Appendix K

Campus Town Transportation Analysis

Campus Town Specific Plan Transportation Analysis

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Campus Town Specific Plan

Transportation Analysis

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Campus Town Specific Plan
Transportation Analysis

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Executive Summary

This report presents the results of the transportation analysis (TA) conducted for the proposed Campus Town Specific Plan, also referred to as the Plan. The purpose of the TA is to:

- Estimates vehicle miles traveled (VMT) for use in identifying environmental impacts.
- Reviews proposed Plan and its affects related to transit, bicycle, or pedestrian facilities.
- Evaluates consistency with the City of Seaside's *2004 General Plan Circulation Element*:
  - Identify level of service in the surrounding transportation system with the addition of the Campus Town Specific Plan and identifies potential transportation improvements.

Plan effects on the surrounding transportation network were evaluated following the updated California Environmental Quality Act (CEQA) Guidelines (2018).

Plan Description

The proposed Plan would consist of residential, hotel, office and retail land uses, including units accessible to students at the California State University at Monterey Bay (CSUMB) located adjacent to the Plan area. Generally, the Plan area is bounded by Lightfighter Drive and Colonel Durham Street to the north, Seventh Avenue to the east, Gigling Road to the south and First Avenue to the west. It includes the following land uses:

- 1,485 housing units, including:
  - Up to 600 multi-family (apartment) units
  - 885 or more single-family detached units
- A 250-room hotel
- A 75-bed youth hostel
- 150,000 square feet of retail, dining, and entertainment space
- 50,000 square feet of office, flex, and "marker space" and light industrial space (more details found in the Campus Town Specific Plan)

Vehicle Miles Traveled (VMT)

Senate Bill (SB) 743, signed by Governor Jerry Brown in 2013, changes the way transportation impacts are identified under the California Environmental Quality Act (CEQA). SB 743 codified Pub. Res. Code Section 21099(b)(2) which generally states that automobile delay, as described solely by LOS or similar measures of vehicular capacity or traffic congestion shall not be considered a significant impact on the environment. The CEQA Guidelines were updated in December 2018 consistent with SB 743, such that vehicular LOS will no

longer be used as a determinant of significant environmental impacts related to transportation, and instead the analysis will focus upon VMT. VMT generally refers to the amount and distance of automobile travel.

This SB 743 VMT assessment is one of the City of Seaside's first evaluations using VMT. The following steps are necessary to fully implement an SB 743 VMT assessment:

- selecting a VMT calculation model
- selecting the VMT accounting method(s)
- calculating the baseline and cumulative regional VMT estimates
- setting a VMT threshold(s)

Like the VMT estimates for the greenhouse gas analysis, the Association of Monterey Bay Area Governments (AMBAG) travel model was used to estimate daily VMT. To provide a complete picture of the effects of the Plan on VMT under Existing with Plan Conditions, Buildout Year (2034) with Plan, and Cumulative (2040) with Plan Conditions, this analysis looks at the: 1) Plan generated VMT per service population, and 2) Plan's effects on VMT. The analysis focuses on the VMT for all trip purposes and vehicle types (no separation of VMT by land use) to be consistent with state of practice for greenhouse gas analysis, air quality and energy evaluations. The VMT thresholds are developed using the Existing Conditions VMT for the AMBAG region.

Plan Generated VMT per Service Population

This analysis uses a threshold for Plan generated VMT per service population of 15 percent below the Existing Conditions regionwide VMT per service population. Therefore, a VMT impact would occur if the Plan's VMT per service population we not at least 15 percent below existing conditions for the AMBAG region. The City selected the 15 percent reduction based on the *Technical Advisory on Evaluating Transportation Impacts in CEQA* prepared by OPR (December 2018).

The threshold is:

- Regionwide: AMBAG generated VMT per service population of 36.20 x 85% = 30.77.

The regionwide Plan generated VMT impacts under Existing with Plan Conditions is:

- Regionwide: The Campus Town Specific Plan generated VMT per service population of 22.37 is less than the three-county AMBAG region threshold of 30.77. Therefore, the Campus Town Specific Plan **would not have a Plan generated VMT impact under Existing with Plan Conditions**.

The regionwide Plan generated VMT impacts under Buildout Year (2034) with Plan Conditions is:

- Regionwide: The Campus Town Specific Plan generated VMT per service population of 25.22 is less than the three-county AMBAG region generated VMT per service population threshold of 30.77. Therefore, the Plan **would not have a Plan generated VMT impact under Buildout Year (2034) with Plan Conditions**.

