	134
Future Volume (vph)	185	345	1308	149	159	883	141	49	134
Ideal Flow (vphpl)	1350	1350	1350	1350	1350	1350	1350	1350	1350
Lane Width	12	9	10	9	9	9	9	9	15
Total Lost time (s)		4.6	5.3		4.6	5.3			4.6
Lane Util. Factor		1.00	0.91		1.00	0.91			1.00
Frpb, ped/bikes		1.00	0.97		1.00	0.95			1.00
Flpb, ped/bikes		1.00	1.00		1.00	1.00			1.00
Frt		1.00	0.98		1.00	0.97			0.86
Flt Protected		0.95	1.00		0.95	1.00			1.00
Satd. Flow (prot)		1018	2910		1018	2698			1133
Flt Permitted		0.95	1.00		0.95	1.00			1.00
Satd. Flow (perm)		1018	2910		1018	2698			1133
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	206	383	1453	166	177	981	157	54	149
RTOR Reduction (vph)	0	0	12	0	0	5	0	0	57
Lane Group Flow (vph)	0	589	1607	0	177	1187	0	0	92
Confl. Peds. (#/hr)				124			127	127	
Confl. Bikes (#/hr)				8			2	2	
Turn Type	Prot	Prot	NA		Prot	NA			Perm
Protected Phases	5	5	2		1	6			
Permitted Phases									1
Actuated Green, G (s)		42.4	65.9		24.2	47.7			24.2
Effective Green, g (s)		42.4	65.9		24.2	47.7			24.2
Actuated g/C Ratio		0.42	0.66		0.24	0.48			0.24
Clearance Time (s)		4.6	5.3		4.6	5.3			4.6
Vehicle Extension (s)		2.5	5.0		2.5	5.0			2.5
Lane Grp Cap (vph)		431	1917		246	1286			274
v/s Ratio Prot		c0.58	0.55		0.17	c0.44			
v/s Ratio Perm									0.08
v/c Ratio		1.37	0.84		0.72	0.92			0.34
Uniform Delay, d1		28.8	13.0		34.8	24.4			31.3
Progression Factor		1.15	1.06		1.22	0.55			1.00
Incremental Delay, d2		166.4	0.4		4.9	7.2			0.5
Delay (s)		199.4	14.2		47.4	20.7			31.8
Level of Service		F	B		D	C			C
Approach Delay (s)			63.6			24.1			
Approach LOS			E			C			

Intersection Summary			
HCM 2000 Control Delay	47.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.13		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	9.9
Intersection Capacity Utilization	88.6%	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)	127	1295	21	0	1003	108	99	68	38	115	58	128
Future Volume (veh/h)	127	1295	21	0	1003	108	99	68	38	115	58	128
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		0.93	1.00		0.88	1.00		0.98	1.00		0.89
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	1616	1616	1683	0	1683	1683	1683	1683	1683	1616	1751	1683
Adj Flow Rate, veh/h	141	1439	21	0	1114	102	110	76	42	128	64	142
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	0	2	2	2	2	2	2	2	2
Cap, veh/h	280	2385	35	0	2254	206	157	99	55	357	406	296
Arrive On Green	1.00	1.00	1.00	0.00	1.00	1.00	0.10	0.10	0.10	0.23	0.23	0.23
Sat Flow, veh/h	389	4474	65	0	4379	386	1603	1011	559	1539	1751	1276
Grp Volume(v), veh/h	141	946	514	0	807	409	110	0	118	128	64	142
Grp Sat Flow(s),veh/h/ln	389	1471	1598	0	1532	1550	1603	0	1570	1539	1751	1276
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	6.6	0.0	7.3	7.0	2.9	9.6
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	6.6	0.0	7.3	7.0	2.9	9.6
Prop In Lane	1.00		0.04	0.00		0.25	1.00		0.36	1.00		1.00
Lane Grp Cap(c), veh/h	280	1568	852	0	1633	827	157	0	154	357	406	296
V/C Ratio(X)	0.50	0.60	0.60	0.00	0.49	0.50	0.70	0.00	0.77	0.36	0.16	0.48
Avail Cap(c_a), veh/h	280	1568	852	0	1633	827	253	0	248	474	539	393
HCM Platoon Ratio	2.00	2.00	2.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.49	0.49	0.49	0.00	0.18	0.18	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	43.7	0.0	44.0	32.2	30.6	33.2
Incr Delay (d2), s/veh	3.2	0.9	1.6	0.0	0.2	0.4	5.5	0.0	7.7	0.6	0.2	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.2	0.4	0.0	0.0	0.1	2.9	0.0	3.2	2.7	1.3	3.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	3.2	0.9	1.6	0.0	0.2	0.4	49.2	0.0	51.7	32.8	30.8	34.4
LnGrp LOS	A	A	A	A	A	A	D	A	D	C	C	C
Approach Vol, veh/h		1601			1216			228			334	
Approach Delay, s/veh		1.3			0.3			50.5			33.1	
Approach LOS		A			A			D			C	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	58.6	14.0	58.6	27.4
Change Period (Y+Rc), s	5.3	* 4.2	5.3	4.2
Max Green Setting (Gmax), s	39.7	* 16	39.7	30.8
Max Q Clear Time (g_c+I1), s	2.0	9.3	2.0	11.6
Green Ext Time (p_c), s	28.1	0.5	20.1	1.2

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

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	19	1146	64	57	1018	68	110	441	100	5	620	96
Future Volume (veh/h)	19	1146	64	57	1018	68	110	441	100	5	620	96
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.93	0.99		0.93	1.00		0.94	0.97		0.93
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	1616	1616	1616	1616	1683	1683	1616	1616	1616	1683	1616	1616
Adj Flow Rate, veh/h	21	1273	63	63	1131	63	122	490	44	6	689	40
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	186	1735	86	221	1896	106	120	1253	526	39	833	356
Arrive On Green	0.03	0.81	0.81	0.04	0.43	0.43	0.08	0.41	0.41	0.28	0.28	0.28
Sat Flow, veh/h	1539	4288	212	1539	4433	247	1539	3070	1290	7	2997	1280
Grp Volume(v), veh/h	21	873	463	63	781	413	122	490	44	372	323	40
Grp Sat Flow(s),veh/h/ln	1539	1471	1559	1539	1532	1617	1539	1535	1290	1607	1397	1280
Q Serve(g_s), s	0.8	13.9	13.9	2.4	19.6	19.6	7.8	11.2	2.1	1.9	21.7	2.3
Cycle Q Clear(g_c), s	0.8	13.9	13.9	2.4	19.6	19.6	7.8	11.2	2.1	21.6	21.7	2.3
Prop In Lane	1.00		0.14	1.00		0.15	1.00		1.00	0.02		1.00
Lane Grp Cap(c), veh/h	186	1190	631	221	1310	691	120	1253	526	483	388	356
V/C Ratio(X)	0.11	0.73	0.73	0.28	0.60	0.60	1.02	0.39	0.08	0.77	0.83	0.11
Avail Cap(c_a), veh/h	279	1190	631	279	1310	691	120	1314	552	515	416	381
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)	0.09	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	18.5	7.0	7.0	17.5	22.0	22.0	46.1	20.9	18.1	33.9	33.9	26.9
Incr Delay (d2), s/veh	0.0	0.4	0.7	0.3	2.0	3.8	86.6	0.3	0.1	7.2	13.4	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	2.2	2.4	0.8	7.2	7.9	5.9	4.1	0.6	9.4	8.7	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.5	7.4	7.7	17.7	24.0	25.8	132.7	21.1	18.2	41.0	47.3	27.1
LnGrp LOS	B	A	A	B	C	C	F	C	B	D	D	C
Approach Vol, veh/h		1357			1257			656			735	
Approach Delay, s/veh		7.7			24.3			41.7			43.0	
Approach LOS		A			C			D			D	

Timer - Assigned Phs	1	2		4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.2	45.8		46.0	5.9	48.1	13.0	33.0
Change Period (Y+Rc), s	4.6	5.3		5.2	4.6	5.3	5.2	5.2
Max Green Setting (Gmax), s	7.4	34.7		42.8	7.4	34.7	7.8	29.8
Max Q Clear Time (g_c+I1), s	4.4	15.9		13.2	2.8	21.6	9.8	23.7
Green Ext Time (p_c), s	0.0	13.6		5.5	0.0	9.4	0.0	3.0

Intersection Summary	
HCM 6th Ctrl Delay	24.9
HCM 6th LOS	C

Notes

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

Intersection	
Intersection Delay, s/veh	13
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			✣			✣	
Traffic Vol, veh/h	21	322	9	9	174	23	5	36	13	34	146	57
Future Vol, veh/h	21	322	9	9	174	23	5	36	13	34	146	57
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	23	358	10	10	193	26	6	40	14	38	162	63
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	15	11.3	9.7	12.4
HCM LOS	B	B	A	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	9%	6%	4%	14%
Vol Thru, %	67%	91%	84%	62%
Vol Right, %	24%	3%	11%	24%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	54	352	206	237
LT Vol	5	21	9	34
Through Vol	36	322	174	146
RT Vol	13	9	23	57
Lane Flow Rate	60	391	229	263
Geometry Grp	1	1	1	1
Degree of Util (X)	0.1	0.568	0.344	0.407
Departure Headway (Hd)	5.974	5.232	5.414	5.566
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	598	688	661	645
Service Time	4.036	3.273	3.462	3.611
HCM Lane V/C Ratio	0.1	0.568	0.346	0.408
HCM Control Delay	9.7	15	11.3	12.4
HCM Lane LOS	A	B	B	B
HCM 95th-tile Q	0.3	3.6	1.5	2

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	15	344	6	7	184	48	6	89	8	56	52	19
Future Vol, veh/h	15	344	6	7	184	48	6	89	8	56	52	19
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	17	382	7	8	204	53	7	99	9	62	58	21
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	14.8	11.4	10.3	10.7
HCM LOS	B	B	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	6%	4%	3%	44%
Vol Thru, %	86%	94%	77%	41%
Vol Right, %	8%	2%	20%	15%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	103	365	239	127
LT Vol	6	15	7	56
Through Vol	89	344	184	52
RT Vol	8	6	48	19
Lane Flow Rate	114	406	266	141
Geometry Grp	1	1	1	1
Degree of Util (X)	0.188	0.574	0.382	0.23
Departure Headway (Hd)	5.904	5.091	5.173	5.878
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	607	710	696	610
Service Time	3.957	3.126	3.214	3.93
HCM Lane V/C Ratio	0.188	0.572	0.382	0.231
HCM Control Delay	10.3	14.8	11.4	10.7
HCM Lane LOS	B	B	B	B
HCM 95th-tile Q	0.7	3.7	1.8	0.9

Intersection	
Intersection Delay, s/veh	13.7
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	19	353	30	23	188	27	16	36	26	34	88	35
Future Vol, veh/h	19	353	30	23	188	27	16	36	26	34	88	35
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	21	392	33	26	209	30	18	40	29	38	98	39
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	16.5	11.8	10	11.2
HCM LOS	C	B	A	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	21%	5%	10%	22%
Vol Thru, %	46%	88%	79%	56%
Vol Right, %	33%	7%	11%	22%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	78	402	238	157
LT Vol	16	19	23	34
Through Vol	36	353	188	88
RT Vol	26	30	27	35
Lane Flow Rate	87	447	264	174
Geometry Grp	1	1	1	1
Degree of Util (X)	0.144	0.631	0.391	0.283
Departure Headway (Hd)	5.973	5.083	5.317	5.84
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	598	710	674	614
Service Time	4.034	3.121	3.361	3.893
HCM Lane V/C Ratio	0.145	0.63	0.392	0.283
HCM Control Delay	10	16.5	11.8	11.2
HCM Lane LOS	A	C	B	B
HCM 95th-tile Q	0.5	4.5	1.9	1.2

LOS Worksheets: Future Plus Scenario 2 Specific Plan Buildout Conditions with Via Closure

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1165	67	17	690	0	256	0	114	72	0	56
Future Volume (veh/h)	0	1165	67	17	690	0	256	0	114	72	0	56
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	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	0	1196	1196	1196	1196	0	1148	0	1196	1244	0	1196
Adj Flow Rate, veh/h	0	1294	67	19	767	0	284	0	59	80	0	19
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	2	2	2	2	0	2	0	2	2	0	2
Cap, veh/h	0	1969	102	63	1832	0	306	0	0	331	0	0
Arrive On Green	0.00	0.62	0.62	1.00	1.00	0.00	0.28	0.00	0.00	0.28	0.00	0.00
Sat Flow, veh/h	0	3277	164	39	3046	0	1094	284		1185	80	
Grp Volume(v), veh/h	0	889	472	270	516	0	284	55.5		80	28.2	
Grp Sat Flow(s),veh/h/ln	0	1088	1156	1006	990	0	1094	E		1185	C	
Q Serve(g_s), s	0.0	26.1	26.1	2.1	0.0	0.0	25.3			5.2		
Cycle Q Clear(g_c), s	0.0	26.1	26.1	28.2	0.0	0.0	25.3			5.2		
Prop In Lane	0.00		0.14	0.07		0.00	1.00			1.00		
Lane Grp Cap(c), veh/h	0	1352	718	663	1231	0	306			331		
V/C Ratio(X)	0.00	0.66	0.66	0.41	0.42	0.00	0.93			0.24		
Avail Cap(c_a), veh/h	0	1352	718	663	1231	0	442			479		
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00	1.00			1.00		
Upstream Filter(I)	0.00	1.00	1.00	0.83	0.83	0.00	1.00			1.00		
Uniform Delay (d), s/veh	0.0	12.1	12.1	0.1	0.0	0.0	35.0			27.8		
Incr Delay (d2), s/veh	0.0	2.5	4.7	1.5	0.9	0.0	20.5			0.4		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0		
%ile BackOfQ(50%),veh/ln	0.0	6.2	7.0	0.3	0.1	0.0	8.4			1.5		
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	14.6	16.8	1.6	0.9	0.0	55.5			28.2		
LnGrp LOS	A	B	B	A	A	A	E			C		
Approach Vol, veh/h		1361			786							
Approach Delay, s/veh		15.4			1.1							
Approach LOS		B			A							
Timer - Assigned Phs		2	3			6	7					
Phs Duration (G+Y+Rc), s		67.4	32.6			67.4	32.6					
Change Period (Y+Rc), s		5.3	4.6			5.3	4.6					
Max Green Setting (Gmax), s		49.7	40.4			49.7	40.4					
Max Q Clear Time (g_c+I1), s		28.1	27.3			30.2	7.2					
Green Ext Time (p_c), s		15.4	0.7			8.9	0.2					
Intersection Summary												
HCM 6th Ctrl Delay			15.9									
HCM 6th LOS			B									

Movement	EBL2	EBT	EBR	WBL	WBT	WBR	NBR	SBR	SBR2
Lane Configurations									
Traffic Volume (vph)	196	1088	53	22	664	123	96	103	203
Future Volume (vph)	196	1088	53	22	664	123	96	103	203
Ideal Flow (vphpl)	1350	1350	1350	1350	1350	1350	1350	1350	1350
Lane Width	9	10	10	9	10	10	12	10	10
Total Lost time (s)	4.6	5.3		4.0	5.3		4.6	4.6	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.88	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.98		1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.99		1.00	0.98		0.86	0.85	0.85
Flt Protected	0.95	1.00		0.95	1.00		1.00	1.00	1.00
Satd. Flow (prot)	1018	3003		1018	2918		1030	1663	945
Flt Permitted	0.95	1.00		0.95	1.00		1.00	1.00	1.00
Satd. Flow (perm)	1018	3003		1018	2918		1030	1663	945
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	218	1209	59	24	738	137	107	114	226
RTOR Reduction (vph)	0	5	0	0	0	0	0	0	0
Lane Group Flow (vph)	218	1263	0	24	875	0	107	114	226
Confl. Peds. (#/hr)			24			64			
Confl. Bikes (#/hr)			3			3	3	3	
Turn Type	Prot	NA		Prot	NA		Prot	Prot	Free
Protected Phases	5	2		1	6		8	4	
Permitted Phases									Free
Actuated Green, G (s)	15.4	69.1		1.0	54.1		16.0	16.0	100.0
Effective Green, g (s)	15.4	69.1		1.0	54.1		16.0	16.0	100.0
Actuated g/C Ratio	0.15	0.69		0.01	0.54		0.16	0.16	1.00
Clearance Time (s)	4.6	5.3		4.0	5.3		4.6	4.6	
Vehicle Extension (s)	1.5	3.0		1.5	3.0		2.5	2.5	
Lane Grp Cap (vph)	156	2075		10	1578		164	266	945
v/s Ratio Prot	c0.21	c0.42		0.02	0.30		c0.10	0.07	
v/s Ratio Perm									0.24
v/c Ratio	1.40	0.61		2.40	0.55		0.65	0.43	0.24
Uniform Delay, d1	42.3	8.2		49.5	15.0		39.4	37.9	0.0
Progression Factor	0.72	0.46		0.75	1.17		1.00	1.00	1.00
Incremental Delay, d2	202.1	0.9		836.0	1.2		8.0	0.8	0.6
Delay (s)	232.6	4.6		873.2	18.8		47.4	38.7	0.6
Level of Service	F	A		F	B		D	D	A
Approach Delay (s)		38.1			41.6				
Approach LOS		D			D				

Intersection Summary			
HCM 2000 Control Delay	36.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	14.5
Intersection Capacity Utilization	59.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1084	101	115	594	0	133	0	109	259	91	43
Future Volume (veh/h)	0	1084	101	115	594	0	133	0	109	259	91	43
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		1.00	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	0	1148	1148	1148	1148	0	1196	0	1196	1196	1196	1196
Adj Flow Rate, veh/h	0	1204	110	128	660	0	148	0	121	288	101	7
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	2	2	2	2	0	2	0	2	2	2	2
Cap, veh/h	0	2080	190	255	2240	0	0	0	0	403	218	176
Arrive On Green	0.00	1.00	1.00	0.71	0.71	0.00	0.00	0.00	0.00	0.18	0.18	0.18
Sat Flow, veh/h	0	3014	266	256	3238	0		0		2210	1196	965
Grp Volume(v), veh/h	0	864	450	128	660	0		0.0		288	101	7
Grp Sat Flow(s),veh/h/ln	0	1045	1087	256	1045	0				1105	1196	965
Q Serve(g_s), s	0.0	0.0	0.0	28.6	7.6	0.0				12.3	7.5	0.6
Cycle Q Clear(g_c), s	0.0	0.0	0.0	28.6	7.6	0.0				12.3	7.5	0.6
Prop In Lane	0.00		0.24	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1493	777	255	2240	0				403	218	176
V/C Ratio(X)	0.00	0.58	0.58	0.50	0.29	0.00				0.71	0.46	0.04
Avail Cap(c_a), veh/h	0	1493	777	255	2240	0				575	311	251
HCM Platoon Ratio	1.00	2.00	2.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.75	0.75	1.00	1.00	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	8.1	5.2	0.0				38.4	36.5	33.7
Incr Delay (d2), s/veh	0.0	1.2	2.4	6.9	0.3	0.0				2.4	1.5	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
%ile BackOfQ(50%),veh/ln	0.0	0.3	0.5	1.8	1.5	0.0				3.5	2.3	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	1.2	2.4	15.1	5.5	0.0				40.8	38.0	33.8
LnGrp LOS	A	A	A	B	A	A				D	D	C
Approach Vol, veh/h		1314			788						396	
Approach Delay, s/veh		1.6			7.0						40.0	
Approach LOS		A			A						D	

Timer - Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		77.8				77.8		22.2
Change Period (Y+Rc), s		6.3				6.3		4.0
Max Green Setting (Gmax), s		43.7				43.7		26.0
Max Q Clear Time (g_c+I1), s		2.0				30.6		14.3
Green Ext Time (p_c), s		23.3				8.4		1.3

Intersection Summary	
HCM 6th Ctrl Delay	9.4
HCM 6th LOS	A

Notes

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

Intersection	
Int Delay, s/veh	2.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	3	1429	34	0	695	3	0	0	129	0	0	0
Future Vol, veh/h	3	1429	34	0	695	3	0	0	129	0	0	0
Conflicting Peds, #/hr	55	0	36	0	0	53	0	0	34	53	0	55
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	1588	38	0	772	3	0	0	143	0	0	0