The regionwide Plan generated VMT impacts under Cumulative (2040) with Plan Conditions is:

- Regionwide: The Campus Town Specific Plan generated VMT per service population of 26.29 is less than the three-county AMBAG region generated VMT per service population threshold of 30.77. Therefore, the Plan **would not have a Plan generated VMT impact under Cumulative (2040) with Plan Conditions**.

Plan's Effect on VMT per Service Population

This analysis uses a regionwide boundary VMT per service population under Existing Conditions, Buildout Year (2034) Conditions or Cumulative (2040) Conditions to determine if the Plan would have an effect on the regionwide VMT. A VMT impact would occur if the Plan's effect on regionwide VMT increases compared to No Plan Conditions.

The regionwide impact thresholds for a projects effect on VMT are expressed as follows:

- Existing Conditions: AMBAG region boundary VMT per service population of 15.20;
- Buildout Year (2034) Conditions: AMBAG region boundary VMT per service population of 16.06;
- Cumulative (2040) Conditions: AMBAG region boundary VMT per service population of 16.34.

Plan's effect on VMT impacts under Existing with Plan, Buildout Year (2034) with Plan, and Cumulative (2040) with Plan Conditions are:

- Existing with Plan Conditions: The regionwide boundary VMT per service population of 15.18 under Existing with Plan Conditions is lower than the regionwide threshold of 15.20. Therefore, the Plan **would not have a significant effect on VMT under Existing with Plan Conditions**.
- Buildout Year (2034) with Plan Conditions: The regionwide boundary VMT per service population of 16.04 under Buildout Year (2034) with Plan Conditions is lower than the regionwide threshold of 16.06. Therefore, the Plan **would not have a significant effect on VMT under Buildout Year (2034) with Plan Conditions**.
- Cumulative (2040) with Plan Conditions: The regionwide boundary VMT per service population of 16.32 under Cumulative (2040) with Plan Conditions is lower than the regionwide threshold of 16.34. Therefore, the Plan **would not have a significant effect on VMT under Cumulative (2040) with Plan Conditions**.

Transit, Bicycle, and Pedestrian Evaluation

Transit Evaluation

Implementation of the proposed Plan would not interfere with existing transit facilities or conflict with planned transit facilities or adopted transit system plans, guidelines, policies, or standards. The Plan would also implement and design any new transit facilities within the Plan area per guidance from Monterey-Salinas Transit and be consistent with the existing *2004 General Plan* and the proposed *Seaside 2040* policies that support multimodal transportation options. Furthermore, implementation of the proposed Plan will likely result in new transit routes, to be determined by the Monterey-Salinas Transit, and would have a beneficial effect, and impacts would be **less than significant**. The Plan proposes a new bus stop and other transit amenities along General Jim Moore Boulevard between Lightfighter Drive and Gigling Road. While the addition of new transit users is generally not treated as an adverse environmental impact, there will be adequate transit capacity to provide service for the Plan area, which would provide service to the approximately 50 and 70 peak hour transit riders. The Plan is not anticipated to create demand for public transit above the existing capacity.

Bicycle and Pedestrian Evaluation

Implementation of the proposed Plan will create new bicycle facilities and would have a beneficial impact on bicycle circulation and access in comparison to existing conditions. The majority of the new streets would be designed for slow-moving traffic with one travel lane in each direction. Bicycle lanes would be provided on key streets including Lightfighter Drive, Malmedy Road, Sixth Avenue, Gigling Road, and General Jim Moore Boulevard, to connect existing and planned bicycle routes in the surrounding area. The bicycle facilities proposed on Lightfighter Drive, Colonel Durham Road, and Second Avenue differ from what is planned in the Transportation Agency for Monterey County (TAMC) *Active Transportation Plan* (2018), but still meets the overall intent to provide facilities that improve bicycle connectivity. Therefore, the Plan is determined to have a **less-than-significant** impact on bicycle facilities.

Many local streets within and near the Campus Town Specific Plan area have no sidewalks resulting in gaps in the pedestrian network. In addition, several local streets have sidewalks only along one side of the street. In some areas, the natural topography results in sidewalks with moderately steep slopes. Some pedestrian crossings at intersections also do not have ADA-accessible curb ramps. Implementation of the proposed Plan will create new pedestrian facilities and would have a beneficial impact on pedestrian circulation and access. The Plan would eliminate many of these existing gaps in the pedestrian system and would provide increased intersection density to improve the pedestrian experience. Implementation of the proposed Plan would not interfere with existing pedestrian facilities or conflict with planned pedestrian facilities or adopted

pedestrian system plans, guidelines, policies, or standards. Therefore, this Plan would have a **less-than-significant** impact on pedestrian facilities, and no mitigation measures would be required.