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	830	0	0	-	-	0	-	-	883
Stage 1	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-
Critical Hdwy	5.34	-	-	-	-	-	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.12	-	-	-	-	-	-	-	3.92
Pot Cap-1 Maneuver	472	-	-	0	-	-	0	0	248
Stage 1	-	-	-	0	-	-	0	0	-
Stage 2	-	-	-	0	-	-	0	0	-
Platoon blocked, %		-	-		-	-			
Mov Cap-1 Maneuver	472	-	-	-	-	-	-	0	231
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	0	-
Stage 1	-	-	-	-	-	-	-	0	-
Stage 2	-	-	-	-	-	-	-	0	-

Approach	EB	WB	NB
HCM Control Delay, s	0.3	0	43.1
HCM LOS			E

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBT	WBR
Capacity (veh/h)	231	472	-	-	-	-
HCM Lane V/C Ratio	0.62	0.007	-	-	-	-
HCM Control Delay (s)	43.1	12.7	0.3	-	-	-
HCM Lane LOS	E	B	A	-	-	-
HCM 95th %tile Q(veh)	3.7	0	-	-	-	-

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBR
Lane Configurations									
Traffic Volume (vph)	398	85	900	94	130	812	275	15	91
Future Volume (vph)	398	85	900	94	130	812	275	15	91
Ideal Flow (vphpl)	1350	1350	1350	1350	1350	1350	1350	1350	1350
Lane Width	12	9	10	9	9	9	9	9	15
Total Lost time (s)		4.6	5.3		4.6	5.3			4.6
Lane Util. Factor		1.00	0.91		1.00	0.91			1.00
Frpb, ped/bikes		1.00	0.99		1.00	0.96			1.00
Flpb, ped/bikes		1.00	1.00		1.00	1.00			1.00
Frt		1.00	0.99		1.00	0.96			0.86
Flt Protected		0.95	1.00		0.95	1.00			1.00
Satd. Flow (prot)		1018	2969		1018	2707			1133
Flt Permitted		0.95	1.00		0.95	1.00			1.00
Satd. Flow (perm)		1018	2969		1018	2707			1133
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	442	94	1000	104	144	902	306	17	101
RTOR Reduction (vph)	0	0	10	0	0	2	0	0	78
Lane Group Flow (vph)	0	536	1094	0	144	1223	0	0	23
Confl. Peds. (#/hr)				32			54	54	
Confl. Bikes (#/hr)				2			8	8	
Turn Type	Prot	Prot	NA		Prot	NA			Perm
Protected Phases	5	5	2		1	6			
Permitted Phases									1
Actuated Green, G (s)		42.4	67.0		23.1	47.7			23.1
Effective Green, g (s)		42.4	67.0		23.1	47.7			23.1
Actuated g/C Ratio		0.42	0.67		0.23	0.48			0.23
Clearance Time (s)		4.6	5.3		4.6	5.3			4.6
Vehicle Extension (s)		2.5	5.0		2.5	5.0			2.5
Lane Grp Cap (vph)		431	1989		235	1291			261
v/s Ratio Prot		c0.53	0.37		0.14	c0.45			
v/s Ratio Perm									0.02
v/c Ratio		1.24	0.55		0.61	0.95			0.09
Uniform Delay, d1		28.8	8.6		34.4	25.0			30.2
Progression Factor		1.17	1.13		1.22	0.60			1.00
Incremental Delay, d2		121.7	0.7		2.7	11.5			0.1
Delay (s)		155.4	10.5		44.8	26.4			30.3
Level of Service		F	B		D	C			C
Approach Delay (s)			57.8			28.3			
Approach LOS			E			C			

Intersection Summary			
HCM 2000 Control Delay	43.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.09		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	9.9
Intersection Capacity Utilization	85.9%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	91	888	34	0	952	93	84	84	30	53	74	112
Future Volume (veh/h)	91	888	34	0	952	93	84	84	30	53	74	112
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.95	1.00		0.92	1.00		0.98	1.00		0.91
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	1148	1148	1196	0	1196	1196	1196	1196	1196	1148	1244	1196
Adj Flow Rate, veh/h	101	987	31	0	1058	92	93	93	33	59	82	124
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	0	2	2	2	2	2	2	2	2
Cap, veh/h	222	1571	49	0	1530	133	149	110	39	249	284	211
Arrive On Green	1.00	1.00	1.00	0.00	1.00	1.00	0.13	0.13	0.13	0.23	0.23	0.23
Sat Flow, veh/h	297	3117	98	0	3143	263	1139	839	298	1094	1244	923
Grp Volume(v), veh/h	101	661	357	0	758	392	93	0	126	59	82	124
Grp Sat Flow(s),veh/h/ln	297	1045	1125	0	1088	1121	1139	0	1136	1094	1244	923
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	7.7	0.0	10.8	4.4	5.4	12.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	7.7	0.0	10.8	4.4	5.4	12.0
Prop In Lane	1.00		0.09	0.00		0.23	1.00		0.26	1.00		1.00
Lane Grp Cap(c), veh/h	222	1054	567	0	1097	565	149	0	149	249	284	211
V/C Ratio(X)	0.46	0.63	0.63	0.00	0.69	0.69	0.62	0.00	0.85	0.24	0.29	0.59
Avail Cap(c_a), veh/h	222	1054	567	0	1097	565	180	0	180	337	383	284
HCM Platoon Ratio	2.00	2.00	2.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.83	0.83	0.83	0.00	0.32	0.32	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	41.1	0.0	42.5	31.5	31.9	34.4
Incr Delay (d2), s/veh	5.5	2.4	4.4	0.0	1.2	2.3	4.7	0.0	26.1	0.5	0.6	2.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.3	0.7	0.0	0.2	0.4	2.4	0.0	4.1	1.2	1.7	2.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	5.5	2.4	4.4	0.0	1.2	2.3	45.9	0.0	68.6	32.0	32.4	37.0
LnGrp LOS	A	A	A	A	A	A	D	A	E	C	C	D
Approach Vol, veh/h		1119			1150			219			265	
Approach Delay, s/veh		3.3			1.5			59.0			34.5	
Approach LOS		A			A			E			C	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	55.7	17.3	55.7	27.0
Change Period (Y+Rc), s	5.3	* 4.2	5.3	4.2
Max Green Setting (Gmax), s	39.7	* 16	39.7	30.8
Max Q Clear Time (g_c+I1), s	2.0	12.8	2.0	14.0
Green Ext Time (p_c), s	20.6	0.3	18.8	1.0

Intersection Summary	
HCM 6th Ctrl Delay	10.0
HCM 6th LOS	A

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	32	1003	67	49	967	56	89	504	70	5	383	67
Future Volume (veh/h)	32	1003	67	49	967	56	89	504	70	5	383	67
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.95	1.00		0.97	0.99		0.92
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	1148	1148	1148	1148	1196	1196	1148	1148	1148	1196	1148	1148
Adj Flow Rate, veh/h	36	1114	63	54	1074	53	99	560	31	6	426	30
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	142	1266	72	168	1370	68	85	858	371	39	558	237
Arrive On Green	0.05	0.84	0.84	0.04	0.43	0.43	0.08	0.39	0.39	0.26	0.26	0.26
Sat Flow, veh/h	1094	3027	171	1094	3177	157	1094	2182	943	8	2122	899
Grp Volume(v), veh/h	36	769	408	54	735	392	99	560	31	231	201	30
Grp Sat Flow(s),veh/h/ln	1094	1045	1108	1094	1088	1157	1094	1091	943	1137	993	899
Q Serve(g_s), s	1.9	22.8	22.9	2.8	29.0	29.1	7.8	21.0	2.1	0.0	18.7	2.5
Cycle Q Clear(g_c), s	1.9	22.8	22.9	2.8	29.0	29.1	7.8	21.0	2.1	18.6	18.7	2.5
Prop In Lane	1.00		0.15	1.00		0.14	1.00		1.00	0.03		1.00
Lane Grp Cap(c), veh/h	142	874	463	168	938	499	85	858	371	336	261	237
V/C Ratio(X)	0.25	0.88	0.88	0.32	0.78	0.78	1.16	0.65	0.08	0.69	0.77	0.13
Avail Cap(c_a), veh/h	196	874	463	208	938	499	85	934	403	375	296	268
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)	0.61	0.61	0.61	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.9	6.6	6.6	18.8	24.4	24.5	46.1	24.8	19.0	34.0	34.0	28.1
Incr Delay (d2), s/veh	0.2	8.0	13.9	0.4	6.5	11.7	147.2	1.7	0.1	5.3	11.4	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	2.6	3.5	0.7	8.0	9.3	5.6	5.6	0.5	5.7	5.3	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.1	14.6	20.5	19.2	31.0	36.2	193.3	26.5	19.2	39.3	45.5	28.4
LnGrp LOS	C	B	C	B	C	D	F	C	B	D	D	C
Approach Vol, veh/h		1213			1181			690			462	
Approach Delay, s/veh		16.8			32.2			50.1			41.3	
Approach LOS		B			C			D			D	
Timer - Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.4	47.1		44.5	7.1	48.4	13.0	31.5				
Change Period (Y+Rc), s	4.6	5.3		5.2	4.6	5.3	5.2	5.2				
Max Green Setting (Gmax), s	7.4	34.7		42.8	7.4	34.7	7.8	29.8				
Max Q Clear Time (g_c+I1), s	4.8	24.9		23.0	3.9	31.1	9.8	20.7				
Green Ext Time (p_c), s	0.0	7.3		5.4	0.0	2.9	0.0	2.5				

Intersection Summary			
HCM 6th Ctrl Delay			31.6
HCM 6th LOS			C

Notes

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

Intersection	
Intersection Delay, s/veh	11.8
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥			✥			✥	
Traffic Vol, veh/h	22	178	7	7	264	43	9	56	5	20	50	35
Future Vol, veh/h	22	178	7	7	264	43	9	56	5	20	50	35
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	28	223	9	9	330	54	11	70	6	25	63	44
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	11.1	13.3	9.8	10
HCM LOS	B	B	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	13%	11%	2%	19%
Vol Thru, %	80%	86%	84%	48%
Vol Right, %	7%	3%	14%	33%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	70	207	314	105
LT Vol	9	22	7	20
Through Vol	56	178	264	50
RT Vol	5	7	43	35
Lane Flow Rate	88	259	392	131
Geometry Grp	1	1	1	1
Degree of Util (X)	0.141	0.368	0.531	0.203
Departure Headway (Hd)	5.787	5.115	4.873	5.555
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	619	706	742	646
Service Time	3.831	3.126	2.882	3.596
HCM Lane V/C Ratio	0.142	0.367	0.528	0.203
HCM Control Delay	9.8	11.1	13.3	10
HCM Lane LOS	A	B	B	A
HCM 95th-tile Q	0.5	1.7	3.2	0.8

Intersection	
Intersection Delay, s/veh	11.7
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥			✥			✥	
Traffic Vol, veh/h	10	188	5	9	298	14	6	99	13	12	20	5
Future Vol, veh/h	10	188	5	9	298	14	6	99	13	12	20	5
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	13	235	6	11	373	18	8	124	16	15	25	6
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	10.8	13.2	10.2	9.3
HCM LOS	B	B	B	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	5%	5%	3%	32%
Vol Thru, %	84%	93%	93%	54%
Vol Right, %	11%	2%	4%	14%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	118	203	321	37
LT Vol	6	10	9	12
Through Vol	99	188	298	20
RT Vol	13	5	14	5
Lane Flow Rate	148	254	401	46
Geometry Grp	1	1	1	1
Degree of Util (X)	0.228	0.355	0.529	0.075
Departure Headway (Hd)	5.57	5.031	4.747	5.82
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	646	718	750	617
Service Time	3.586	3.031	2.844	3.84
HCM Lane V/C Ratio	0.229	0.354	0.535	0.075
HCM Control Delay	10.2	10.8	13.2	9.3
HCM Lane LOS	B	B	B	A
HCM 95th-tile Q	0.9	1.6	3.1	0.2

Intersection	
Intersection Delay, s/veh	11.5
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			✣			✣	
Traffic Vol, veh/h	13	194	8	16	283	23	14	31	18	22	28	27
Future Vol, veh/h	13	194	8	16	283	23	14	31	18	22	28	27
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	16	243	10	20	354	29	18	39	23	28	35	34
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	10.7	12.9	9.4	9.5
HCM LOS	B	B	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	22%	6%	5%	29%
Vol Thru, %	49%	90%	88%	36%
Vol Right, %	29%	4%	7%	35%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	63	215	322	77
LT Vol	14	13	16	22
Through Vol	31	194	283	28
RT Vol	18	8	23	27
Lane Flow Rate	79	269	402	96
Geometry Grp	1	1	1	1
Degree of Util (X)	0.123	0.363	0.524	0.148
Departure Headway (Hd)	5.617	4.861	4.691	5.554
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	642	731	761	649
Service Time	3.62	2.95	2.771	3.558
HCM Lane V/C Ratio	0.123	0.368	0.528	0.148
HCM Control Delay	9.4	10.7	12.9	9.5
HCM Lane LOS	A	B	B	A
HCM 95th-tile Q	0.4	1.7	3.1	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1450	134	28	1118	0	310	0	69	138	0	69
Future Volume (veh/h)	0	1450	134	28	1118	0	310	0	69	138	0	69
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.92	1.00		1.00	1.00		1.00	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	0	1683	1683	1683	1683	0	1616	0	1683	1751	0	1683
Adj Flow Rate, veh/h	0	1611	140	31	1242	0	344	0	51	153	0	19
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	2	2	2	2	0	2	0	2	2	0	2
Cap, veh/h	0	2794	242	76	2673	0	380	0	0	411	0	0
Arrive On Green	0.00	0.65	0.65	1.00	1.00	0.00	0.25	0.00	0.00	0.25	0.00	0.00
Sat Flow, veh/h	0	4422	370	57	4223	0	1539	344		1667	153	
Grp Volume(v), veh/h	0	1155	596	418	855	0	344	47.4		153	31.8	
Grp Sat Flow(s),veh/h/ln	0	1532	1577	1354	1394	0	1539	D		1667	C	
Q Serve(g_s), s	0.0	20.9	21.0	0.0	0.0	0.0	21.7			7.6		
Cycle Q Clear(g_c), s	0.0	20.9	21.0	0.0	0.0	0.0	21.7			7.6		
Prop In Lane	0.00		0.23	0.07		0.00	1.00			1.00		
Lane Grp Cap(c), veh/h	0	2005	1032	925	1824	0	380			411		
V/C Ratio(X)	0.00	0.58	0.58	0.45	0.47	0.00	0.91			0.37		
Avail Cap(c_a), veh/h	0	2005	1032	925	1824	0	622			674		
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00	1.00			1.00		
Upstream Filter(I)	0.00	1.00	1.00	0.60	0.60	0.00	1.00			1.00		
Uniform Delay (d), s/veh	0.0	9.6	9.6	0.0	0.0	0.0	36.5			31.2		
Incr Delay (d2), s/veh	0.0	1.2	2.4	1.0	0.5	0.0	10.9			0.6		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0		
%ile BackOfQ(50%),veh/ln	0.0	6.6	7.1	0.2	0.1	0.0	9.2			3.1		
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	10.8	12.0	1.0	0.5	0.0	47.4			31.8		
LnGrp LOS	A	B	B	A	A	A	D			C		
Approach Vol, veh/h		1751			1273							
Approach Delay, s/veh		11.2			0.7							
Approach LOS		B			A							
Timer - Assigned Phs		2	3			6	7					
Phs Duration (G+Y+Rc), s		70.7	29.3			70.7	29.3					
Change Period (Y+Rc), s		5.3	4.6			5.3	4.6					
Max Green Setting (Gmax), s		49.7	40.4			49.7	40.4					
Max Q Clear Time (g_c+I1), s		23.0	23.7			2.0	9.6					
Green Ext Time (p_c), s		22.0	1.0			25.3	0.4					
Intersection Summary												
HCM 6th Ctrl Delay			11.8									
HCM 6th LOS			B									

Movement	EBL2	EBT	EBR	WBL	WBT	WBR	NBR	SBR	SBR2
Lane Configurations									
Traffic Volume (vph)	108	1468	67	57	899	57	68	252	198
Future Volume (vph)	108	1468	67	57	899	57	68	252	198
Ideal Flow (vphpl)	1350	1350	1350	1350	1350	1350	1350	1350	1350
Lane Width	9	10	10	9	10	10	12	10	10
Total Lost time (s)	4.6	5.3		4.0	5.3		4.6	4.6	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.88	1.00
Frpb, ped/bikes	1.00	0.99		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	0.99		1.00	0.99		0.86	0.85	0.85
Flt Protected	0.95	1.00		0.95	1.00		1.00	1.00	1.00
Satd. Flow (prot)	1018	2979		1018	2986		1030	1663	945
Flt Permitted	0.95	1.00		0.95	1.00		1.00	1.00	1.00
Satd. Flow (perm)	1018	2979		1018	2986		1030	1663	945
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	120	1631	74	63	999	63	76	280	220
RTOR Reduction (vph)	0	5	0	0	0	0	0	0	0
Lane Group Flow (vph)	120	1700	0	63	1062	0	76	280	220
Confl. Peds. (#/hr)			115			83			
Confl. Bikes (#/hr)			6			6	6	6	
Turn Type	Prot	NA		Prot	NA		Prot	Prot	Free
Protected Phases	5	2		1	6		8	4	
Permitted Phases									Free
Actuated Green, G (s)	15.4	65.9		1.0	50.9		19.2	19.2	100.0
Effective Green, g (s)	15.4	65.9		1.0	50.9		19.2	19.2	100.0
Actuated g/C Ratio	0.15	0.66		0.01	0.51		0.19	0.19	1.00
Clearance Time (s)	4.6	5.3		4.0	5.3		4.6	4.6	
Vehicle Extension (s)	1.5	3.0		1.5	3.0		2.5	2.5	
Lane Grp Cap (vph)	156	1963		10	1519		197	319	945
v/s Ratio Prot	0.12	c0.57		c0.06	0.36		0.07	c0.17	
v/s Ratio Perm									0.23
v/c Ratio	0.77	0.87		6.30	0.70		0.39	0.88	0.23
Uniform Delay, d1	40.6	13.5		49.5	18.7		35.3	39.3	0.0
Progression Factor	0.59	0.60		0.75	1.06		1.00	1.00	1.00
Incremental Delay, d2	1.9	0.5		2528.1	1.9		0.9	22.6	0.6
Delay (s)	25.8	8.6		2565.3	21.8		36.2	61.8	0.6
Level of Service	C	A		F	C		D	E	A
Approach Delay (s)		9.7			164.2				
Approach LOS		A			F				

Intersection Summary			
HCM 2000 Control Delay	63.2	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	14.5
Intersection Capacity Utilization	64.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1452	86	114	773	0	160	0	131	408	232	80
Future Volume (veh/h)	0	1452	86	114	773	0	160	0	131	408	232	80
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.88	0.99		1.00	1.00		1.00	1.00		0.93
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	0	1616	1616	1616	1616	0	1683	0	1683	1683	1683	1683
Adj Flow Rate, veh/h	0	1613	95	127	859	0	178	0	146	453	258	19
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	2	2	2	2	0	2	0	2	2	2	2
Cap, veh/h	0	2876	169	239	3004	0	0	0	0	672	364	287
Arrive On Green	0.00	1.00	1.00	0.91	0.91	0.00	0.00	0.00	0.00	0.22	0.22	0.22
Sat Flow, veh/h	0	4370	249	245	4557	0		0		3110	1683	1329
Grp Volume(v), veh/h	0	1123	585	127	859	0		0.0		453	258	19
Grp Sat Flow(s),veh/h/ln	0	1471	1532	245	1471	0				1555	1683	1329
Q Serve(g_s), s	0.0	0.0	0.0	15.8	2.5	0.0				13.4	14.2	1.1
Cycle Q Clear(g_c), s	0.0	0.0	0.0	15.8	2.5	0.0				13.4	14.2	1.1
Prop In Lane	0.00		0.16	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2002	1043	239	3004	0				672	364	287
V/C Ratio(X)	0.00	0.56	0.56	0.53	0.29	0.00				0.67	0.71	0.07
Avail Cap(c_a), veh/h	0	2002	1043	239	3004	0				809	438	345
HCM Platoon Ratio	1.00	2.00	2.00	1.33	1.33	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.42	0.42	1.00	1.00	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	2.3	1.6	0.0				36.0	36.3	31.2
Incr Delay (d2), s/veh	0.0	0.5	0.9	8.2	0.2	0.0				1.7	4.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.1	0.3	0.8	0.6	0.0				5.2	6.2	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.5	0.9	10.5	1.9	0.0				37.7	40.4	31.3
LnGrp LOS	A	A	A	B	A	A				D	D	C
Approach Vol, veh/h		1708			986						730	
Approach Delay, s/veh		0.6			3.0						38.5	
Approach LOS		A			A						D	