Vehicular Level of Service (LOS) and Improvements

At the time of the preparation of this Transportation Assessment, the City of Seaside's currently adopted *2004 General Plan* was in effect. The *2004 General Plan* includes a LOS policy that strives to maintain a LOS C standard during peak hours. However, this policy must be balanced with the other multimodal transportation policy directives in the *2004 General Plan* as a whole and must be interpreted in the context of recent legislative amendments, as discussed in greater detail in Chapter 7 below. While the Plan would result in some intersections operating below LOS C, the Plan has been proposed to focus upon non-vehicular multi-modal transportation options.

The City of Seaside is also preparing an updated General Plan, *Seaside 2040*, which envisions a multimodal network of complete streets throughout the City and does not have a specific LOS policy. The vehicular LOS effects, based on the *2004 General Plan*, for key intersections in the City of Seaside are described below, in **Table ES-1**. This evaluation is provided to meet the needs of *2004 General Plan* and would not be necessary or even desirable under the new, *Seaside 2040*, General Plan or CEQA.

Table ES-1: Intersection Level of Service and Improvement Summary

Intersections Operating Below Vehicular LOS Criteria	Scenario			Potential Improvement based on Previously Documented Improvements
	Existing with Plan	Background with Plan	Cumulative with Plan	
3. Lightfighter Drive/General Jim Moore Boulevard	X	X	X	Reconfigure the intersection as follows as identified in *The Dunes at Monterey Bay EIR* (2005): - Northbound: add a third left-turn lane and second through-lane - Southbound: add a designated right-turn lane with overlap phase - Eastbound: add a second left-turn lane - Westbound: add a second left-turn lane and second through-lane Optimize the cycle length.
5. Gigling Road/General Jim Moore Boulevard		X	X	Reconfigure the intersection as follows as identified in *The Dunes at Monterey Bay EIR* (2005): - Northbound: add a second left-turn lane and third through-lane - Southbound: add a second left-turn lane and third through-lane - Eastbound: add a designated right-turn lane and install overlap phase - Westbound: add a second left-turn lane and second through-lane Optimize the cycle length.
6. Gigling Road/Malmedy Road			X	Signalize the intersection.
7. Gigling Road/Parker Flats Cut Off Road			X	Signalize the intersection.
8. Normandy Road/General Jim Moore Boulevard	X	X	X	Add a third northbound and southbound through-lane as identified in *The Dunes at Monterey Bay EIR* (2005), and Optimize the cycle length.
9. Coe Avenue/General Jim Moore Boulevard	X	X	X	Signalize the intersection, and Restripe the existing eastbound left-turn lane and right-turn lane to a left-turn lane and shared through/right-turn lane as identified in *The Dunes at Monterey Bay EIR* (2005).

1. Introduction

This report describes the Transportation Analysis (TA) for the Campus Town Specific Plan (the "Plan") Environmental Impact Report (EIR). This TA evaluates the Plan's effects on the surrounding transportation system including roadways, transit service, pedestrian facilities, and bicycle facilities.

Purpose

This analysis accomplishes the following:

- Estimates vehicle miles traveled (VMT) for use in identifying environmental impacts.
- Reviews proposed Plan and its affects related to transit, bicycle, or pedestrian facilities.
- Evaluates consistency with the City of Seaside's *2004 General Plan Circulation Element*:
  - Identify level of service in the surrounding transportation system with the addition of the Campus Town Specific Plan and identifies potential transportation improvements.

Specific Plan Description

The proposed Plan is a mixed-use area in northern Seaside just south of California State University at Monterey Bay (CSUMB). **Figure 1** shows the location of the Plan in Seaside, and **Figure 2** shows the proposed Plan.