Timer - Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		74.4				74.4		25.6
Change Period (Y+Rc), s		6.3				6.3		4.0
Max Green Setting (Gmax), s		43.7				43.7		26.0
Max Q Clear Time (g_c+I1), s		2.0				17.8		16.2
Green Ext Time (p_c), s		30.9				16.2		2.5

Intersection Summary		
HCM 6th Ctrl Delay		9.4
HCM 6th LOS		A

Notes

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

Intersection	
Int Delay, s/veh	9.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	1888	101	0	884	1	0	0	102	0	0	0
Future Vol, veh/h	2	1888	101	0	884	1	0	0	102	0	0	0
Conflicting Peds, #/hr	107	0	128	0	0	107	0	0	128	107	0	107
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	2098	112	0	982	1	0	0	113	0	0	0

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	1090	0	0	-	-	0	-	-	1361
Stage 1	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-
Critical Hdwy	5.34	-	-	-	-	-	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.12	-	-	-	-	-	-	-	3.92
Pot Cap-1 Maneuver	354	-	-	0	-	-	0	0	118
Stage 1	-	-	-	0	-	-	0	0	-
Stage 2	-	-	-	0	-	-	0	0	-
Platoon blocked, %		-	-		-	-			
Mov Cap-1 Maneuver	354	-	-	-	-	-	-	0	~ 90
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	0	-
Stage 1	-	-	-	-	-	-	-	0	-
Stage 2	-	-	-	-	-	-	-	0	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	264.8
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBT	WBR
Capacity (veh/h)	90	354	-	-	-	-
HCM Lane V/C Ratio	1.259	0.006	-	-	-	-
HCM Control Delay (s)	264.8	15.2	0	-	-	-
HCM Lane LOS	F	C	A	-	-	-
HCM 95th %tile Q(veh)	8.1	0	-	-	-	-

Notes

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

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBR
Lane Configurations									
Traffic Volume (vph)	185	345	1308	149	159	883	141	49	134
Future Volume (vph)	185	345	1308	149	159	883	141	49	134
Ideal Flow (vphpl)	1350	1350	1350	1350	1350	1350	1350	1350	1350
Lane Width	12	9	10	9	9	9	9	9	15
Total Lost time (s)		4.6	5.3		4.6	5.3			4.6
Lane Util. Factor		1.00	0.91		1.00	0.91			1.00
Frpb, ped/bikes		1.00	0.97		1.00	0.95			1.00
Flpb, ped/bikes		1.00	1.00		1.00	1.00			1.00
Frt		1.00	0.98		1.00	0.97			0.86
Flt Protected		0.95	1.00		0.95	1.00			1.00
Satd. Flow (prot)		1018	2910		1018	2698			1133
Flt Permitted		0.95	1.00		0.95	1.00			1.00
Satd. Flow (perm)		1018	2910		1018	2698			1133
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	206	383	1453	166	177	981	157	54	149
RTOR Reduction (vph)	0	0	12	0	0	5	0	0	57
Lane Group Flow (vph)	0	589	1607	0	177	1187	0	0	92
Confl. Peds. (#/hr)				124			127	127	
Confl. Bikes (#/hr)				8			2	2	
Turn Type	Prot	Prot	NA		Prot	NA			Perm
Protected Phases	5	5	2		1	6			
Permitted Phases									1
Actuated Green, G (s)		42.4	65.9		24.2	47.7			24.2
Effective Green, g (s)		42.4	65.9		24.2	47.7			24.2
Actuated g/C Ratio		0.42	0.66		0.24	0.48			0.24
Clearance Time (s)		4.6	5.3		4.6	5.3			4.6
Vehicle Extension (s)		2.5	5.0		2.5	5.0			2.5
Lane Grp Cap (vph)		431	1917		246	1286			274
v/s Ratio Prot		c0.58	0.55		0.17	c0.44			
v/s Ratio Perm									0.08
v/c Ratio		1.37	0.84		0.72	0.92			0.34
Uniform Delay, d1		28.8	13.0		34.8	24.4			31.3
Progression Factor		1.10	1.07		1.22	0.55			1.00
Incremental Delay, d2		166.4	0.4		4.9	7.2			0.5
Delay (s)		198.1	14.4		47.4	20.7			31.8
Level of Service		F	B		D	C			C
Approach Delay (s)			63.4			24.1			
Approach LOS			E			C			

Intersection Summary			
HCM 2000 Control Delay	47.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.13		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	9.9
Intersection Capacity Utilization	88.6%	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)	127	1295	21	0	1003	108	99	68	38	115	58	128
Future Volume (veh/h)	127	1295	21	0	1003	108	99	68	38	115	58	128
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		0.93	1.00		0.88	1.00		0.98	1.00		0.89
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	1616	1616	1683	0	1683	1683	1683	1683	1683	1616	1751	1683
Adj Flow Rate, veh/h	141	1439	21	0	1114	102	110	76	42	128	64	142
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	0	2	2	2	2	2	2	2	2
Cap, veh/h	280	2385	35	0	2254	206	157	99	55	357	406	296
Arrive On Green	1.00	1.00	1.00	0.00	1.00	1.00	0.10	0.10	0.10	0.23	0.23	0.23
Sat Flow, veh/h	389	4474	65	0	4379	386	1603	1011	559	1539	1751	1276
Grp Volume(v), veh/h	141	946	514	0	807	409	110	0	118	128	64	142
Grp Sat Flow(s),veh/h/ln	389	1471	1598	0	1532	1550	1603	0	1570	1539	1751	1276
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	6.6	0.0	7.3	7.0	2.9	9.6
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	6.6	0.0	7.3	7.0	2.9	9.6
Prop In Lane	1.00		0.04	0.00		0.25	1.00		0.36	1.00		1.00
Lane Grp Cap(c), veh/h	280	1568	852	0	1633	827	157	0	154	357	406	296
V/C Ratio(X)	0.50	0.60	0.60	0.00	0.49	0.50	0.70	0.00	0.77	0.36	0.16	0.48
Avail Cap(c_a), veh/h	280	1568	852	0	1633	827	253	0	248	474	539	393
HCM Platoon Ratio	2.00	2.00	2.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.49	0.49	0.49	0.00	0.18	0.18	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	43.7	0.0	44.0	32.2	30.6	33.2
Incr Delay (d2), s/veh	3.2	0.9	1.6	0.0	0.2	0.4	5.5	0.0	7.7	0.6	0.2	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.2	0.4	0.0	0.0	0.1	2.9	0.0	3.2	2.7	1.3	3.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	3.2	0.9	1.6	0.0	0.2	0.4	49.2	0.0	51.7	32.8	30.8	34.4
LnGrp LOS	A	A	A	A	A	A	D	A	D	C	C	C
Approach Vol, veh/h		1601			1216			228			334	
Approach Delay, s/veh		1.3			0.3			50.5			33.1	
Approach LOS		A			A			D			C	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	58.6	14.0	58.6	27.4
Change Period (Y+Rc), s	5.3	* 4.2	5.3	4.2
Max Green Setting (Gmax), s	39.7	* 16	39.7	30.8
Max Q Clear Time (g_c+I1), s	2.0	9.3	2.0	11.6
Green Ext Time (p_c), s	28.1	0.5	20.1	1.2

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

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	19	1146	64	57	1018	68	110	441	100	5	620	96
Future Volume (veh/h)	19	1146	64	57	1018	68	110	441	100	5	620	96
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.93	0.99		0.93	1.00		0.94	0.97		0.93
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	1616	1616	1616	1616	1683	1683	1616	1616	1616	1683	1616	1616
Adj Flow Rate, veh/h	21	1273	63	63	1131	63	122	490	44	6	689	40
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	186	1735	86	221	1896	106	120	1253	526	39	833	356
Arrive On Green	0.03	0.81	0.81	0.04	0.43	0.43	0.08	0.41	0.41	0.28	0.28	0.28
Sat Flow, veh/h	1539	4288	212	1539	4433	247	1539	3070	1290	7	2997	1280
Grp Volume(v), veh/h	21	873	463	63	781	413	122	490	44	372	323	40
Grp Sat Flow(s),veh/h/ln	1539	1471	1559	1539	1532	1617	1539	1535	1290	1607	1397	1280
Q Serve(g_s), s	0.8	13.9	13.9	2.4	19.6	19.6	7.8	11.2	2.1	1.9	21.7	2.3
Cycle Q Clear(g_c), s	0.8	13.9	13.9	2.4	19.6	19.6	7.8	11.2	2.1	21.6	21.7	2.3
Prop In Lane	1.00		0.14	1.00		0.15	1.00		1.00	0.02		1.00
Lane Grp Cap(c), veh/h	186	1190	631	221	1310	691	120	1253	526	483	388	356
V/C Ratio(X)	0.11	0.73	0.73	0.28	0.60	0.60	1.02	0.39	0.08	0.77	0.83	0.11
Avail Cap(c_a), veh/h	279	1190	631	279	1310	691	120	1314	552	515	416	381
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)	0.09	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	18.5	7.0	7.0	17.5	22.0	22.0	46.1	20.9	18.1	33.9	33.9	26.9
Incr Delay (d2), s/veh	0.0	0.4	0.7	0.3	2.0	3.8	86.6	0.3	0.1	7.2	13.4	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	2.2	2.4	0.8	7.2	7.9	5.9	4.1	0.6	9.4	8.7	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.5	7.4	7.7	17.7	24.0	25.8	132.7	21.1	18.2	41.0	47.3	27.1
LnGrp LOS	B	A	A	B	C	C	F	C	B	D	D	C
Approach Vol, veh/h		1357			1257			656			735	
Approach Delay, s/veh		7.7			24.3			41.7			43.0	
Approach LOS		A			C			D			D	

Timer - Assigned Phs	1	2	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.2	45.8	46.0	5.9	48.1	13.0	33.0
Change Period (Y+Rc), s	4.6	5.3	5.2	4.6	5.3	5.2	5.2
Max Green Setting (Gmax), s	7.4	34.7	42.8	7.4	34.7	7.8	29.8
Max Q Clear Time (g_c+I1), s	4.4	15.9	13.2	2.8	21.6	9.8	23.7
Green Ext Time (p_c), s	0.0	13.6	5.5	0.0	9.4	0.0	3.0

Intersection Summary	
HCM 6th Ctrl Delay	24.9
HCM 6th LOS	C

Notes

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

Intersection	
Intersection Delay, s/veh	13.7
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥			✥			✥	
Traffic Vol, veh/h	21	322	9	9	174	47	5	36	13	54	146	57
Future Vol, veh/h	21	322	9	9	174	47	5	36	13	54	146	57
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	23	358	10	10	193	52	6	40	14	60	162	63
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	15.7	12	9.9	13.4
HCM LOS	C	B	A	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	9%	6%	4%	21%
Vol Thru, %	67%	91%	76%	57%
Vol Right, %	24%	3%	20%	22%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	54	352	230	257
LT Vol	5	21	9	54
Through Vol	36	322	174	146
RT Vol	13	9	47	57
Lane Flow Rate	60	391	256	286
Geometry Grp	1	1	1	1
Degree of Util (X)	0.102	0.583	0.388	0.451
Departure Headway (Hd)	6.138	5.366	5.464	5.683
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	580	669	657	631
Service Time	4.217	3.417	3.522	3.739
HCM Lane V/C Ratio	0.103	0.584	0.39	0.453
HCM Control Delay	9.9	15.7	12	13.4
HCM Lane LOS	A	C	B	B
HCM 95th-tile Q	0.3	3.8	1.8	2.3

Intersection	
Intersection Delay, s/veh	12.9
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			✣			✣	
Traffic Vol, veh/h	15	364	6	7	208	24	6	89	8	36	52	19
Future Vol, veh/h	15	364	6	7	208	24	6	89	8	36	52	19
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	17	404	7	8	231	27	7	99	9	40	58	21
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	15.2	11.4	10.3	10.4
HCM LOS	C	B	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	6%	4%	3%	34%
Vol Thru, %	86%	95%	87%	49%
Vol Right, %	8%	2%	10%	18%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	103	385	239	107
LT Vol	6	15	7	36
Through Vol	89	364	208	52
RT Vol	8	6	24	19
Lane Flow Rate	114	428	266	119
Geometry Grp	1	1	1	1
Degree of Util (X)	0.188	0.596	0.382	0.194
Departure Headway (Hd)	5.9	5.019	5.183	5.886
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	608	719	693	609
Service Time	3.945	3.051	3.219	3.932
HCM Lane V/C Ratio	0.188	0.595	0.384	0.195
HCM Control Delay	10.3	15.2	11.4	10.4
HCM Lane LOS	B	C	B	B
HCM 95th-tile Q	0.7	4	1.8	0.7

Intersection	
Intersection Delay, s/veh	13.7
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			✣			✣	
Traffic Vol, veh/h	19	353	30	23	188	27	16	36	26	34	88	35
Future Vol, veh/h	19	353	30	23	188	27	16	36	26	34	88	35
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	21	392	33	26	209	30	18	40	29	38	98	39
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	16.5	11.8	10	11.2
HCM LOS	C	B	A	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	21%	5%	10%	22%
Vol Thru, %	46%	88%	79%	56%
Vol Right, %	33%	7%	11%	22%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	78	402	238	157
LT Vol	16	19	23	34
Through Vol	36	353	188	88
RT Vol	26	30	27	35
Lane Flow Rate	87	447	264	174
Geometry Grp	1	1	1	1
Degree of Util (X)	0.144	0.631	0.391	0.283
Departure Headway (Hd)	5.973	5.083	5.317	5.84
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	598	710	674	614
Service Time	4.034	3.121	3.361	3.893
HCM Lane V/C Ratio	0.145	0.63	0.392	0.283
HCM Control Delay	10	16.5	11.8	11.2
HCM Lane LOS	A	C	B	B
HCM 95th-tile Q	0.5	4.5	1.9	1.2

LOS Worksheets: Future Plus Scenario 3 Specific Plan Buildout Conditions

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1135	67	17	687	0	256	0	114	72	0	56
Future Volume (veh/h)	0	1135	67	17	687	0	256	0	114	72	0	56
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	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	0	1196	1196	1196	1196	0	1148	0	1196	1244	0	1196
Adj Flow Rate, veh/h	0	1261	67	19	763	0	284	0	59	80	0	19
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	2	2	2	2	0	2	0	2	2	0	2
Cap, veh/h	0	1966	104	63	1847	0	306	0	0	331	0	0
Arrive On Green	0.00	0.62	0.62	1.00	1.00	0.00	0.28	0.00	0.00	0.28	0.00	0.00
Sat Flow, veh/h	0	3272	168	40	3071	0	1094	284		1185	80	
Grp Volume(v), veh/h	0	867	461	273	509	0	284	55.5		80	28.2	
Grp Sat Flow(s),veh/h/ln	0	1088	1155	1032	990	0	1094	E		1185	C	
Q Serve(g_s), s	0.0	25.1	25.1	1.0	0.0	0.0	25.3			5.2		
Cycle Q Clear(g_c), s	0.0	25.1	25.1	26.1	0.0	0.0	25.3			5.2		
Prop In Lane	0.00		0.15	0.07		0.00	1.00			1.00		
Lane Grp Cap(c), veh/h	0	1352	718	680	1231	0	306			331		
V/C Ratio(X)	0.00	0.64	0.64	0.40	0.41	0.00	0.93			0.24		
Avail Cap(c_a), veh/h	0	1352	718	680	1231	0	442			479		
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00	1.00			1.00		
Upstream Filter(I)	0.00	1.00	1.00	0.83	0.83	0.00	1.00			1.00		
Uniform Delay (d), s/veh	0.0	11.9	11.9	0.0	0.0	0.0	35.0			27.8		
Incr Delay (d2), s/veh	0.0	2.3	4.4	1.5	0.9	0.0	20.5			0.4		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0		
%ile BackOfQ(50%),veh/ln	0.0	5.9	6.7	0.3	0.1	0.0	8.4			1.5		
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	14.3	16.3	1.5	0.9	0.0	55.5			28.2		
LnGrp LOS	A	B	B	A	A	A	E			C		
Approach Vol, veh/h		1328			782							
Approach Delay, s/veh		15.0			1.1							
Approach LOS		B			A							
Timer - Assigned Phs		2	3			6	7					
Phs Duration (G+Y+Rc), s		67.4	32.6			67.4	32.6					
Change Period (Y+Rc), s		5.3	4.6			5.3	4.6					
Max Green Setting (Gmax), s		49.7	40.4			49.7	40.4					
Max Q Clear Time (g_c+I1), s		27.1	27.3			28.1	7.2					
Green Ext Time (p_c), s		15.6	0.7			9.4	0.2					
Intersection Summary												
HCM 6th Ctrl Delay			15.7									
HCM 6th LOS			B									

Movement	EBL2	EBT	EBR	WBL	WBT	WBR	NBR	SBR	SBR2
Lane Configurations									
Traffic Volume (vph)	196	1058	53	22	661	123	96	103	203
Future Volume (vph)	196	1058	53	22	661	123	96	103	203
Ideal Flow (vphpl)	1350	1350	1350	1350	1350	1350	1350	1350	1350
Lane Width	9	10	10	9	10	10	12	10	10
Total Lost time (s)	4.6	5.3		4.0	5.3		4.6	4.6	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.88	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.98		1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.99		1.00	0.98		0.86	0.85	0.85
Flt Protected	0.95	1.00		0.95	1.00		1.00	1.00	1.00
Satd. Flow (prot)	1018	3003		1018	2918		1030	1663	945
Flt Permitted	0.95	1.00		0.95	1.00		1.00	1.00	1.00
Satd. Flow (perm)	1018	3003		1018	2918		1030	1663	945
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	218	1176	59	24	734	137	107	114	226
RTOR Reduction (vph)	0	5	0	0	0	0	0	0	0
Lane Group Flow (vph)	218	1230	0	24	871	0	107	114	226
Confl. Peds. (#/hr)			24			64			
Confl. Bikes (#/hr)			3			3	3	3	
Turn Type	Prot	NA		Prot	NA		Prot	Prot	Free
Protected Phases	5	2		1	6		8	4	
Permitted Phases									Free
Actuated Green, G (s)	15.4	69.1		1.0	54.1		16.0	16.0	100.0
Effective Green, g (s)	15.4	69.1		1.0	54.1		16.0	16.0	100.0
Actuated g/C Ratio	0.15	0.69		0.01	0.54		0.16	0.16	1.00
Clearance Time (s)	4.6	5.3		4.0	5.3		4.6	4.6	
Vehicle Extension (s)	1.5	3.0		1.5	3.0		2.5	2.5	
Lane Grp Cap (vph)	156	2075		10	1578		164	266	945
v/s Ratio Prot	c0.21	c0.41		0.02	0.30		c0.10	0.07	
v/s Ratio Perm									0.24
v/c Ratio	1.40	0.59		2.40	0.55		0.65	0.43	0.24
Uniform Delay, d1	42.3	8.1		49.5	15.0		39.4	37.9	0.0
Progression Factor	0.73	0.46		0.74	1.15		1.00	1.00	1.00
Incremental Delay, d2	202.8	0.8		836.9	1.2		8.0	0.8	0.6
Delay (s)	233.7	4.5		873.7	18.5		47.4	38.7	0.6
Level of Service	F	A		F	B		D	D	A
Approach Delay (s)		38.9			41.4				
Approach LOS		D			D				

Intersection Summary			
HCM 2000 Control Delay	36.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	14.5
Intersection Capacity Utilization	59.7%	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)	0	1081	74	74	594	0	130	0	55	259	87	43
Future Volume (veh/h)	0	1081	74	74	594	0	130	0	55	259	87	43
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		1.00	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	0	1148	1148	1148	1148	0	1196	0	1196	1196	1196	1196
Adj Flow Rate, veh/h	0	1201	80	82	660	0	144	0	61	288	97	7
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	2	2	2	2	0	2	0	2	2	2	2
Cap, veh/h	0	2139	142	261	2240	0	0	0	0	403	218	176
Arrive On Green	0.00	1.00	1.00	0.71	0.71	0.00	0.00	0.00	0.00	0.18	0.18	0.18
Sat Flow, veh/h	0	3096	199	264	3238	0		0		2210	1196	965
Grp Volume(v), veh/h	0	838	443	82	660	0		0.0		288	97	7
Grp Sat Flow(s),veh/h/ln	0	1045	1102	264	1045	0				1105	1196	965
Q Serve(g_s), s	0.0	0.0	0.0	12.8	7.6	0.0				12.3	7.2	0.6
Cycle Q Clear(g_c), s	0.0	0.0	0.0	12.8	7.6	0.0				12.3	7.2	0.6
Prop In Lane	0.00		0.18	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1494	788	261	2240	0				403	218	176
V/C Ratio(X)	0.00	0.56	0.56	0.31	0.29	0.00				0.71	0.44	0.04
Avail Cap(c_a), veh/h	0	1494	788	261	2240	0				575	311	251
HCM Platoon Ratio	1.00	2.00	2.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.77	0.77	1.00	1.00	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	5.9	5.2	0.0				38.4	36.4	33.7
Incr Delay (d2), s/veh	0.0	1.2	2.2	3.1	0.3	0.0				2.4	1.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.2	0.5	0.8	1.5	0.0				3.5	2.2	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	1.2	2.2	9.0	5.5	0.0				40.8	37.8	33.8
LnGrp LOS	A	A	A	A	A	A				D	D	C
Approach Vol, veh/h		1281			742						392	
Approach Delay, s/veh		1.5			5.9						40.0	
Approach LOS		A			A						D	

Timer - Assigned Phs	2	6	8
Phs Duration (G+Y+Rc), s	77.8	77.8	22.2
Change Period (Y+Rc), s	6.3	6.3	4.0
Max Green Setting (Gmax), s	43.7	43.7	26.0
Max Q Clear Time (g_c+I1), s	2.0	14.8	14.3
Green Ext Time (p_c), s	22.5	12.5	1.3

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

Notes

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

Intersection												
Int Delay, s/veh	5.2											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	3	1376	30	0	654	3	0	0	179	0	0	0
Future Vol, veh/h	3	1376	30	0	654	3	0	0	179	0	0	0
Conflicting Peds, #/hr	55	0	36	0	0	53	0	0	34	53	0	55
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	1529	33	0	727	3	0	0	199	0	0	0

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	785	0	0	-	-	0	-	-	851
Stage 1	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-
Critical Hdwy	5.34	-	-	-	-	-	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.12	-	-	-	-	-	-	-	3.92
Pot Cap-1 Maneuver	496	-	-	0	-	-	0	0	260
Stage 1	-	-	-	0	-	-	0	0	-
Stage 2	-	-	-	0	-	-	0	0	-
Platoon blocked, %		-	-		-	-			
Mov Cap-1 Maneuver	496	-	-	-	-	-	-	0	242
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	0	-
Stage 1	-	-	-	-	-	-	-	0	-
Stage 2	-	-	-	-	-	-	-	0	-

Approach	EB	WB	NB
HCM Control Delay, s	0.2	0	64.1
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBT	WBR
Capacity (veh/h)	242	496	-	-	-	-
HCM Lane V/C Ratio	0.822	0.007	-	-	-	-
HCM Control Delay (s)	64.1	12.3	0.2	-	-	-
HCM Lane LOS	F	B	A	-	-	-
HCM 95th %tile Q(veh)	6.4	0	-	-	-	-

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBR
Lane Configurations									
Traffic Volume (vph)	397	85	897	94	125	771	275	15	90
Future Volume (vph)	397	85	897	94	125	771	275	15	90
Ideal Flow (vphpl)	1350	1350	1350	1350	1350	1350	1350	1350	1350
Lane Width	12	9	10	9	9	9	9	9	15
Total Lost time (s)		4.6	5.3		4.6	5.3			4.6
Lane Util. Factor		1.00	0.91		1.00	0.91			1.00
Frpb, ped/bikes		1.00	0.99		1.00	0.96			1.00
Flpb, ped/bikes		1.00	1.00		1.00	1.00			1.00
Frt		1.00	0.99		1.00	0.96			0.86
Flt Protected		0.95	1.00		0.95	1.00			1.00
Satd. Flow (prot)		1018	2969		1018	2699			1133
Flt Permitted		0.95	1.00		0.95	1.00			1.00
Satd. Flow (perm)		1018	2969		1018	2699			1133
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	441	94	997	104	139	857	306	17	100
RTOR Reduction (vph)	0	0	10	0	0	2	0	0	77
Lane Group Flow (vph)	0	535	1091	0	139	1178	0	0	23
Confl. Peds. (#/hr)				32			54	54	
Confl. Bikes (#/hr)				2			8	8	
Turn Type	Prot	Prot	NA		Prot	NA			Perm
Protected Phases	5	5	2		1	6			
Permitted Phases									1
Actuated Green, G (s)		42.4	67.2		22.9	47.7			22.9
Effective Green, g (s)		42.4	67.2		22.9	47.7			22.9
Actuated g/C Ratio		0.42	0.67		0.23	0.48			0.23
Clearance Time (s)		4.6	5.3		4.6	5.3			4.6
Vehicle Extension (s)		2.5	5.0		2.5	5.0			2.5
Lane Grp Cap (vph)		431	1995		233	1287			259
v/s Ratio Prot		c0.53	0.37		0.14	c0.44			
v/s Ratio Perm									0.02
v/c Ratio		1.24	0.55		0.60	0.92			0.09
Uniform Delay, d1		28.8	8.5		34.4	24.3			30.3
Progression Factor		1.23	1.14		1.22	0.60			1.00
Incremental Delay, d2		122.1	0.8		2.4	8.8			0.1
Delay (s)		157.6	10.4		44.5	23.3			30.4
Level of Service		F	B		D	C			C
Approach Delay (s)			58.5			25.5			
Approach LOS			E			C			

Intersection Summary			
HCM 2000 Control Delay	43.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.07		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	9.9
Intersection Capacity Utilization	84.6%	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)	90	886	34	0	913	93	84	84	30	53	74	104
Future Volume (veh/h)	90	886	34	0	913	93	84	84	30	53	74	104
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.95	1.00		0.92	1.00		0.98	1.00		0.91
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	1148	1148	1196	0	1196	1196	1196	1196	1196	1148	1244	1196
Adj Flow Rate, veh/h	100	984	31	0	1014	92	93	93	33	59	82	116
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	0	2	2	2	2	2	2	2	2
Cap, veh/h	229	1583	50	0	1535	139	149	110	39	245	279	207
Arrive On Green	1.00	1.00	1.00	0.00	1.00	1.00	0.13	0.13	0.13	0.22	0.22	0.22
Sat Flow, veh/h	309	3117	98	0	3130	273	1139	839	298	1094	1244	922
Grp Volume(v), veh/h	100	659	356	0	730	376	93	0	126	59	82	116
Grp Sat Flow(s),veh/h/ln	309	1045	1125	0	1088	1119	1139	0	1136	1094	1244	922
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	7.7	0.0	10.8	4.4	5.5	11.2
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	7.7	0.0	10.8	4.4	5.5	11.2
Prop In Lane	1.00		0.09	0.00		0.24	1.00		0.26	1.00		1.00
Lane Grp Cap(c), veh/h	229	1061	571	0	1105	568	149	0	149	245	279	207
V/C Ratio(X)	0.44	0.62	0.62	0.00	0.66	0.66	0.62	0.00	0.85	0.24	0.29	0.56
Avail Cap(c_a), veh/h	229	1061	571	0	1105	568	180	0	180	337	383	284
HCM Platoon Ratio	2.00	2.00	2.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.84	0.84	0.84	0.00	0.37	0.37	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	41.1	0.0	42.5	31.8	32.2	34.4
Incr Delay (d2), s/veh	5.0	2.3	4.3	0.0	1.2	2.3	4.7	0.0	26.1	0.5	0.6	2.4
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	0.3	0.3	0.7	0.0	0.2	0.4	2.4	0.0	4.1	1.2	1.7	2.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	5.0	2.3	4.3	0.0	1.2	2.3	45.9	0.0	68.6	32.3	32.8	36.8
LnGrp LOS	A	A	A	A	A	A	D	A	E	C	C	D
Approach Vol, veh/h		1115			1106			219			257	
Approach Delay, s/veh		3.2			1.5			59.0			34.5	
Approach LOS		A			A			E			C	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		56.1		17.3		56.1		26.7				
Change Period (Y+Rc), s		5.3		* 4.2		5.3		4.2				
Max Green Setting (Gmax), s		39.7		* 16		39.7		30.8				
Max Q Clear Time (g_c+I1), s		2.0		12.8		2.0		13.2				
Green Ext Time (p_c), s		20.3		0.3		17.9		1.0				
Intersection Summary												
HCM 6th Ctrl Delay			10.0									
HCM 6th LOS			B									

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	32	1001	67	49	931	56	89	504	70	5	383	64
Future Volume (veh/h)	32	1001	67	49	931	56	89	504	70	5	383	64
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.95	1.00		0.97	0.99		0.92
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	1148	1148	1148	1148	1196	1196	1148	1148	1148	1196	1148	1148
Adj Flow Rate, veh/h	36	1112	63	54	1034	53	99	560	31	6	426	27
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	148	1266	72	169	1367	70	85	858	370	39	558	237
Arrive On Green	0.05	0.84	0.84	0.04	0.43	0.43	0.08	0.39	0.39	0.26	0.26	0.26
Sat Flow, veh/h	1094	3026	171	1094	3170	162	1094	2182	942	8	2122	899
Grp Volume(v), veh/h	36	768	407	54	709	378	99	560	31	231	201	27
Grp Sat Flow(s),veh/h/ln	1094	1045	1108	1094	1088	1156	1094	1091	942	1137	993	899
Q Serve(g_s), s	1.9	22.6	22.7	2.8	27.5	27.6	7.8	21.0	2.1	0.0	18.7	2.3
Cycle Q Clear(g_c), s	1.9	22.6	22.7	2.8	27.5	27.6	7.8	21.0	2.1	18.6	18.7	2.3
Prop In Lane	1.00		0.15	1.00		0.14	1.00		1.00	0.03		1.00
Lane Grp Cap(c), veh/h	148	874	464	169	939	498	85	858	370	336	261	237
V/C Ratio(X)	0.24	0.88	0.88	0.32	0.76	0.76	1.16	0.65	0.08	0.69	0.77	0.11
Avail Cap(c_a), veh/h	202	874	464	209	939	498	85	934	403	375	296	268
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)	0.62	0.62	0.62	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.4	6.6	6.6	18.7	24.0	24.0	46.1	24.8	19.0	34.0	34.0	28.0
Incr Delay (d2), s/veh	0.2	8.0	13.9	0.4	5.6	10.3	147.2	1.7	0.1	5.3	11.4	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	2.6	3.5	0.7	7.5	8.7	5.6	5.6	0.5	5.7	5.3	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.6	14.6	20.5	19.1	29.7	34.3	193.3	26.5	19.2	39.3	45.5	28.3
LnGrp LOS	B	B	C	B	C	C	F	C	B	D	D	C
Approach Vol, veh/h		1211			1141			690			459	
Approach Delay, s/veh		16.7			30.7			50.1			41.4	
Approach LOS		B			C			D			D	

Timer - Assigned Phs	1	2		4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.4	47.1		44.5	7.1	48.4	13.0	31.5
Change Period (Y+Rc), s	4.6	5.3		5.2	4.6	5.3	5.2	5.2
Max Green Setting (Gmax), s	7.4	34.7		42.8	7.4	34.7	7.8	29.8
Max Q Clear Time (g_c+I1), s	4.8	24.7		23.0	3.9	29.6	9.8	20.7
Green Ext Time (p_c), s	0.0	7.4		5.4	0.0	3.9	0.0	2.5

Intersection Summary	
HCM 6th Ctrl Delay	31.1
HCM 6th LOS	C

Notes

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

Intersection	
Intersection Delay, s/veh	10.9
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥			✥			✥	
Traffic Vol, veh/h	17	177	7	7	263	17	9	52	5	5	50	35
Future Vol, veh/h	17	177	7	7	263	17	9	52	5	5	50	35
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	21	221	9	9	329	21	11	65	6	6	63	44
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	10.5	12	9.4	9.4
HCM LOS	B	B	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	14%	8%	2%	6%
Vol Thru, %	79%	88%	92%	56%
Vol Right, %	8%	3%	6%	39%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	66	201	287	90
LT Vol	9	17	7	5
Through Vol	52	177	263	50
RT Vol	5	7	17	35
Lane Flow Rate	82	251	359	112
Geometry Grp	1	1	1	1
Degree of Util (X)	0.129	0.34	0.47	0.167
Departure Headway (Hd)	5.613	4.867	4.72	5.355
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	642	731	753	674
Service Time	3.617	2.957	2.803	3.359
HCM Lane V/C Ratio	0.128	0.343	0.477	0.166
HCM Control Delay	9.4	10.5	12	9.4
HCM Lane LOS	A	B	B	A
HCM 95th-tile Q	0.4	1.5	2.5	0.6

Intersection	
Intersection Delay, s/veh	11.4
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			✣			✣	
Traffic Vol, veh/h	9	173	5	9	272	30	6	96	13	27	19	4
Future Vol, veh/h	9	173	5	9	272	30	6	96	13	27	19	4
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	216	6	11	340	38	8	120	16	34	24	5
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	10.5	12.8	10.1	9.5
HCM LOS	B	B	B	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	5%	5%	3%	54%
Vol Thru, %	83%	93%	87%	38%
Vol Right, %	11%	3%	10%	8%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	115	187	311	50
LT Vol	6	9	9	27
Through Vol	96	173	272	19
RT Vol	13	5	30	4
Lane Flow Rate	144	234	389	62
Geometry Grp	1	1	1	1
Degree of Util (X)	0.221	0.328	0.511	0.101
Departure Headway (Hd)	5.528	5.052	4.728	5.805
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	651	715	750	619
Service Time	3.542	3.052	2.824	3.825
HCM Lane V/C Ratio	0.221	0.327	0.519	0.1
HCM Control Delay	10.1	10.5	12.8	9.5
HCM Lane LOS	B	B	B	A
HCM 95th-tile Q	0.8	1.4	2.9	0.3

Intersection	
Intersection Delay, s/veh	11.3
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥			✥			✥	
Traffic Vol, veh/h	13	194	8	16	273	23	14	31	18	21	28	27
Future Vol, veh/h	13	194	8	16	273	23	14	31	18	21	28	27
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	16	243	10	20	341	29	18	39	23	26	35	34
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	10.7	12.6	9.4	9.5
HCM LOS	B	B	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	22%	6%	5%	28%
Vol Thru, %	49%	90%	88%	37%
Vol Right, %	29%	4%	7%	36%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	63	215	312	76
LT Vol	14	13	16	21
Through Vol	31	194	273	28
RT Vol	18	8	23	27
Lane Flow Rate	79	269	390	95
Geometry Grp	1	1	1	1
Degree of Util (X)	0.122	0.361	0.507	0.146
Departure Headway (Hd)	5.579	4.839	4.683	5.515
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	646	734	760	654
Service Time	3.583	2.927	2.762	3.518
HCM Lane V/C Ratio	0.122	0.366	0.513	0.145
HCM Control Delay	9.4	10.7	12.6	9.5
HCM Lane LOS	A	B	B	A
HCM 95th-tile Q	0.4	1.6	2.9	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1438	134	28	1089	0	310	0	69	138	0	69
Future Volume (veh/h)	0	1438	134	28	1089	0	310	0	69	138	0	69
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.92	1.00		1.00	1.00		1.00	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	0	1683	1683	1683	1683	0	1616	0	1683	1751	0	1683
Adj Flow Rate, veh/h	0	1598	140	31	1210	0	344	0	51	153	0	19
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	2	2	2	2	0	2	0	2	2	0	2
Cap, veh/h	0	2792	244	77	2667	0	380	0	0	411	0	0
Arrive On Green	0.00	0.65	0.65	1.00	1.00	0.00	0.25	0.00	0.00	0.25	0.00	0.00
Sat Flow, veh/h	0	4418	373	59	4214	0	1539	344		1667	153	
Grp Volume(v), veh/h	0	1147	591	406	835	0	344	47.4		153	31.8	
Grp Sat Flow(s),veh/h/ln	0	1532	1576	1347	1394	0	1539	D		1667	C	
Q Serve(g_s), s	0.0	20.7	20.8	0.0	0.0	0.0	21.7			7.6		
Cycle Q Clear(g_c), s	0.0	20.7	20.8	0.0	0.0	0.0	21.7			7.6		
Prop In Lane	0.00		0.24	0.08		0.00	1.00			1.00		
Lane Grp Cap(c), veh/h	0	2005	1031	920	1824	0	380			411		
V/C Ratio(X)	0.00	0.57	0.57	0.44	0.46	0.00	0.91			0.37		
Avail Cap(c_a), veh/h	0	2005	1031	920	1824	0	622			674		
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00	1.00			1.00		
Upstream Filter(I)	0.00	1.00	1.00	0.63	0.63	0.00	1.00			1.00		
Uniform Delay (d), s/veh	0.0	9.5	9.6	0.0	0.0	0.0	36.5			31.2		
Incr Delay (d2), s/veh	0.0	1.2	2.3	1.0	0.5	0.0	10.9			0.6		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0		
%ile BackOfQ(50%),veh/ln	0.0	6.5	7.0	0.2	0.1	0.0	9.2			3.1		
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	10.7	11.9	1.0	0.5	0.0	47.4			31.8		
LnGrp LOS	A	B	B	A	A	A	D			C		
Approach Vol, veh/h		1738			1241							
Approach Delay, s/veh		11.1			0.7							
Approach LOS		B			A							
Timer - Assigned Phs		2	3			6	7					
Phs Duration (G+Y+Rc), s		70.7	29.3			70.7	29.3					
Change Period (Y+Rc), s		5.3	4.6			5.3	4.6					
Max Green Setting (Gmax), s		49.7	40.4			49.7	40.4					
Max Q Clear Time (g_c+I1), s		22.8	23.7			2.0	9.6					
Green Ext Time (p_c), s		22.1	1.0			24.5	0.4					
Intersection Summary												
HCM 6th Ctrl Delay			11.9									
HCM 6th LOS			B									