Land Use

The Plan would consist of residential, hotel, office and retail land uses, including units accessible to students at CSUMB located adjacent to the Plan area. Generally, the Plan area is bounded by Lightfighter Drive and Colonel Durham Street to the north, Seventh Avenue to the east, Gigling Road to the south and First Avenue to the west. It includes the following land uses:

- 1,485 housing units, including:
  - A maximum of 600 multi-family (apartment) units
  - A maximum of 885 single-family units
- A 250-room hotel
- A 75-bed youth hostel
- 150,000 square feet of retail, dining, and entertainment space
- 50,000 square feet of office, flex, and "marker space" and light industrial space

Policy Guidance and Specific Plan Street Transportation Network

Historically, whenever new developments were proposed, the street system would often be expanded to accommodate the increase in vehicle traffic associated with the increased land use density and intensity resulting from the new development. However, in this case, the City of Seaside draft 2040 General Plan, *Seaside 2040*, describes a vision for a multimodal network of complete streets that has been incorporated into the Plan. The final version of *Seaside 2040* is planned to be released and adopted in late-2018/early-2019. Goal LUD-23 in the *Seaside 2040* Land Use & Community Design section highlights the desire to transform the City's northern area into a "mixed-use, economically-vibrant Campus Town that serves the student population and leverages its geographic adjacency to CSUMB." The area is desired to be high-density with a multimodal focus to improve access and connections for all modes to CSUMB. The Plan would provide residential, retail, and office space for the area directly south of CSUMB campus.

Additionally, *Seaside 2040* presents different modal priorities than the currently adopted *2004 General Plan*. The *2004 General Plan* includes a LOS policy that requires the City of Seaside to maintain a LOS C standard during peak hours. Using this LOS C standard requires the construction of larger intersections, which can have a negative effect on pedestrian and bicycle access and comfort. Thus, this discussion highlights the draft *Seaside 2040* (November 2017) goals that focus on creating accessible, complete streets for all users of the street system and paths and the transportation features in the Plan that support the key features. Key transportation goals in *Seaside 2040* include:

- *LUD-1:* An urban form and structure that enhances the quality of life of residents, meets the community's vision for the future, and weaves new growth areas together with long-established Seaside neighborhoods.
- *LUD-8:* A safe urban environment oriented and scaled to pedestrians and bicyclists.
- *LUD-10:* A network of pedestrian-oriented, human-scale and well-landscaped streetscapes throughout Seaside.
- LUD-18: Design new Seaside neighborhoods on former Fort Ord lands sustainably linking land use, transportation, and infrastructure development to increase non-automobile travel, project sensitive habitat, and reduce infrastructure costs.
- LUD-23: Transform the City's northern area into a mixed-use economically vibrant Campus Town that serves the student population and leverages its geographic adjacency to CSUMB.
- *M-1:* A citywide network of "complete streets" that meets the needs of all users, including bicyclists, children, persons with disabilities, motorists, movers of commercial goods, pedestrians, public transportation, and seniors.

- *M-2:* Mobility options that serve the multimodal access and travel needs generated by new development in a manner suitable to the local context.
- *M-3:* Pedestrian facilities that connect land uses, address safety concerns, and support land use and urban design goals.
- *M-4:* Accessible regional connections to parks, recreational facilities, and open space.
- *M-5:* A citywide bicycle network that connects residential, commercial, educational and recreational uses, and earns Seaside the reputation of a bicycle-friendly city.
- *M-6:* Transit service that is frequent and convenient, and maximizes ridership potential for residents, employees and visitors.
- *M-7*: A safe transportation system that eliminates traffic-related fatalities and reduces non-fatal injury collisions.
- *M-8*: Well-managed commercial parking that supports Seaside's businesses and limits impacts on adjacent residential neighborhoods.

Seaside 2040 also denotes the planned street, bicycle, pedestrian, and transit networks near the Plan. The Plan expresses the following complete streets policy.

> *1.3.2 Utilize a "complete streets" policy to ensure that all thoroughfares are designed for character as well as capacity; that all forms of mobility are considered; and that safety for pedestrians and bicyclists is considered alongside safety for vehicle occupants.*

Using the policy guidance described above, the Plan includes street cross-sections that minimize the crossing distances of pedestrian and bicyclists at most intersections by using narrow travel lanes and traffic calming features like curb extensions at intersections.