Movement	EBL2	EBT	EBR	WBL	WBT	WBR	NBR	SBR	SBR2
Lane Configurations									
Traffic Volume (vph)	108	1456	67	57	870	52	68	252	198
Future Volume (vph)	108	1456	67	57	870	52	68	252	198
Ideal Flow (vphpl)	1350	1350	1350	1350	1350	1350	1350	1350	1350
Lane Width	9	10	10	9	10	10	12	10	10
Total Lost time (s)	4.6	5.3		4.0	5.3		4.6	4.6	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.88	1.00
Frpb, ped/bikes	1.00	0.99		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	0.99		1.00	0.99		0.86	0.85	0.85
Flt Protected	0.95	1.00		0.95	1.00		1.00	1.00	1.00
Satd. Flow (prot)	1018	2978		1018	2988		1030	1663	945
Flt Permitted	0.95	1.00		0.95	1.00		1.00	1.00	1.00
Satd. Flow (perm)	1018	2978		1018	2988		1030	1663	945
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	120	1618	74	63	967	58	76	280	220
RTOR Reduction (vph)	0	5	0	0	0	0	0	0	0
Lane Group Flow (vph)	120	1687	0	63	1025	0	76	280	220
Confl. Peds. (#/hr)			115			83			
Confl. Bikes (#/hr)			6			6	6	6	
Turn Type	Prot	NA		Prot	NA		Prot	Prot	Free
Protected Phases	5	2		1	6		8	4	
Permitted Phases									Free
Actuated Green, G (s)	15.4	65.9		1.0	50.9		19.2	19.2	100.0
Effective Green, g (s)	15.4	65.9		1.0	50.9		19.2	19.2	100.0
Actuated g/C Ratio	0.15	0.66		0.01	0.51		0.19	0.19	1.00
Clearance Time (s)	4.6	5.3		4.0	5.3		4.6	4.6	
Vehicle Extension (s)	1.5	3.0		1.5	3.0		2.5	2.5	
Lane Grp Cap (vph)	156	1962		10	1520		197	319	945
v/s Ratio Prot	0.12	c0.57		c0.06	0.34		0.07	c0.17	
v/s Ratio Perm									0.23
v/c Ratio	0.77	0.86		6.30	0.67		0.39	0.88	0.23
Uniform Delay, d1	40.6	13.4		49.5	18.4		35.3	39.3	0.0
Progression Factor	0.59	0.59		0.73	1.06		1.00	1.00	1.00
Incremental Delay, d2	1.9	0.5		2538.2	1.8		0.9	22.6	0.6
Delay (s)	26.0	8.4		2574.2	21.2		36.2	61.8	0.6
Level of Service	C	A		F	C		D	E	A
Approach Delay (s)		9.5			169.1				
Approach LOS		A			F				

Intersection Summary			
HCM 2000 Control Delay	63.7	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	14.5
Intersection Capacity Utilization	63.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↱		↰	↑↑↑		↰		↱	↰↰	↑	↱
Traffic Volume (veh/h)	0	1449	77	102	773	0	126	0	56	408	231	80
Future Volume (veh/h)	0	1449	77	102	773	0	126	0	56	408	231	80
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.88	0.99		1.00	1.00		1.00	1.00		0.93
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	0	1616	1616	1616	1616	0	1683	0	1683	1683	1683	1683
Adj Flow Rate, veh/h	0	1610	85	113	859	0	140	0	62	453	257	19
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	2	2	2	2	0	2	0	2	2	2	2
Cap, veh/h	0	2899	153	241	3005	0	0	0	0	671	363	287
Arrive On Green	0.00	1.00	1.00	0.91	0.91	0.00	0.00	0.00	0.00	0.22	0.22	0.22
Sat Flow, veh/h	0	4402	225	248	4557	0		0		3110	1683	1329
Grp Volume(v), veh/h	0	1112	583	113	859	0		0.0		453	257	19
Grp Sat Flow(s),veh/h/ln	0	1471	1540	248	1471	0				1555	1683	1329
Q Serve(g_s), s	0.0	0.0	0.0	10.9	2.5	0.0				13.4	14.1	1.1
Cycle Q Clear(g_c), s	0.0	0.0	0.0	10.9	2.5	0.0				13.4	14.1	1.1
Prop In Lane	0.00		0.15	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2003	1049	241	3005	0				671	363	287
V/C Ratio(X)	0.00	0.56	0.56	0.47	0.29	0.00				0.67	0.71	0.07
Avail Cap(c_a), veh/h	0	2003	1049	241	3005	0				809	438	345
HCM Platoon Ratio	1.00	2.00	2.00	1.33	1.33	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.43	0.43	1.00	1.00	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	2.0	1.6	0.0				36.0	36.3	31.2
Incr Delay (d2), s/veh	0.0	0.5	0.9	6.4	0.2	0.0				1.7	4.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.1	0.3	0.7	0.6	0.0				5.2	6.2	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.5	0.9	8.4	1.9	0.0				37.7	40.4	31.3
LnGrp LOS	A	A	A	A	A	A				D	D	C
Approach Vol, veh/h		1695			972						729	
Approach Delay, s/veh		0.6			2.6						38.5	
Approach LOS		A			A						D	
Timer - Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		74.4				74.4		25.6				
Change Period (Y+Rc), s		6.3				6.3		4.0				
Max Green Setting (Gmax), s		43.7				43.7		26.0				
Max Q Clear Time (g_c+I1), s		2.0				12.9		16.1				
Green Ext Time (p_c), s		30.7				17.5		2.5				

Intersection Summary			
HCM 6th Ctrl Delay			9.3
HCM 6th LOS			A

Notes

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

Intersection	
Int Delay, s/veh	17.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	1813	97	0	872	1	0	0	137	0	0	0
Future Vol, veh/h	2	1813	97	0	872	1	0	0	137	0	0	0
Conflicting Peds, #/hr	107	0	128	0	0	107	0	0	128	107	0	107
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	2014	108	0	969	1	0	0	152	0	0	0

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	1077	0	0	-	-	0	-	-	1317
Stage 1	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-
Critical Hdwy	5.34	-	-	-	-	-	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.12	-	-	-	-	-	-	-	3.92
Pot Cap-1 Maneuver	359	-	-	0	-	-	0	0	~ 127
Stage 1	-	-	-	0	-	-	0	0	-
Stage 2	-	-	-	0	-	-	0	0	-
Platoon blocked, %		-	-		-	-			
Mov Cap-1 Maneuver	359	-	-	-	-	-	-	0	~ 97
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	0	-
Stage 1	-	-	-	-	-	-	-	0	-
Stage 2	-	-	-	-	-	-	-	0	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	$ 376.6
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBT	WBR
Capacity (veh/h)	97	359	-	-	-	-
HCM Lane V/C Ratio	1.569	0.006	-	-	-	-
HCM Control Delay (s)	$ 376.6	15.1	0	-	-	-
HCM Lane LOS	F	C	A	-	-	-
HCM 95th %tile Q(veh)	11.8	0	-	-	-	-

Notes

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

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBR
Lane Configurations									
Traffic Volume (vph)	183	341	1275	149	154	871	141	49	129
Future Volume (vph)	183	341	1275	149	154	871	141	49	129
Ideal Flow (vphpl)	1350	1350	1350	1350	1350	1350	1350	1350	1350
Lane Width	12	9	10	9	9	9	9	9	15
Total Lost time (s)		4.6	5.3		4.6	5.3			4.6
Lane Util. Factor		1.00	0.91		1.00	0.91			1.00
Frpb, ped/bikes		1.00	0.97		1.00	0.95			1.00
Flpb, ped/bikes		1.00	1.00		1.00	1.00			1.00
Frt		1.00	0.98		1.00	0.97			0.86
Flt Protected		0.95	1.00		0.95	1.00			1.00
Satd. Flow (prot)		1018	2907		1018	2695			1133
Flt Permitted		0.95	1.00		0.95	1.00			1.00
Satd. Flow (perm)		1018	2907		1018	2695			1133
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	203	379	1417	166	171	968	157	54	143
RTOR Reduction (vph)	0	0	12	0	0	5	0	0	57
Lane Group Flow (vph)	0	582	1571	0	171	1174	0	0	86
Confl. Peds. (#/hr)				124			127	127	
Confl. Bikes (#/hr)				8			2	2	
Turn Type	Prot	Prot	NA		Prot	NA			Perm
Protected Phases	5	5	2		1	6			
Permitted Phases									1
Actuated Green, G (s)		42.4	66.1		24.0	47.7			24.0
Effective Green, g (s)		42.4	66.1		24.0	47.7			24.0
Actuated g/C Ratio		0.42	0.66		0.24	0.48			0.24
Clearance Time (s)		4.6	5.3		4.6	5.3			4.6
Vehicle Extension (s)		2.5	5.0		2.5	5.0			2.5
Lane Grp Cap (vph)		431	1921		244	1285			271
v/s Ratio Prot		c0.57	0.54		0.17	c0.44			
v/s Ratio Perm									0.08
v/c Ratio		1.35	0.82		0.70	0.91			0.32
Uniform Delay, d1		28.8	12.5		34.7	24.2			31.3
Progression Factor		1.17	1.06		1.22	0.55			1.00
Incremental Delay, d2		159.1	0.4		4.5	6.8			0.5
Delay (s)		192.7	13.6		46.9	20.2			31.8
Level of Service		F	B		D	C			C
Approach Delay (s)			61.8			23.6			
Approach LOS			E			C			

Intersection Summary			
HCM 2000 Control Delay	46.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.12		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	9.9
Intersection Capacity Utilization	87.8%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	124	1260	21	0	988	108	99	68	38	115	58	125
Future Volume (veh/h)	124	1260	21	0	988	108	99	68	38	115	58	125
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		0.93	1.00		0.88	1.00		0.98	1.00		0.89
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	1616	1616	1683	0	1683	1683	1683	1683	1683	1616	1751	1683
Adj Flow Rate, veh/h	138	1400	21	0	1098	102	110	76	42	128	64	139
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	0	2	2	2	2	2	2	2	2
Cap, veh/h	283	2388	36	0	2254	209	157	99	55	355	404	294
Arrive On Green	1.00	1.00	1.00	0.00	1.00	1.00	0.10	0.10	0.10	0.23	0.23	0.23
Sat Flow, veh/h	395	4472	67	0	4373	391	1603	1011	559	1539	1751	1275
Grp Volume(v), veh/h	138	921	500	0	796	404	110	0	118	128	64	139
Grp Sat Flow(s),veh/h/ln	395	1471	1598	0	1532	1549	1603	0	1570	1539	1751	1275
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	6.6	0.0	7.3	7.0	2.9	9.4
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	6.6	0.0	7.3	7.0	2.9	9.4
Prop In Lane	1.00		0.04	0.00		0.25	1.00		0.36	1.00		1.00
Lane Grp Cap(c), veh/h	283	1570	853	0	1636	827	157	0	154	355	404	294
V/C Ratio(X)	0.49	0.59	0.59	0.00	0.49	0.49	0.70	0.00	0.77	0.36	0.16	0.47
Avail Cap(c_a), veh/h	283	1570	853	0	1636	827	253	0	248	474	539	393
HCM Platoon Ratio	2.00	2.00	2.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.52	0.52	0.52	0.00	0.20	0.20	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	43.7	0.0	44.0	32.3	30.7	33.2
Incr Delay (d2), s/veh	3.1	0.8	1.5	0.0	0.2	0.4	5.5	0.0	7.7	0.6	0.2	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.2	0.4	0.0	0.0	0.1	2.9	0.0	3.2	2.7	1.3	3.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	3.1	0.8	1.5	0.0	0.2	0.4	49.2	0.0	51.7	32.9	30.9	34.4
LnGrp LOS	A	A	A	A	A	A	D	A	D	C	C	C
Approach Vol, veh/h		1559			1200			228			331	
Approach Delay, s/veh		1.3			0.3			50.5			33.1	
Approach LOS		A			A			D			C	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	58.7	14.0	58.7	27.3
Change Period (Y+Rc), s	5.3	* 4.2	5.3	4.2
Max Green Setting (Gmax), s	39.7	* 16	39.7	30.8
Max Q Clear Time (g_c+I1), s	2.0	9.3	2.0	11.4
Green Ext Time (p_c), s	27.5	0.5	19.8	1.2

Intersection Summary	
HCM 6th Ctrl Delay	7.5
HCM 6th LOS	A

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	19	1111	64	57	1004	68	110	441	100	5	620	95
Future Volume (veh/h)	19	1111	64	57	1004	68	110	441	100	5	620	95
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.93	0.99		0.93	1.00		0.94	0.97		0.93
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	1616	1616	1616	1616	1683	1683	1616	1616	1616	1683	1616	1616
Adj Flow Rate, veh/h	21	1234	63	63	1116	63	122	490	44	6	689	39
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	188	1732	88	228	1895	107	120	1253	526	39	833	356
Arrive On Green	0.03	0.81	0.81	0.04	0.43	0.43	0.08	0.41	0.41	0.28	0.28	0.28
Sat Flow, veh/h	1539	4280	218	1539	4430	250	1539	3070	1290	7	2997	1280
Grp Volume(v), veh/h	21	848	449	63	772	407	122	490	44	372	323	39
Grp Sat Flow(s),veh/h/ln	1539	1471	1557	1539	1532	1616	1539	1535	1290	1607	1397	1280
Q Serve(g_s), s	0.8	13.0	13.0	2.4	19.3	19.3	7.8	11.2	2.1	1.9	21.7	2.3
Cycle Q Clear(g_c), s	0.8	13.0	13.0	2.4	19.3	19.3	7.8	11.2	2.1	21.6	21.7	2.3
Prop In Lane	1.00		0.14	1.00		0.15	1.00		1.00	0.02		1.00
Lane Grp Cap(c), veh/h	188	1190	630	228	1310	691	120	1253	526	483	388	356
V/C Ratio(X)	0.11	0.71	0.71	0.28	0.59	0.59	1.02	0.39	0.08	0.77	0.83	0.11
Avail Cap(c_a), veh/h	282	1190	630	286	1310	691	120	1314	552	515	416	381
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)	0.09	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	18.4	6.9	6.9	17.3	21.9	21.9	46.1	20.9	18.1	33.9	33.9	26.9
Incr Delay (d2), s/veh	0.0	0.3	0.6	0.2	1.9	3.7	86.6	0.3	0.1	7.2	13.4	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	2.1	2.3	0.8	7.1	7.8	5.9	4.1	0.6	9.4	8.8	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.5	7.2	7.5	17.6	23.8	25.6	132.7	21.1	18.2	41.0	47.3	27.1
LnGrp LOS	B	A	A	B	C	C	F	C	B	D	D	C
Approach Vol, veh/h		1318			1242			656			734	
Approach Delay, s/veh		7.5			24.1			41.7			43.1	
Approach LOS		A			C			D			D	

Timer - Assigned Phs	1	2		4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.2	45.8		46.0	5.9	48.1	13.0	33.0
Change Period (Y+Rc), s	4.6	5.3		5.2	4.6	5.3	5.2	5.2
Max Green Setting (Gmax), s	7.4	34.7		42.8	7.4	34.7	7.8	29.8
Max Q Clear Time (g_c+I1), s	4.4	15.0		13.2	2.8	21.3	9.8	23.7
Green Ext Time (p_c), s	0.0	13.8		5.5	0.0	9.5	0.0	3.0

Intersection Summary	
HCM 6th Ctrl Delay	25.0
HCM 6th LOS	C

Notes

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

Intersection	
Intersection Delay, s/veh	12.8
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			✣			✣	
Traffic Vol, veh/h	20	321	9	9	174	23	5	35	13	34	142	53
Future Vol, veh/h	20	321	9	9	174	23	5	35	13	34	142	53
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	22	357	10	10	193	26	6	39	14	38	158	59
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	14.7	11.2	9.6	12.2
HCM LOS	B	B	A	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	9%	6%	4%	15%
Vol Thru, %	66%	92%	84%	62%
Vol Right, %	25%	3%	11%	23%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	53	350	206	229
LT Vol	5	20	9	34
Through Vol	35	321	174	142
RT Vol	13	9	23	53
Lane Flow Rate	59	389	229	254
Geometry Grp	1	1	1	1
Degree of Util (X)	0.097	0.561	0.342	0.393
Departure Headway (Hd)	5.934	5.195	5.373	5.554
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	601	692	668	646
Service Time	3.996	3.235	3.417	3.598
HCM Lane V/C Ratio	0.098	0.562	0.343	0.393
HCM Control Delay	9.6	14.7	11.2	12.2
HCM Lane LOS	A	B	B	B
HCM 95th-tile Q	0.3	3.5	1.5	1.9

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	14	344	6	7	184	44	6	88	8	47	52	19
Future Vol, veh/h	14	344	6	7	184	44	6	88	8	47	52	19
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	16	382	7	8	204	49	7	98	9	52	58	21
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	14.5	11.2	10.2	10.4
HCM LOS	B	B	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	6%	4%	3%	40%
Vol Thru, %	86%	95%	78%	44%
Vol Right, %	8%	2%	19%	16%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	102	364	235	118
LT Vol	6	14	7	47
Through Vol	88	344	184	52
RT Vol	8	6	44	19
Lane Flow Rate	113	404	261	131
Geometry Grp	1	1	1	1
Degree of Util (X)	0.184	0.566	0.372	0.212
Departure Headway (Hd)	5.852	5.039	5.132	5.831
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	612	716	700	615
Service Time	3.898	3.069	3.166	3.876
HCM Lane V/C Ratio	0.185	0.564	0.373	0.213
HCM Control Delay	10.2	14.5	11.2	10.4
HCM Lane LOS	B	B	B	B
HCM 95th-tile Q	0.7	3.6	1.7	0.8

Intersection	
Intersection Delay, s/veh	13.3
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			✣			✣	
Traffic Vol, veh/h	19	344	30	23	184	27	16	36	26	33	88	35
Future Vol, veh/h	19	344	30	23	184	27	16	36	26	33	88	35
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	21	382	33	26	204	30	18	40	29	37	98	39
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	15.9	11.6	10	11.1
HCM LOS	C	B	A	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	21%	5%	10%	21%
Vol Thru, %	46%	88%	79%	56%
Vol Right, %	33%	8%	12%	22%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	78	393	234	156
LT Vol	16	19	23	33
Through Vol	36	344	184	88
RT Vol	26	30	27	35
Lane Flow Rate	87	437	260	173
Geometry Grp	1	1	1	1
Degree of Util (X)	0.143	0.614	0.382	0.279
Departure Headway (Hd)	5.922	5.063	5.288	5.795
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	603	712	679	619
Service Time	3.979	3.1	3.332	3.844
HCM Lane V/C Ratio	0.144	0.614	0.383	0.279
HCM Control Delay	10	15.9	11.6	11.1
HCM Lane LOS	A	C	B	B
HCM 95th-tile Q	0.5	4.2	1.8	1.1

LOS Worksheets: Future Plus Scenario 3 Specific Plan Buildout Conditions with Via Closure

FEHR PEERS

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1135	67	17	687	0	256	0	114	72	0	56
Future Volume (veh/h)	0	1135	67	17	687	0	256	0	114	72	0	56
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	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	0	1196	1196	1196	1196	0	1148	0	1196	1244	0	1196
Adj Flow Rate, veh/h	0	1261	67	19	763	0	284	0	59	80	0	19
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	2	2	2	2	0	2	0	2	2	0	2
Cap, veh/h	0	1966	104	63	1847	0	306	0	0	331	0	0
Arrive On Green	0.00	0.62	0.62	1.00	1.00	0.00	0.28	0.00	0.00	0.28	0.00	0.00
Sat Flow, veh/h	0	3272	168	40	3071	0	1094	284		1185	80	
Grp Volume(v), veh/h	0	867	461	273	509	0	284	55.5		80	28.2	
Grp Sat Flow(s),veh/h/ln	0	1088	1155	1032	990	0	1094	E		1185	C	
Q Serve(g_s), s	0.0	25.1	25.1	1.0	0.0	0.0	25.3			5.2		
Cycle Q Clear(g_c), s	0.0	25.1	25.1	26.1	0.0	0.0	25.3			5.2		
Prop In Lane	0.00		0.15	0.07		0.00	1.00			1.00		
Lane Grp Cap(c), veh/h	0	1352	718	680	1231	0	306			331		
V/C Ratio(X)	0.00	0.64	0.64	0.40	0.41	0.00	0.93			0.24		
Avail Cap(c_a), veh/h	0	1352	718	680	1231	0	442			479		
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00	1.00			1.00		
Upstream Filter(I)	0.00	1.00	1.00	0.83	0.83	0.00	1.00			1.00		
Uniform Delay (d), s/veh	0.0	11.9	11.9	0.0	0.0	0.0	35.0			27.8		
Incr Delay (d2), s/veh	0.0	2.3	4.4	1.5	0.9	0.0	20.5			0.4		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0		
%ile BackOfQ(50%),veh/ln	0.0	5.9	6.7	0.3	0.1	0.0	8.4			1.5		
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	14.3	16.3	1.5	0.9	0.0	55.5			28.2		
LnGrp LOS	A	B	B	A	A	A	E			C		
Approach Vol, veh/h		1328			782							
Approach Delay, s/veh		15.0			1.1							
Approach LOS		B			A							
Timer - Assigned Phs		2	3			6	7					
Phs Duration (G+Y+Rc), s		67.4	32.6			67.4	32.6					
Change Period (Y+Rc), s		5.3	4.6			5.3	4.6					
Max Green Setting (Gmax), s		49.7	40.4			49.7	40.4					
Max Q Clear Time (g_c+I1), s		27.1	27.3			28.1	7.2					
Green Ext Time (p_c), s		15.6	0.7			9.4	0.2					
Intersection Summary												
HCM 6th Ctrl Delay			15.7									
HCM 6th LOS			B									

Movement	EBL2	EBT	EBR	WBL	WBT	WBR	NBR	SBR	SBR2
Lane Configurations									
Traffic Volume (vph)	196	1058	53	22	661	123	96	103	203
Future Volume (vph)	196	1058	53	22	661	123	96	103	203
Ideal Flow (vphpl)	1350	1350	1350	1350	1350	1350	1350	1350	1350
Lane Width	9	10	10	9	10	10	12	10	10
Total Lost time (s)	4.6	5.3		4.0	5.3		4.6	4.6	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.88	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.98		1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.99		1.00	0.98		0.86	0.85	0.85
Flt Protected	0.95	1.00		0.95	1.00		1.00	1.00	1.00
Satd. Flow (prot)	1018	3003		1018	2918		1030	1663	945
Flt Permitted	0.95	1.00		0.95	1.00		1.00	1.00	1.00
Satd. Flow (perm)	1018	3003		1018	2918		1030	1663	945
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	218	1176	59	24	734	137	107	114	226
RTOR Reduction (vph)	0	5	0	0	0	0	0	0	0
Lane Group Flow (vph)	218	1230	0	24	871	0	107	114	226
Confl. Peds. (#/hr)			24			64			
Confl. Bikes (#/hr)			3			3	3	3	
Turn Type	Prot	NA		Prot	NA		Prot	Prot	Free
Protected Phases	5	2		1	6		8	4	
Permitted Phases									Free
Actuated Green, G (s)	15.4	69.1		1.0	54.1		16.0	16.0	100.0
Effective Green, g (s)	15.4	69.1		1.0	54.1		16.0	16.0	100.0
Actuated g/C Ratio	0.15	0.69		0.01	0.54		0.16	0.16	1.00
Clearance Time (s)	4.6	5.3		4.0	5.3		4.6	4.6	
Vehicle Extension (s)	1.5	3.0		1.5	3.0		2.5	2.5	
Lane Grp Cap (vph)	156	2075		10	1578		164	266	945
v/s Ratio Prot	c0.21	c0.41		0.02	0.30		c0.10	0.07	
v/s Ratio Perm									0.24
v/c Ratio	1.40	0.59		2.40	0.55		0.65	0.43	0.24
Uniform Delay, d1	42.3	8.1		49.5	15.0		39.4	37.9	0.0
Progression Factor	0.73	0.46		0.74	1.15		1.00	1.00	1.00
Incremental Delay, d2	202.8	0.8		836.9	1.2		8.0	0.8	0.6
Delay (s)	233.7	4.5		873.7	18.5		47.4	38.7	0.6
Level of Service	F	A		F	B		D	D	A
Approach Delay (s)		38.9			41.4				
Approach LOS		D			D				

Intersection Summary			
HCM 2000 Control Delay	36.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	14.5
Intersection Capacity Utilization	59.7%	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)	0	1081	74	74	594	0	130	0	106	259	87	43
Future Volume (veh/h)	0	1081	74	74	594	0	130	0	106	259	87	43
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		1.00	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	0	1148	1148	1148	1148	0	1196	0	1196	1196	1196	1196
Adj Flow Rate, veh/h	0	1201	80	82	660	0	144	0	118	288	97	7
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	2	2	2	2	0	2	0	2	2	2	2
Cap, veh/h	0	2139	142	261	2240	0	0	0	0	403	218	176
Arrive On Green	0.00	1.00	1.00	0.71	0.71	0.00	0.00	0.00	0.00	0.18	0.18	0.18
Sat Flow, veh/h	0	3096	199	264	3238	0		0		2210	1196	965
Grp Volume(v), veh/h	0	838	443	82	660	0		0.0		288	97	7
Grp Sat Flow(s),veh/h/ln	0	1045	1102	264	1045	0				1105	1196	965
Q Serve(g_s), s	0.0	0.0	0.0	12.8	7.6	0.0				12.3	7.2	0.6
Cycle Q Clear(g_c), s	0.0	0.0	0.0	12.8	7.6	0.0				12.3	7.2	0.6
Prop In Lane	0.00		0.18	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1494	788	261	2240	0				403	218	176
V/C Ratio(X)	0.00	0.56	0.56	0.31	0.29	0.00				0.71	0.44	0.04
Avail Cap(c_a), veh/h	0	1494	788	261	2240	0				575	311	251
HCM Platoon Ratio	1.00	2.00	2.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.77	0.77	1.00	1.00	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	5.9	5.2	0.0				38.4	36.4	33.7
Incr Delay (d2), s/veh	0.0	1.2	2.2	3.1	0.3	0.0				2.4	1.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.2	0.5	0.8	1.5	0.0				3.5	2.2	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	1.2	2.2	9.0	5.5	0.0				40.8	37.8	33.8
LnGrp LOS	A	A	A	A	A	A				D	D	C
Approach Vol, veh/h		1281			742						392	
Approach Delay, s/veh		1.5			5.9						40.0	
Approach LOS		A			A						D	

Timer - Assigned Phs	2	6	8
Phs Duration (G+Y+Rc), s	77.8	77.8	22.2
Change Period (Y+Rc), s	6.3	6.3	4.0
Max Green Setting (Gmax), s	43.7	43.7	26.0
Max Q Clear Time (g_c+I1), s	2.0	14.8	14.3
Green Ext Time (p_c), s	22.5	12.5	1.3

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

Notes

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

Intersection	
Int Delay, s/veh	2.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	3	1426	30	0	654	3	0	0	129	0	0	0
Future Vol, veh/h	3	1426	30	0	654	3	0	0	129	0	0	0
Conflicting Peds, #/hr	55	0	36	0	0	53	0	0	34	53	0	55
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	1584	33	0	727	3	0	0	143	0	0	0

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	785	0	0	-	-	0	-	-	879
Stage 1	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-
Critical Hdwy	5.34	-	-	-	-	-	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.12	-	-	-	-	-	-	-	3.92
Pot Cap-1 Maneuver	496	-	-	0	-	-	0	0	250
Stage 1	-	-	-	0	-	-	0	0	-
Stage 2	-	-	-	0	-	-	0	0	-
Platoon blocked, %		-	-		-	-			
Mov Cap-1 Maneuver	496	-	-	-	-	-	-	0	233
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	0	-
Stage 1	-	-	-	-	-	-	-	0	-
Stage 2	-	-	-	-	-	-	-	0	-

Approach	EB	WB	NB
HCM Control Delay, s	0.3	0	42.4
HCM LOS			E

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBT	WBR
Capacity (veh/h)	233	496	-	-	-	-
HCM Lane V/C Ratio	0.615	0.007	-	-	-	-
HCM Control Delay (s)	42.4	12.3	0.3	-	-	-
HCM Lane LOS	E	B	A	-	-	-
HCM 95th %tile Q(veh)	3.6	0	-	-	-	-

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBR
Lane Configurations									
Traffic Volume (vph)	397	85	897	94	125	771	275	15	90
Future Volume (vph)	397	85	897	94	125	771	275	15	90
Ideal Flow (vphpl)	1350	1350	1350	1350	1350	1350	1350	1350	1350
Lane Width	12	9	10	9	9	9	9	9	15
Total Lost time (s)		4.6	5.3		4.6	5.3			4.6
Lane Util. Factor		1.00	0.91		1.00	0.91			1.00
Frpb, ped/bikes		1.00	0.99		1.00	0.96			1.00
Flpb, ped/bikes		1.00	1.00		1.00	1.00			1.00
Frt		1.00	0.99		1.00	0.96			0.86
Flt Protected		0.95	1.00		0.95	1.00			1.00
Satd. Flow (prot)		1018	2969		1018	2699			1133
Flt Permitted		0.95	1.00		0.95	1.00			1.00
Satd. Flow (perm)		1018	2969		1018	2699			1133
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	441	94	997	104	139	857	306	17	100
RTOR Reduction (vph)	0	0	10	0	0	2	0	0	77
Lane Group Flow (vph)	0	535	1091	0	139	1178	0	0	23
Confl. Peds. (#/hr)				32			54	54	
Confl. Bikes (#/hr)				2			8	8	
Turn Type	Prot	Prot	NA		Prot	NA			Perm
Protected Phases	5	5	2		1	6			
Permitted Phases									1
Actuated Green, G (s)		42.4	67.2		22.9	47.7			22.9
Effective Green, g (s)		42.4	67.2		22.9	47.7			22.9
Actuated g/C Ratio		0.42	0.67		0.23	0.48			0.23
Clearance Time (s)		4.6	5.3		4.6	5.3			4.6
Vehicle Extension (s)		2.5	5.0		2.5	5.0			2.5
Lane Grp Cap (vph)		431	1995		233	1287			259
v/s Ratio Prot		c0.53	0.37		0.14	c0.44			
v/s Ratio Perm									0.02
v/c Ratio		1.24	0.55		0.60	0.92			0.09
Uniform Delay, d1		28.8	8.5		34.4	24.3			30.3
Progression Factor		1.18	1.14		1.22	0.60			1.00
Incremental Delay, d2		121.2	0.7		2.4	8.8			0.1
Delay (s)		155.2	10.4		44.5	23.3			30.4
Level of Service		F	B		D	C			C
Approach Delay (s)			57.8			25.5			
Approach LOS			E			C			

Intersection Summary			
HCM 2000 Control Delay	42.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.07		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	9.9
Intersection Capacity Utilization	84.6%	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)	90	886	34	0	913	93	84	84	30	53	74	104
Future Volume (veh/h)	90	886	34	0	913	93	84	84	30	53	74	104
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.95	1.00		0.92	1.00		0.98	1.00		0.91
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	1148	1148	1196	0	1196	1196	1196	1196	1196	1148	1244	1196
Adj Flow Rate, veh/h	100	984	31	0	1014	92	93	93	33	59	82	116
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	0	2	2	2	2	2	2	2	2
Cap, veh/h	229	1583	50	0	1535	139	149	110	39	245	279	207
Arrive On Green	1.00	1.00	1.00	0.00	1.00	1.00	0.13	0.13	0.13	0.22	0.22	0.22
Sat Flow, veh/h	309	3117	98	0	3130	273	1139	839	298	1094	1244	922
Grp Volume(v), veh/h	100	659	356	0	730	376	93	0	126	59	82	116
Grp Sat Flow(s),veh/h/ln	309	1045	1125	0	1088	1119	1139	0	1136	1094	1244	922
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	7.7	0.0	10.8	4.4	5.5	11.2
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	7.7	0.0	10.8	4.4	5.5	11.2
Prop In Lane	1.00		0.09	0.00		0.24	1.00		0.26	1.00		1.00
Lane Grp Cap(c), veh/h	229	1061	571	0	1105	568	149	0	149	245	279	207
V/C Ratio(X)	0.44	0.62	0.62	0.00	0.66	0.66	0.62	0.00	0.85	0.24	0.29	0.56
Avail Cap(c_a), veh/h	229	1061	571	0	1105	568	180	0	180	337	383	284
HCM Platoon Ratio	2.00	2.00	2.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.84	0.84	0.84	0.00	0.37	0.37	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	41.1	0.0	42.5	31.8	32.2	34.4
Incr Delay (d2), s/veh	5.0	2.3	4.3	0.0	1.2	2.3	4.7	0.0	26.1	0.5	0.6	2.4
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	0.3	0.3	0.7	0.0	0.2	0.4	2.4	0.0	4.1	1.2	1.7	2.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	5.0	2.3	4.3	0.0	1.2	2.3	45.9	0.0	68.6	32.3	32.8	36.8
LnGrp LOS	A	A	A	A	A	A	D	A	E	C	C	D
Approach Vol, veh/h		1115			1106			219			257	
Approach Delay, s/veh		3.2			1.5			59.0			34.5	
Approach LOS		A			A			E			C	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		56.1		17.3		56.1		26.7				
Change Period (Y+Rc), s		5.3		* 4.2		5.3		4.2				
Max Green Setting (Gmax), s		39.7		* 16		39.7		30.8				
Max Q Clear Time (g_c+I1), s		2.0		12.8		2.0		13.2				
Green Ext Time (p_c), s		20.3		0.3		17.9		1.0				
Intersection Summary												
HCM 6th Ctrl Delay			10.0									
HCM 6th LOS			B									

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	32	1001	67	49	931	56	89	504	70	5	383	64
Future Volume (veh/h)	32	1001	67	49	931	56	89	504	70	5	383	64
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.95	1.00		0.97	0.99		0.92
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	1148	1148	1148	1148	1196	1196	1148	1148	1148	1196	1148	1148
Adj Flow Rate, veh/h	36	1112	63	54	1034	53	99	560	31	6	426	27
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	148	1266	72	169	1367	70	85	858	370	39	558	237
Arrive On Green	0.05	0.84	0.84	0.04	0.43	0.43	0.08	0.39	0.39	0.26	0.26	0.26
Sat Flow, veh/h	1094	3026	171	1094	3170	162	1094	2182	942	8	2122	899
Grp Volume(v), veh/h	36	768	407	54	709	378	99	560	31	231	201	27
Grp Sat Flow(s),veh/h/ln	1094	1045	1108	1094	1088	1156	1094	1091	942	1137	993	899
Q Serve(g_s), s	1.9	22.6	22.7	2.8	27.5	27.6	7.8	21.0	2.1	0.0	18.7	2.3
Cycle Q Clear(g_c), s	1.9	22.6	22.7	2.8	27.5	27.6	7.8	21.0	2.1	18.6	18.7	2.3
Prop In Lane	1.00		0.15	1.00		0.14	1.00		1.00	0.03		1.00
Lane Grp Cap(c), veh/h	148	874	464	169	939	498	85	858	370	336	261	237
V/C Ratio(X)	0.24	0.88	0.88	0.32	0.76	0.76	1.16	0.65	0.08	0.69	0.77	0.11
Avail Cap(c_a), veh/h	202	874	464	209	939	498	85	934	403	375	296	268
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)	0.62	0.62	0.62	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.4	6.6	6.6	18.7	24.0	24.0	46.1	24.8	19.0	34.0	34.0	28.0
Incr Delay (d2), s/veh	0.2	8.0	13.9	0.4	5.6	10.3	147.2	1.7	0.1	5.3	11.4	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	2.6	3.5	0.7	7.5	8.7	5.6	5.6	0.5	5.7	5.3	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.6	14.6	20.5	19.1	29.7	34.3	193.3	26.5	19.2	39.3	45.5	28.3
LnGrp LOS	B	B	C	B	C	C	F	C	B	D	D	C
Approach Vol, veh/h		1211			1141			690			459	
Approach Delay, s/veh		16.7			30.7			50.1			41.4	
Approach LOS		B			C			D			D	

Timer - Assigned Phs	1	2		4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.4	47.1		44.5	7.1	48.4	13.0	31.5
Change Period (Y+Rc), s	4.6	5.3		5.2	4.6	5.3	5.2	5.2
Max Green Setting (Gmax), s	7.4	34.7		42.8	7.4	34.7	7.8	29.8
Max Q Clear Time (g_c+I1), s	4.8	24.7		23.0	3.9	29.6	9.8	20.7
Green Ext Time (p_c), s	0.0	7.4		5.4	0.0	3.9	0.0	2.5

Intersection Summary		
HCM 6th Ctrl Delay		31.1
HCM 6th LOS		C

Notes

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

Intersection	
Intersection Delay, s/veh	11.4
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			✣			✣	
Traffic Vol, veh/h	17	177	7	7	263	34	9	52	5	20	50	35
Future Vol, veh/h	17	177	7	7	263	34	9	52	5	20	50	35
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	21	221	9	9	329	43	11	65	6	25	63	44
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	10.8	12.6	9.6	9.9
HCM LOS	B	B	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	14%	8%	2%	19%
Vol Thru, %	79%	88%	87%	48%
Vol Right, %	8%	3%	11%	33%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	66	201	304	105
LT Vol	9	17	7	20
Through Vol	52	177	263	50
RT Vol	5	7	34	35
Lane Flow Rate	82	251	380	131
Geometry Grp	1	1	1	1
Degree of Util (X)	0.131	0.353	0.502	0.2
Departure Headway (Hd)	5.727	5.064	4.856	5.487
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	628	714	749	656
Service Time	3.745	3.064	2.856	3.504
HCM Lane V/C Ratio	0.131	0.352	0.507	0.2
HCM Control Delay	9.6	10.8	12.6	9.9
HCM Lane LOS	A	B	B	A
HCM 95th-tile Q	0.4	1.6	2.8	0.7

Intersection	
Intersection Delay, s/veh	11.4
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			✣			✣	
Traffic Vol, veh/h	9	188	5	9	289	13	6	96	13	12	19	4
Future Vol, veh/h	9	188	5	9	289	13	6	96	13	12	19	4
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	235	6	11	361	16	8	120	16	15	24	5
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	10.6	12.7	10.1	9.2
HCM LOS	B	B	B	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	5%	4%	3%	34%
Vol Thru, %	83%	93%	93%	54%
Vol Right, %	11%	2%	4%	11%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	115	202	311	35
LT Vol	6	9	9	12
Through Vol	96	188	289	19
RT Vol	13	5	13	4
Lane Flow Rate	144	252	389	44
Geometry Grp	1	1	1	1
Degree of Util (X)	0.22	0.343	0.51	0.07
Departure Headway (Hd)	5.522	4.893	4.727	5.784
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	654	727	754	623
Service Time	3.523	2.983	2.807	3.788
HCM Lane V/C Ratio	0.22	0.347	0.516	0.071
HCM Control Delay	10.1	10.6	12.7	9.2
HCM Lane LOS	B	B	B	A
HCM 95th-tile Q	0.8	1.5	2.9	0.2

Intersection	
Intersection Delay, s/veh	11.3
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	13	194	8	16	273	23	14	31	18	21	28	27
Future Vol, veh/h	13	194	8	16	273	23	14	31	18	21	28	27
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	16	243	10	20	341	29	18	39	23	26	35	34
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	10.7	12.6	9.4	9.5
HCM LOS	B	B	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	22%	6%	5%	28%
Vol Thru, %	49%	90%	88%	37%
Vol Right, %	29%	4%	7%	36%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	63	215	312	76
LT Vol	14	13	16	21
Through Vol	31	194	273	28
RT Vol	18	8	23	27
Lane Flow Rate	79	269	390	95
Geometry Grp	1	1	1	1
Degree of Util (X)	0.122	0.361	0.507	0.146
Departure Headway (Hd)	5.579	4.839	4.683	5.515
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	646	734	760	654
Service Time	3.583	2.927	2.762	3.518
HCM Lane V/C Ratio	0.122	0.366	0.513	0.145
HCM Control Delay	9.4	10.7	12.6	9.5
HCM Lane LOS	A	B	B	A
HCM 95th-tile Q	0.4	1.6	2.9	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1438	134	28	1089	0	310	0	69	138	0	69
Future Volume (veh/h)	0	1438	134	28	1089	0	310	0	69	138	0	69
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.92	1.00		1.00	1.00		1.00	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	0	1683	1683	1683	1683	0	1616	0	1683	1751	0	1683
Adj Flow Rate, veh/h	0	1598	140	31	1210	0	344	0	51	153	0	19
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	2	2	2	2	0	2	0	2	2	0	2
Cap, veh/h	0	2792	244	77	2667	0	380	0	0	411	0	0
Arrive On Green	0.00	0.65	0.65	1.00	1.00	0.00	0.25	0.00	0.00	0.25	0.00	0.00
Sat Flow, veh/h	0	4418	373	59	4214	0	1539	344		1667	153	
Grp Volume(v), veh/h	0	1147	591	406	835	0	344	47.4		153	31.8	
Grp Sat Flow(s),veh/h/ln	0	1532	1576	1347	1394	0	1539	D		1667	C	
Q Serve(g_s), s	0.0	20.7	20.8	0.0	0.0	0.0	21.7			7.6		
Cycle Q Clear(g_c), s	0.0	20.7	20.8	0.0	0.0	0.0	21.7			7.6		
Prop In Lane	0.00		0.24	0.08		0.00	1.00			1.00		
Lane Grp Cap(c), veh/h	0	2005	1031	920	1824	0	380			411		
V/C Ratio(X)	0.00	0.57	0.57	0.44	0.46	0.00	0.91			0.37		
Avail Cap(c_a), veh/h	0	2005	1031	920	1824	0	622			674		
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00	1.00			1.00		
Upstream Filter(I)	0.00	1.00	1.00	0.63	0.63	0.00	1.00			1.00		
Uniform Delay (d), s/veh	0.0	9.5	9.6	0.0	0.0	0.0	36.5			31.2		
Incr Delay (d2), s/veh	0.0	1.2	2.3	1.0	0.5	0.0	10.9			0.6		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0		
%ile BackOfQ(50%),veh/ln	0.0	6.5	7.0	0.2	0.1	0.0	9.2			3.1		
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	10.7	11.9	1.0	0.5	0.0	47.4			31.8		
LnGrp LOS	A	B	B	A	A	A	D			C		
Approach Vol, veh/h		1738			1241							
Approach Delay, s/veh		11.1			0.7							
Approach LOS		B			A							
Timer - Assigned Phs		2	3			6	7					
Phs Duration (G+Y+Rc), s		70.7	29.3			70.7	29.3					
Change Period (Y+Rc), s		5.3	4.6			5.3	4.6					
Max Green Setting (Gmax), s		49.7	40.4			49.7	40.4					
Max Q Clear Time (g_c+I1), s		22.8	23.7			2.0	9.6					
Green Ext Time (p_c), s		22.1	1.0			24.5	0.4					
Intersection Summary												
HCM 6th Ctrl Delay			11.9									
HCM 6th LOS			B									