The Plan proposed intersection and street improvements conform to *Seaside 2040* transportation goals by including the following complete street features:

- Roundabouts: Two roundabouts are proposed at the intersections of General Jim Moore / Lightfighter Avenue and General Jim Moore / Gigling Avenue. Both roundabouts are proposed as two-lane roundabouts as seen in **Figure 2**. Properly designed and implemented roundabouts give access for all modes of travel, while calming and slowing vehicular traffic. For projects with a multimodal focus, roundabouts can improve vehicular circulation without significantly impeding bicycle and pedestrian travel.
- New Signalized Intersection: The Plan minimizes the use of signalized intersections to one new traffic signal at General Jim Moore Boulevard and the new Central Street (located north of Gigling Avenue). This traffic signal would serve as an access point into the Commercial Center.
- Complete Streets: The Plan's streets are designed with multimodal facilities that allow for multiple modes to travel safely and comfortably along the road, such as bike lanes, comfortable pedestrian

walkways, transit stops, and multi-use paths. There are five roadway types within the Plan as described below and shown in **Figure 3**, in addition to General Jim Moore Boulevard and Lightfighter Avenue.

- Main Street 1A – These streets serve pedestrians, bicycles, and slow-moving vehicles to access various uses and destinations. They will have one travel lane in each direction and curbside parking lanes on both sides. Streets designated as Main Street 1A do not have bicycle facilities; whereas streets designated as Main Street 1B will have Class II bicycle facilities.
- Main Street 2 – This is an extension of Second Avenue. It will have one travel lane in each direction and curb-side parallel parking.
- Main Street 3 – This roadway type is designed for slow-moving vehicular traffic and bicycles share the road. It will have one travel lane in each direction, and has mostly diagonal parking on both sides.
- Local Street – This roadway type is designed for pedestrians, bicyclists, and slow-moving vehicles. They will have one travel lane in each direction with curbside parking.
- Alley – Alleys provide access to the interior of blocks in order to allow for access to garages and surface parking. Parallel parking is either not provided or only provided on one side of the street.

The Plan proposes new multiuse paths and a High-Intensity Activated crossWalK (HAWK) beacon along General Jim Moore Boulevard.

- Multiuse paths: Wide paths for bicyclists and pedestrians provide separate space for non-vehicular modes. Separating these modes both reduce conflicts with drivers and increase the likelihood that travelers would bike or walk instead of drive though the area.
- High-Intensity Activated crossWalK Beacon: The HAWK beacon is a traffic control device that stops road traffic to allow for protected pedestrian crossings. A HAWK is proposed at General Jim Moore Boulevard at Colonel Durham Street. A curb bulb-out and a median refuge area would also be installed at the HAWK beacon.
- Bicycle facilities: Class II bicycle lanes are provided along key streets including Lightfighter Drive, Malmedy Road, Sixth Avenue, Gigling Road, and General Jim Moore Boulevard to connect to existing and planned bicycle routes in the area.

Every street in the Plan area is designed to accommodate bicycle traffic. Most of the new streets are designed for slow-moving traffic with one travel lane in each direction. Five major roadways propose Class II bicycle lanes and the remaining roadways, proposed Class III bicycle routes. The following policies are proposed for use in the Plan:

- Continue with the extension of the Fort Ord Recreational Trails and Greenway (FORTAG) networks as well as other bicycle facilities that support a connected citywide bicycle network.
- Maintain a vehicular speed limit of 25 miles per hour or less on all roadways with a designated Class III bicycle route.

- Provided enhanced pedestrian crossings, such as high visibility crosswalks or Rectangular Rapid Flashing Beacons (RRFB), when driver yielding compliance is low and pedestrian traffic is high.

Recent Changes to CEQA Transportation Analysis

In 2013, the California Senate adopted Senate Bill (SB) 743, which changed the way transportation analyses are conducted under the California Environmental Quality. Historically, transportation analyses under CEQA have focused upon LOS metrics, which measured the amount of vehicular delay and congestion. Under SB 743, Section 1(a)(2) and 1(b)(2) the legislature adopted findings which state:

> Transportation analyses under the California Environmental Quality Act...typically study changes in automobile delay. New methodologies under the California Environmental Quality Act are needed for evaluating transportation impacts that are better able to promote the state's goals of reducing greenhouse gas emissions and traffic-related air pollution, promoting the development of a multimodal transportation system, and providing clean, efficient access to destinations...[and to] [m]ore appropriately balance the needs of congestion management with statewide goals related to infill development, promotion of public health through active transportation, and reduction of greenhouse gas emissions.

SB 743 established new CEQA Guidelines with "criteria for determining the significance of transportation impacts of projects ...[which] shall promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses." Consequently, under SB 743, automobile delay, as described solely by level of service or similar measures of vehicular capacity or traffic congestion shall not be considered a significant impact on the environment. (Pub. Res. Code § 21099(b)(2).) The Office of Planning and Research concluded that "[g]enerally, vehicle miles traveled is the most appropriate measure of transportation impacts. (CEQA Guidelines § 15064.3(a).) SB 743 was adopted with a series of similar laws by the California Legislature.