Movement	EBL2	EBT	EBR	WBL	WBT	WBR	NBR	SBR	SBR2
Lane Configurations									
Traffic Volume (vph)	108	1456	67	57	870	52	68	252	198
Future Volume (vph)	108	1456	67	57	870	52	68	252	198
Ideal Flow (vphpl)	1350	1350	1350	1350	1350	1350	1350	1350	1350
Lane Width	9	10	10	9	10	10	12	10	10
Total Lost time (s)	4.6	5.3		4.0	5.3		4.6	4.6	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.88	1.00
Frpb, ped/bikes	1.00	0.99		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	0.99		1.00	0.99		0.86	0.85	0.85
Flt Protected	0.95	1.00		0.95	1.00		1.00	1.00	1.00
Satd. Flow (prot)	1018	2978		1018	2988		1030	1663	945
Flt Permitted	0.95	1.00		0.95	1.00		1.00	1.00	1.00
Satd. Flow (perm)	1018	2978		1018	2988		1030	1663	945
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	120	1618	74	63	967	58	76	280	220
RTOR Reduction (vph)	0	5	0	0	0	0	0	0	0
Lane Group Flow (vph)	120	1687	0	63	1025	0	76	280	220
Confl. Peds. (#/hr)			115			83			
Confl. Bikes (#/hr)			6			6	6	6	
Turn Type	Prot	NA		Prot	NA		Prot	Prot	Free
Protected Phases	5	2		1	6		8	4	
Permitted Phases									Free
Actuated Green, G (s)	15.4	65.9		1.0	50.9		19.2	19.2	100.0
Effective Green, g (s)	15.4	65.9		1.0	50.9		19.2	19.2	100.0
Actuated g/C Ratio	0.15	0.66		0.01	0.51		0.19	0.19	1.00
Clearance Time (s)	4.6	5.3		4.0	5.3		4.6	4.6	
Vehicle Extension (s)	1.5	3.0		1.5	3.0		2.5	2.5	
Lane Grp Cap (vph)	156	1962		10	1520		197	319	945
v/s Ratio Prot	0.12	c0.57		c0.06	0.34		0.07	c0.17	
v/s Ratio Perm									0.23
v/c Ratio	0.77	0.86		6.30	0.67		0.39	0.88	0.23
Uniform Delay, d1	40.6	13.4		49.5	18.4		35.3	39.3	0.0
Progression Factor	0.59	0.59		0.73	1.06		1.00	1.00	1.00
Incremental Delay, d2	1.9	0.5		2538.2	1.8		0.9	22.6	0.6
Delay (s)	26.0	8.4		2574.2	21.2		36.2	61.8	0.6
Level of Service	C	A		F	C		D	E	A
Approach Delay (s)		9.5			169.1				
Approach LOS		A			F				

Intersection Summary			
HCM 2000 Control Delay	63.7	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	14.5
Intersection Capacity Utilization	63.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1449	77	102	773	0	126	0	93	408	231	80
Future Volume (veh/h)	0	1449	77	102	773	0	126	0	93	408	231	80
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.88	0.99		1.00	1.00		1.00	1.00		0.93
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	0	1616	1616	1616	1616	0	1683	0	1683	1683	1683	1683
Adj Flow Rate, veh/h	0	1610	85	113	859	0	140	0	103	453	257	19
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	2	2	2	2	0	2	0	2	2	2	2
Cap, veh/h	0	2899	153	241	3005	0	0	0	0	671	363	287
Arrive On Green	0.00	1.00	1.00	0.91	0.91	0.00	0.00	0.00	0.00	0.22	0.22	0.22
Sat Flow, veh/h	0	4402	225	248	4557	0		0		3110	1683	1329
Grp Volume(v), veh/h	0	1112	583	113	859	0		0.0		453	257	19
Grp Sat Flow(s),veh/h/ln	0	1471	1540	248	1471	0				1555	1683	1329
Q Serve(g_s), s	0.0	0.0	0.0	10.9	2.5	0.0				13.4	14.1	1.1
Cycle Q Clear(g_c), s	0.0	0.0	0.0	10.9	2.5	0.0				13.4	14.1	1.1
Prop In Lane	0.00		0.15	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2003	1049	241	3005	0				671	363	287
V/C Ratio(X)	0.00	0.56	0.56	0.47	0.29	0.00				0.67	0.71	0.07
Avail Cap(c_a), veh/h	0	2003	1049	241	3005	0				809	438	345
HCM Platoon Ratio	1.00	2.00	2.00	1.33	1.33	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.43	0.43	1.00	1.00	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	2.0	1.6	0.0				36.0	36.3	31.2
Incr Delay (d2), s/veh	0.0	0.5	0.9	6.4	0.2	0.0				1.7	4.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.1	0.3	0.7	0.6	0.0				5.2	6.2	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.5	0.9	8.4	1.9	0.0				37.7	40.4	31.3
LnGrp LOS	A	A	A	A	A	A				D	D	C
Approach Vol, veh/h		1695			972						729	
Approach Delay, s/veh		0.6			2.6						38.5	
Approach LOS		A			A						D	

Timer - Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		74.4				74.4		25.6				
Change Period (Y+Rc), s		6.3				6.3		4.0				
Max Green Setting (Gmax), s		43.7				43.7		26.0				
Max Q Clear Time (g_c+I1), s		2.0				12.9		16.1				
Green Ext Time (p_c), s		30.7				17.5		2.5				

Intersection Summary			
HCM 6th Ctrl Delay			9.3
HCM 6th LOS			A

Notes

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

Intersection	
Int Delay, s/veh	8.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	1849	97	0	872	1	0	0	101	0	0	0
Future Vol, veh/h	2	1849	97	0	872	1	0	0	101	0	0	0
Conflicting Peds, #/hr	107	0	128	0	0	107	0	0	128	107	0	107
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	2054	108	0	969	1	0	0	112	0	0	0

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	1077	0	0	-	-	0	-	-	1337
Stage 1	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-
Critical Hdwy	5.34	-	-	-	-	-	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.12	-	-	-	-	-	-	-	3.92
Pot Cap-1 Maneuver	359	-	-	0	-	-	0	0	123
Stage 1	-	-	-	0	-	-	0	0	-
Stage 2	-	-	-	0	-	-	0	0	-
Platoon blocked, %		-	-		-	-			
Mov Cap-1 Maneuver	359	-	-	-	-	-	-	0	~ 94
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	0	-
Stage 1	-	-	-	-	-	-	-	0	-
Stage 2	-	-	-	-	-	-	-	0	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	236.8
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBT	WBR
Capacity (veh/h)	94	359	-	-	-	-
HCM Lane V/C Ratio	1.194	0.006	-	-	-	-
HCM Control Delay (s)	236.8	15.1	0	-	-	-
HCM Lane LOS	F	C	A	-	-	-
HCM 95th %tile Q(veh)	7.7	0	-	-	-	-

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

HCM Signalized Intersection Capacity Analysis
5: Camden Dr & Wilshire Blvd & Dayton Wy

06/27/2023

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBR
Lane Configurations									
Traffic Volume (vph)	183	341	1275	149	154	871	141	49	129
Future Volume (vph)	183	341	1275	149	154	871	141	49	129
Ideal Flow (vphpl)	1350	1350	1350	1350	1350	1350	1350	1350	1350
Lane Width	12	9	10	9	9	9	9	9	15
Total Lost time (s)		4.6	5.3		4.6	5.3			4.6
Lane Util. Factor		1.00	0.91		1.00	0.91			1.00
Frpb, ped/bikes		1.00	0.97		1.00	0.95			1.00
Flpb, ped/bikes		1.00	1.00		1.00	1.00			1.00
Frt		1.00	0.98		1.00	0.97			0.86
Flt Protected		0.95	1.00		0.95	1.00			1.00
Satd. Flow (prot)		1018	2907		1018	2695			1133
Flt Permitted		0.95	1.00		0.95	1.00			1.00
Satd. Flow (perm)		1018	2907		1018	2695			1133
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	203	379	1417	166	171	968	157	54	143
RTOR Reduction (vph)	0	0	12	0	0	5	0	0	57
Lane Group Flow (vph)	0	582	1571	0	171	1174	0	0	86
Confl. Peds. (#/hr)				124			127	127	
Confl. Bikes (#/hr)				8			2	2	
Turn Type	Prot	Prot	NA		Prot	NA			Perm
Protected Phases	5	5	2		1	6			
Permitted Phases									1
Actuated Green, G (s)		42.4	66.1		24.0	47.7			24.0
Effective Green, g (s)		42.4	66.1		24.0	47.7			24.0
Actuated g/C Ratio		0.42	0.66		0.24	0.48			0.24
Clearance Time (s)		4.6	5.3		4.6	5.3			4.6
Vehicle Extension (s)		2.5	5.0		2.5	5.0			2.5
Lane Grp Cap (vph)		431	1921		244	1285			271
v/s Ratio Prot		c0.57	0.54		0.17	c0.44			
v/s Ratio Perm									0.08
v/c Ratio		1.35	0.82		0.70	0.91			0.32
Uniform Delay, d1		28.8	12.5		34.7	24.2			31.3
Progression Factor		1.14	1.06		1.22	0.55			1.00
Incremental Delay, d2		159.1	0.4		4.5	6.8			0.5
Delay (s)		191.9	13.7		46.9	20.2			31.8
Level of Service		F	B		D	C			C
Approach Delay (s)			61.6			23.6			
Approach LOS			E			C			

Intersection Summary			
HCM 2000 Control Delay	46.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.12		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	9.9
Intersection Capacity Utilization	87.8%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	124	1260	21	0	988	108	99	68	38	115	58	125
Future Volume (veh/h)	124	1260	21	0	988	108	99	68	38	115	58	125
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		0.93	1.00		0.88	1.00		0.98	1.00		0.89
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	1616	1616	1683	0	1683	1683	1683	1683	1683	1616	1751	1683
Adj Flow Rate, veh/h	138	1400	21	0	1098	102	110	76	42	128	64	139
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	0	2	2	2	2	2	2	2	2
Cap, veh/h	283	2388	36	0	2254	209	157	99	55	355	404	294
Arrive On Green	1.00	1.00	1.00	0.00	1.00	1.00	0.10	0.10	0.10	0.23	0.23	0.23
Sat Flow, veh/h	395	4472	67	0	4373	391	1603	1011	559	1539	1751	1275
Grp Volume(v), veh/h	138	921	500	0	796	404	110	0	118	128	64	139
Grp Sat Flow(s),veh/h/ln	395	1471	1598	0	1532	1549	1603	0	1570	1539	1751	1275
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	6.6	0.0	7.3	7.0	2.9	9.4
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	6.6	0.0	7.3	7.0	2.9	9.4
Prop In Lane	1.00		0.04	0.00		0.25	1.00		0.36	1.00		1.00
Lane Grp Cap(c), veh/h	283	1570	853	0	1636	827	157	0	154	355	404	294
V/C Ratio(X)	0.49	0.59	0.59	0.00	0.49	0.49	0.70	0.00	0.77	0.36	0.16	0.47
Avail Cap(c_a), veh/h	283	1570	853	0	1636	827	253	0	248	474	539	393
HCM Platoon Ratio	2.00	2.00	2.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.52	0.52	0.52	0.00	0.20	0.20	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	43.7	0.0	44.0	32.3	30.7	33.2
Incr Delay (d2), s/veh	3.1	0.8	1.5	0.0	0.2	0.4	5.5	0.0	7.7	0.6	0.2	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.2	0.4	0.0	0.0	0.1	2.9	0.0	3.2	2.7	1.3	3.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	3.1	0.8	1.5	0.0	0.2	0.4	49.2	0.0	51.7	32.9	30.9	34.4
LnGrp LOS	A	A	A	A	A	A	D	A	D	C	C	C
Approach Vol, veh/h		1559			1200			228			331	
Approach Delay, s/veh		1.3			0.3			50.5			33.1	
Approach LOS		A			A			D			C	

Timer - Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		58.7		14.0		58.7		27.3
Change Period (Y+Rc), s		5.3		* 4.2		5.3		4.2
Max Green Setting (Gmax), s		39.7		* 16		39.7		30.8
Max Q Clear Time (g_c+I1), s		2.0		9.3		2.0		11.4
Green Ext Time (p_c), s		27.5		0.5		19.8		1.2

Intersection Summary	
HCM 6th Ctrl Delay	7.5
HCM 6th LOS	A

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	19	1111	64	57	1004	68	110	441	100	5	620	95
Future Volume (veh/h)	19	1111	64	57	1004	68	110	441	100	5	620	95
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.93	0.99		0.93	1.00		0.94	0.97		0.93
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	1616	1616	1616	1616	1683	1683	1616	1616	1616	1683	1616	1616
Adj Flow Rate, veh/h	21	1234	63	63	1116	63	122	490	44	6	689	39
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	188	1732	88	228	1895	107	120	1253	526	39	833	356
Arrive On Green	0.03	0.81	0.81	0.04	0.43	0.43	0.08	0.41	0.41	0.28	0.28	0.28
Sat Flow, veh/h	1539	4280	218	1539	4430	250	1539	3070	1290	7	2997	1280
Grp Volume(v), veh/h	21	848	449	63	772	407	122	490	44	372	323	39
Grp Sat Flow(s),veh/h/ln	1539	1471	1557	1539	1532	1616	1539	1535	1290	1607	1397	1280
Q Serve(g_s), s	0.8	13.0	13.0	2.4	19.3	19.3	7.8	11.2	2.1	1.9	21.7	2.3
Cycle Q Clear(g_c), s	0.8	13.0	13.0	2.4	19.3	19.3	7.8	11.2	2.1	21.6	21.7	2.3
Prop In Lane	1.00		0.14	1.00		0.15	1.00		1.00	0.02		1.00
Lane Grp Cap(c), veh/h	188	1190	630	228	1310	691	120	1253	526	483	388	356
V/C Ratio(X)	0.11	0.71	0.71	0.28	0.59	0.59	1.02	0.39	0.08	0.77	0.83	0.11
Avail Cap(c_a), veh/h	282	1190	630	286	1310	691	120	1314	552	515	416	381
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)	0.09	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	18.4	6.9	6.9	17.3	21.9	21.9	46.1	20.9	18.1	33.9	33.9	26.9
Incr Delay (d2), s/veh	0.0	0.3	0.6	0.2	1.9	3.7	86.6	0.3	0.1	7.2	13.4	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	2.1	2.3	0.8	7.1	7.8	5.9	4.1	0.6	9.4	8.8	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.5	7.2	7.5	17.6	23.8	25.6	132.7	21.1	18.2	41.0	47.3	27.1
LnGrp LOS	B	A	A	B	C	C	F	C	B	D	D	C
Approach Vol, veh/h		1318			1242			656			734	
Approach Delay, s/veh		7.5			24.1			41.7			43.1	
Approach LOS		A			C			D			D	

Timer - Assigned Phs	1	2	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.2	45.8	46.0	5.9	48.1	13.0	33.0
Change Period (Y+Rc), s	4.6	5.3	5.2	4.6	5.3	5.2	5.2
Max Green Setting (Gmax), s	7.4	34.7	42.8	7.4	34.7	7.8	29.8
Max Q Clear Time (g_c+I1), s	4.4	15.0	13.2	2.8	21.3	9.8	23.7
Green Ext Time (p_c), s	0.0	13.8	5.5	0.0	9.5	0.0	3.0

Intersection Summary	
HCM 6th Ctrl Delay	25.0
HCM 6th LOS	C

Notes

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

Intersection	
Intersection Delay, s/veh	13.3
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	20	321	9	9	174	44	5	35	13	45	142	53
Future Vol, veh/h	20	321	9	9	174	44	5	35	13	45	142	53
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	22	357	10	10	193	49	6	39	14	50	158	59
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	15.2	11.7	9.8	12.7
HCM LOS	C	B	A	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	9%	6%	4%	19%
Vol Thru, %	66%	92%	77%	59%
Vol Right, %	25%	3%	19%	22%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	53	350	227	240
LT Vol	5	20	9	45
Through Vol	35	321	174	142
RT Vol	13	9	44	53
Lane Flow Rate	59	389	252	267
Geometry Grp	1	1	1	1
Degree of Util (X)	0.099	0.571	0.377	0.418
Departure Headway (Hd)	6.051	5.284	5.385	5.64
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	589	681	666	637
Service Time	4.12	3.329	3.436	3.691
HCM Lane V/C Ratio	0.1	0.571	0.378	0.419
HCM Control Delay	9.8	15.2	11.7	12.7
HCM Lane LOS	A	C	B	B
HCM 95th-tile Q	0.3	3.6	1.8	2.1

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	14	355	6	7	205	23	6	88	8	36	52	19
Future Vol, veh/h	14	355	6	7	205	23	6	88	8	36	52	19
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	16	394	7	8	228	26	7	98	9	40	58	21
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	14.7	11.3	10.2	10.3
HCM LOS	B	B	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	6%	4%	3%	34%
Vol Thru, %	86%	95%	87%	49%
Vol Right, %	8%	2%	10%	18%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	102	375	235	107
LT Vol	6	14	7	36
Through Vol	88	355	205	52
RT Vol	8	6	23	19
Lane Flow Rate	113	417	261	119
Geometry Grp	1	1	1	1
Degree of Util (X)	0.184	0.579	0.374	0.193
Departure Headway (Hd)	5.855	5.003	5.158	5.838
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	612	721	697	613
Service Time	3.898	3.032	3.192	3.881
HCM Lane V/C Ratio	0.185	0.578	0.374	0.194
HCM Control Delay	10.2	14.7	11.3	10.3
HCM Lane LOS	B	B	B	B
HCM 95th-tile Q	0.7	3.8	1.7	0.7

Intersection	
Intersection Delay, s/veh	13.3
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			✣			✣	
Traffic Vol, veh/h	19	344	30	23	184	27	16	36	26	33	88	35
Future Vol, veh/h	19	344	30	23	184	27	16	36	26	33	88	35
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	21	382	33	26	204	30	18	40	29	37	98	39
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	15.9	11.6	10	11.1
HCM LOS	C	B	A	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	21%	5%	10%	21%
Vol Thru, %	46%	88%	79%	56%
Vol Right, %	33%	8%	12%	22%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	78	393	234	156
LT Vol	16	19	23	33
Through Vol	36	344	184	88
RT Vol	26	30	27	35
Lane Flow Rate	87	437	260	173
Geometry Grp	1	1	1	1
Degree of Util (X)	0.143	0.614	0.382	0.279
Departure Headway (Hd)	5.922	5.063	5.288	5.795
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	603	712	679	619
Service Time	3.979	3.1	3.332	3.844
HCM Lane V/C Ratio	0.144	0.614	0.383	0.279
HCM Control Delay	10	15.9	11.6	11.1
HCM Lane LOS	A	C	B	B
HCM 95th-tile Q	0.5	4.2	1.8	1.1

Appendix C: Mixed Use (MXD) Trip Generation Estimates

Table C-1
Conceptual Plan Trip Reduction Estimates
based on MXD Model Internalization and Non-Vehicular Trips

Trip Reduction Estimates	Trip Rates		
	Daily	AM	PM
MXD+ Model Estimates			
Internalization	120	32	56
Transit/Walk/Bike Trips	1,275	100	117
Trip Reduction Applied to Project			
Internalization	120	32	56
50% Reduction to Transit/Walk/Bike	638	50	59
Total Reduction Estimate	758	82	115
Total Project Trips	5,316	403	543
% Reduction of Total Project Trips	**14.3%**	**20.3%**	**21.2%**

Notes:
(1) Trip reductions estimated by MXD+ Model.

Table C-2
Scenario 2 Trip Reduction Estimates
based on MXD Model Internalization and Non-Vehicular Trips

Trip Reduction Estimates	Trip Rates		
	Daily	AM	PM
MXD+ Model Estimates			
Internalization	214	42	68
Transit/Walk/Bike Trips	2,696	265	233
Trip Reduction Applied to Project			
Internalization	214	42	68
50% Reduction to Transit/Walk/Bike	1,348	133	117
Total Reduction Estimate	1,562	175	185
Total Project Trips	10,888	946	1,003
% Reduction of Total Project Trips	**14.3%**	**18.5%**	**18.4%**

Notes:
(1) Trip reductions estimated by MXD+ Model.

Table C-3
Scenario 3 Trip Reduction Estimates
based on MXD Model Internalization and Non-Vehicular Trips

Trip Reduction Estimates	Trip Rates		
	Daily	AM	PM
MXD+ Model Estimates			
Internalization	238	36	60
Transit/Walk/Bike Trips	2,721	262	228
Trip Reduction Applied to Project			
Internalization	238	36	60
50% Reduction to Transit/Walk/Bike	1,361	131	114
Total Reduction Estimate	1,599	167	174
Total Project Trips	9,705	828	856
% Reduction of Total Project Trips	**16.5%**	**20.2%**	**20.3%**

Notes:
(1) Trip reductions estimated by MXD+ Model.

9600 WILSHIRE BOULEVARD SPECIFIC PLAN PROJECT
TRIP GENERATION ESTIMATE for Concpetual Plan (Scenario 1)

Land Use	ITE Land Use Code	Size	Trip Generation Rates [a]								Estimated Trip Generation						
			Daily	AM Peak Hour			PM Peak Hour			Trip Rate	Daily	AM Peak Hour Trips			PM Peak Hour Trips		
			Rate	Rate	% In	% Out	Rate	% In	% Out	Unit	Trips	In	Out	Total	In	Out	Total
Saks Rehabilitation and Parcel B																	
Retail [b]	820	28.998 ksf	37.01	0.84	62%	38%	3.40	48%	52%	per ksf	1,073	15	9	24	48	51	99
Quality Restaurant [c]	931	3.046 ksf	92.39	8.25	55%	45%	7.80	67%	33%	per ksf	281	14	11	25	16	8	24
Office	710	67.108 ksf	10.84	1.52	88%	12%	1.44	17%	83%	per ksf	727	90	12	102	16	81	97
Boutique Hotel	310	40 rooms	7.99	0.46	56%	44%	0.59	51%	49%	per room	320	10	8	18	12	12	24
Social Club and Spa	[d]	32.180 ksf	[d]	[d]	-	-	[d]	-	-	-	500	10	5	15	35	25	60
Saks Rehabilitation and Parcel B Subtotal											**2,901**	**139**	**45**	**184**	**127**	**177**	**304**
Parcel A																	
Quality Restaurant [c]	931	11.657 ksf	92.39	8.25	55%	45%	7.80	67%	33%	per ksf	1,077	53	43	96	61	30	91
Office	710	58.796 ksf	10.84	1.52	88%	12%	1.44	17%	83%	per ksf	637	78	11	89	14	71	85
Parcel A Subtotal											**1,714**	**131**	**54**	**185**	**75**	**101**	**176**
Neighborhood West																	
West Residential	221	38 units	4.54	0.37	23%	77%	0.39	61%	39%	per unit	173	3	11	14	9	6	15
West Retail [b]	820	5.540 ksf	37.01	0.84	62%	38%	3.40	48%	52%	per ksf	205	3	2	5	9	10	19
Neighborhood West Subtotal											**378**	**6**	**13**	**19**	**18**	**16**	**34**
Neighborhood East																	
East Residential	221	30 units	4.54	0.37	23%	77%	0.39	61%	39%	per unit	136	3	8	11	7	5	12
East Retail [b]	820	5.041 ksf	37.01	0.84	62%	38%	3.40	48%	52%	per ksf	187	2	2	4	8	9	17
Neighborhood East Subtotal											**323**	**5**	**10**	**15**	**15**	**14**	**29**
Land Use Summary																	
Total Retail		**39.579 ksf**									**1,465**	**20**	**13**	**33**	**65**	**70**	**135**
Total Restaurant		**14.703 ksf**									**1,358**	**67**	**54**	**121**	**77**	**38**	**115**
Total Office		**125.904 ksf**									**1,364**	**168**	**23**	**191**	**30**	**152**	**182**
Total Social Club/Spa		**32.180 ksf**									**500**	**10**	**5**	**15**	**35**	**25**	**60**
Total Hotel		**41.356 ksf**	***40.00***	***rooms***							**320**	**10**	**8**	**18**	**12**	**12**	**24**
Total Residential		**68.000 units**									**309**	**6**	**19**	**25**	**16**	**11**	**27**
Total Circulation Space		**0.000 ksf**															
Total Commercial KSF		**253.722 ksf**															
Total Trips (base ITE rates)											5,316	281	122	403	235	308	543
Total Commercial											5,007	275	103	378	219	297	516
Total Residential											309	6	19	25	16	11	27
% MXD+ Adjustment for Internalization & Walk/Bike/Transit Trips											*14%*	*20%*	*20%*	*20%*	*21%*	*21%*	*21%*
MXD+ Adjustment for Internalization & Walk/Bike/Transit Trips											*-758*	*-57*	*-25*	*-82*	*-50*	*-65*	*-115*
Project Vehicle Trips											**4,558**	**224**	**97**	**321**	**185**	**243**	**428**
Total Trips (Saks Fifth Avenue Store) [e]											1,092	19	9	28	32	63	95
Total Existing Trips											**1,092**	**19**	**9**	**28**	**32**	**63**	**95**
NET INCREMENTAL TRIPS											**3,466**	**205**	**88**	**293**	**153**	**180**	**333**

Notes:

a. Source: Institute of Transportation Engineers (ITE), *Trip Generation, 11th Edition* , 2021, unless otherwise noted.

b. The Retail land use utilized the trip generation rates from the Shopping Center (>150ksf) use as the rates are lower than the Shopping Center (40-150 ksf) use. The lower trip generation rates are expected to be more reflective of the lower trips anticipated for the high-end retail use at the Project.

c. Distributional splits of AM Peak Hour trip generation not provided in *Trip Generation, 11th Edition* . AM Peak Hour distributional splits from High-Turnover Sit-Down Restaurant (ITE Code 932) utilized. Adjustments were made to the daily and AM peak hour trip generation rate to reflect potential breakfast service using trip generation rates for ITE Land Use 932 – High Turnover Restaurant.

d. Social Club Amenities and Spa is not a land use identified in *Trip Generation, 11th Edition.* Trip generation estimates were taken directly from *9600 Wilshire Boulevard Project Social Club and Amenities, Beverly Hills, California* memorandum dated May 26, 2023 from Gibson Transportation, Inc. The trip generation estimates for this land use were based on anticipated attendance levels by members and their guests on a typical weekday.

e. The existing trip generation for Saks Fifth Avenue was developed based on empirical data collection conducted in April 2022 at Saks Fifth Avenue. The trip generation estimates were taken directly from *Traffic Sensitivity Analysis for the 9600 Wilshire Boulevard Project Beverly Hills, California* memorandum dated October 23, 2022 from Gibson Transportation, Inc.

9600 WILSHIRE BOULEVARD SPECIFIC PLAN PROJECT
TRIP GENERATION ESTIMATE - Specific Plan Buildout (Scenario 2)

Land Use	ITE Land Use Code	Size	Trip Generation Rates [a]								Estimated Trip Generation						
			Daily	AM Peak Hour			PM Peak Hour			Trip Rate	Daily	AM Peak Hour Trips			PM Peak Hour Trips		
			Rate	Rate	% In	% Out	Rate	% In	% Out	Unit	Trips	In	Out	Total	In	Out	Total
Saks Rehabilitation and Parcel B																	
Retail [b]	820	0.000 ksf	37.01	0.84	62%	38%	3.40	48%	52%	per ksf	0	0	0	0	0	0	0
Quality Restaurant [c]	931	44.0 ksf	92.39	8.25	55%	45%	7.80	67%	33%	per ksf	4,065	200	163	363	230	113	343
Office	710	75.0 ksf	10.84	1.52	88%	12%	1.44	17%	83%	per ksf	813	100	14	114	18	90	108
Boutique Hotel	310	50 rooms	7.99	0.46	56%	44%	0.59	51%	49%	per room	400	13	10	23	15	15	30
Social Club and Spa	[d]	39.0 ksf	15.54	0.47	67%	33%	1.86	58%	42%	per KSF	606	12	6	18	42	31	73
Saks Rehabilitation and Parcel B Subtotal											**5,884**	**325**	**193**	**518**	**305**	**249**	**554**
Parcel A																	
Quality Restaurant [c]	931	40.0 ksf	92.39	8.25	55%	45%	7.80	67%	33%	per ksf	3,696	182	148	330	209	103	312
Office	710	40.0 ksf	10.84	1.52	88%	12%	1.44	17%	83%	per ksf	434	54	7	61	10	48	58
Parcel A Subtotal											**4,130**	**236**	**155**	**391**	**219**	**151**	**370**
Neighborhood West																	
West Residential	221	39 units	4.54	0.37	23%	77%	0.39	61%	39%	per unit	177	3	11	14	9	6	15
West Retail [b]	820	7.5 ksf	37.01	0.84	62%	38%	3.40	48%	52%	per ksf	278	4	2	6	12	14	26
Neighborhood West Subtotal											**455**	**7**	**13**	**20**	**21**	**20**	**41**
Neighborhood East																	
East Residential	221	31 units	4.54	0.37	23%	77%	0.39	61%	39%	per unit	141	3	8	11	7	5	12
East Retail [b]	820	7.5 ksf	37.01	0.84	62%	38%	3.40	48%	52%	per ksf	278	4	2	6	12	14	26
Neighborhood East Subtotal											**419**	**7**	**10**	**17**	**19**	**19**	**38**
Land Use Summary																	
Total Retail		**15.0 ksf**									**556**	**8**	**4**	**12**	**24**	**28**	**52**
Total Restaurant		**84.0 ksf**									**7,761**	**382**	**311**	**693**	**439**	**216**	**655**
Total Office		**115.0 ksf**									**1,247**	**154**	**21**	**175**	**28**	**138**	**166**
Total Social Club/Spa (other)		**39.0 ksf**									**606**	**12**	**6**	**18**	**42**	**31**	**73**
Total Hotel		**55.0 ksf**	***50.00***	***rooms***							**400**	**13**	**10**	**23**	**15**	**15**	**30**
Total Residential		**70.0 units**									**318**	**6**	**19**	**25**	**16**	**11**	**27**
Total Circulation Space		**0.0 ksf**															
Total Commercial KSF		**308.0 ksf**															
Total Trips (base ITE rates)											10,888	575	371	946	564	439	1,003
Total Commercial											10,570	569	352	921	548	428	976
Total Residential											318	6	19	25	16	11	27
% MXD+ Adjustment for Internalization & Walk/Bike/Transit Trips											*14%*	*18%*	*18%*	*18%*	*18%*	*18%*	*18%*
MXD+ Adjustment for Internalization & Walk/Bike/Transit Trips											*-1,562*	*-106*	*-69*	*-175*	*-104*	*-81*	*-185*
Project Vehicle Trips											**9,326**	**469**	**302**	**771**	**460**	**358**	**818**
Total Trips (Saks Fifth Avenue Store) [e]											1,092	19	9	28	32	63	95
Total Existing Trips											**1,092**	**19**	**9**	**28**	**32**	**63**	**95**
NET INCREMENTAL TRIPS											**8,234**	**450**	**293**	**743**	**428**	**295**	**723**

Notes:

a. Source: Institute of Transportation Engineers (ITE), *Trip Generation, 11th Edition* , 2021, unless otherwise noted.

b. The Retail land use utilized the trip generation rates from the Shopping Center (>150ksf) use as the rates are lower than the Shopping Center (40-150 ksf) use. The lower trip generation rates are expected to be more reflective of the lower trips anticipated for the high-end retail use at the Project.

c. Distributional splits of AM Peak Hour trip generation not provided in *Trip Generation, 11th Edition* . AM Peak Hour distributional splits from High-Turnover Sit-Down Restaurant (ITE Code 932) utilized. Adjustments were made to the daily and AM peak hour trip generation rate to reflect potential breakfast service using trip generation rates for ITE Land Use 932 – High Turnover Restaurant.

d. Social Club Amenities and Spa is not a land use identified in *Trip Generation, 11th Edition.* Trip generation estimates were taken directly from *9600 Wilshire Boulevard Project Social Club and Amenities, Beverly Hills, California* memorandum dated May 26, 2023 from Gibson Transportation, Inc. The trip generation estimates for this land use were based on anticipated attendance levels by members and their guests on a typical weekday.

e. The existing trip generation for Saks Fifth Avenue was developed based on empirical data collection conducted in April 2022 at Saks Fifth Avenue. The trip generation estimates were taken directly from *Traffic Sensitivity Analysis for the 9600 Wilshire Boulevard Project Beverly Hills, California* memorandum dated October 23, 2022 from Gibson Transportation, Inc.

9600 WILSHIRE BOULEVARD SPECIFIC PLAN PROJECT
TRIP GENERATION ESTIMATE - Specific Plan Buildout with Residential (Scenario 3)

Land Use	ITE Land Use Code	Size	Trip Generation Rates [a]								Estimated Trip Generation						
			Daily	AM Peak Hour			PM Peak Hour			Trip Rate	Daily	AM Peak Hour Trips			PM Peak Hour Trips		
			Rate	Rate	% In	% Out	Rate	% In	% Out	Unit	Trips	In	Out	Total	In	Out	Total
Saks Rehabilitation and Parcel B																	
Retail [b]	820	0.000 ksf	37.01	0.84	62%	38%	3.40	48%	52%	per ksf	0	0	0	0	0	0	0
Quality Restaurant [c]	931	44.0 ksf	92.39	8.25	55%	45%	7.80	67%	33%	per ksf	4,065	200	163	363	230	113	343
Office	710	0.0 ksf	10.84	1.52	88%	12%	1.44	17%	83%	per ksf	0	0	0	0	0	0	0
Residential	221	75 units	4.54	0.37	23%	77%	0.39	61%	39%	per unit	341	6	22	28	18	11	29
Spa [d]	[d]	19.0 ksf	15.54	0.47	67%	33%	1.86	58%	42%	per KSF	295	6	3	9	20	15	35
Saks Rehabilitation and Parcel B Subtotal											**4,701**	**212**	**188**	**400**	**268**	**139**	**407**
Parcel A																	
Quality Restaurant [c]	931	40.0 ksf	92.39	8.25	55%	45%	7.80	67%	33%	per ksf	3,696	182	148	330	209	103	312
Office	710	40.0 ksf	10.84	1.52	88%	12%	1.44	17%	83%	per ksf	434	54	7	61	10	48	58
Parcel A Subtotal											**4,130**	**236**	**155**	**391**	**219**	**151**	**370**
Neighborhood West																	
West Residential	221	39 units	4.54	0.37	23%	77%	0.39	61%	39%	per unit	177	3	11	14	9	6	15
West Retail [b]	820	7.5 ksf	37.01	0.84	62%	38%	3.40	48%	52%	per ksf	278	4	2	6	12	14	26
Neighborhood West Subtotal											**455**	**7**	**13**	**20**	**21**	**20**	**41**
Neighborhood East																	
East Residential	221	31 units	4.54	0.37	23%	77%	0.39	61%	39%	per unit	141	3	8	11	7	5	12
East Retail [b]	820	7.5 ksf	37.01	0.84	62%	38%	3.40	48%	52%	per ksf	278	4	2	6	12	14	26
Neighborhood East Subtotal											**419**	**7**	**10**	**17**	**19**	**19**	**38**
Land Use Summary																	
Total Retail		**15.0 ksf**									**556**	**8**	**4**	**12**	**24**	**28**	**52**
Total Restaurant		**84.0 ksf**									**7,761**	**382**	**311**	**693**	**439**	**216**	**655**
Total Office		**40.0 ksf**									**434**	**54**	**7**	**61**	**10**	**48**	**58**
Total Social Club/Spa (other)		**19.0 ksf**									**295**	**6**	**3**	**9**	**20**	**15**	**35**
Total Hotel		**0.0 ksf**	***0***	***rooms***							**0**	**0**	**0**	**0**	**0**	**0**	**0**
Total Residential		**145.0 units**									**659**	**12**	**41**	**53**	**34**	**22**	**56**
Total Circulation Space		**0.0 ksf**															
Total Commercial KSF		**158.0 ksf**															
Total Trips (base ITE rates)											9,705	462	366	828	527	329	856
Total Commercial											9,046	450	325	775	493	307	800
Total Residential											659	12	41	53	34	22	56
% MXD+ Adjustment for Internalization & Walk/Bike/Transit Trips											*16%*	*20%*	*20%*	*20%*	*20%*	*20%*	*20%*
MXD+ Adjustment for Internalization & Walk/Bike/Transit Trips											*-1,599*	*-93*	*-74*	*-167*	*-107*	*-67*	*-174*
Project Vehicle Trips											**8,106**	**369**	**292**	**661**	**420**	**262**	**682**
Total Trips (Saks Fifth Avenue Store) [e]											1,092	19	9	28	32	63	95
Total Existing Trips											**1,092**	**19**	**9**	**28**	**32**	**63**	**95**
NET INCREMENTAL TRIPS											**7,014**	**350**	**283**	**633**	**388**	**199**	**587**

Notes:

a. Source: Institute of Transportation Engineers (ITE), *Trip Generation, 11th Edition* , 2021, unless otherwise noted.

b. The Retail land use utilized the trip generation rates from the Shopping Center (>150ksf) use as the rates are lower than the Shopping Center (40-150 ksf) use. The lower trip generation rates are expected to be more reflective of the lower trips anticipated for the high-end retail use at the Project.

c. Distributional splits of AM Peak Hour trip generation not provided in *Trip Generation, 11th Edition* . AM Peak Hour distributional splits from High-Turnover Sit-Down Restaurant (ITE Code 932) utilized. Adjustments were made to the daily and AM peak hour trip generation rate to reflect potential breakfast service using trip generation rates for ITE Land Use 932 – High Turnover Restaurant.

d. Social Club Amenities and Spa is not a land use identified in *Trip Generation, 11th Edition.* Trip generation estimates were taken directly from *9600 Wilshire Boulevard Project Social Club and Amenities, Beverly* Hills, California memorandum dated May 26, 2023 from Gibson Transportation, Inc. The trip generation estimates for this land use were based on anticipated attendance levels by members and their guests on a typical weekday.

e. The existing trip generation for Saks Fifth Avenue was developed based on empirical data collection conducted in April 2022 at Saks Fifth Avenue. The trip generation estimates were taken directly from *Traffic Sensitivity Analysis for the 9600 Wilshire Boulevard Project Beverly Hills, California* memorandum dated October 23, 2022 from Gibson Transportation, Inc.