This includes the Complete Streets Act (Assembly Bill 1358; Gov. Code § 65302), which provides for the creation of General Plan Circulation Element policies which "plan for a balanced multimodal transportation network that meets the needs of all users of streets, roads, and highways." The legislature's stated purpose of this bill was to "fulfill the commitment to reduce greenhouse gas emissions, make the most efficient use of urban land and transportation infrastructure, and improvement public health by encouraging physical activity...to reduce vehicle miles traveled and to shift from short trips in automobile to biking, walking, and use of public transit." Similar concepts were incorporated into Senate Bill 375 in 2008, which provides for regional transportation planning to achieve certain goals for the reduction of greenhouse gas emissions

from automobiles and light trucks. This includes changes in land use patterns to improve transportation efficiency. (SB 375, § 1(c); Gov. Code § 65080(b)(2)(B).)

More recently in 2017, the legislature added twelve new findings which explain, in part, that "California has a housing supply and affordability crisis of historic proportions." (AB 1515 (2017].) The legislature has further noted that "the lack or housing…is a critical problem that threatens the economic, environmental. and social quality of life in California…Among the consequences of those actions are…*reduced mobility,* urban sprawl. *excessive commuting, and air quality deterioration*…" (Government Code 65589.S(a).)

Consistent with the legislative directives discussed above, this document includes analysis utilizing new VMT metrics. While a LOS analysis has also been included for addressing pre-existing Circulation Element policies in the City's *2004 General Plan*, this LOS analysis is not considered an environmental impact under CEQA. Furthermore, as acknowledged under the Complete Streets Act, existing *2004 General Plan* LOS policies must be balanced with other competing multimodal transportation policies in the City's *2004 General Plan* and new *Seaside 2040*.

Study Area and Analysis Scenarios

This TA presents an environmental analysis, for CEQA purposes and a transportation LOS analysis. The forecasts and study scenarios are different for each type of analysis based on what area of transportation is being analyzed and what type of analysis is being performed. For the VMT analysis, results from the AMBAG Regional Travel Demand Model (RTDM)[1] were used to calculate VMT, as described below. For the transportation LOS evaluation, forecasts were developed by adding traffic from projects under construction, approved, and/or pending to existing volumes to determine what specific improvements may be necessary to maintain operations as the Plan is constructed. These forecasts were used to evaluate intersections and freeway mainline and ramps. Additional scenario details are provided below.

Vehicle Miles Traveled

Two VMT analyses were performed in compliance with CEQA Guidelines. The first analysis method considers all miles of travel generated by the Plan and does not truncate trips within the AMBAG region. The second method considers all miles traveled within the AMBAG region and no travel outside of the region. These methods are further explained in **Chapter 4**.

The VMT analysis was evaluated under the following analysis scenarios:

[1] Information on the AMBAG Regional Travel Demand Model (RTDM) is available online at: https://ambag.org/programs-services/modeling. Including the detailed 2018 technical documentation: https://ambag.org/programs/Modeling/AMBAG_2018RTDM_TechnicalReport.pdf

Scenario 1: *Baseline (Existing) Conditions* – Vehicle miles traveled from the base year (2018) travel demand forecasting model from the Association of Monterey Bay Area Governments (AMBAG).[2]

Scenario 2: *Existing with Plan Conditions* – Vehicle miles traveled from the AMBAG base year (2018) model with the addition of the Campus Town Specific Plan.

Scenario 3: *Buildout Year (2034) Conditions* – Vehicle miles traveled estimated in year the Plan is estimated to be fully constructed (2034) without the Plan.

Scenario 4: *Buildout Year (2034) with Plan Conditions* – Vehicle miles traveled estimated in the year the Plan is estimated to be fully construction (2034) with the addition of the development allowed under Campus Town Specific Plan.

Scenario 5: *Cumulative (2040) Conditions* – Vehicle miles traveled from the future year (2040) travel demand forecasting model from AMBAG. This includes any land use updates as part of the City's proposed *Seaside 2040* General Plan, not including the Campus Town Specific Plan development.

Scenario 6: *Cumulative (2040) with Plan Conditions* – Vehicle miles traveled from AMBAG future year (2040) model with the addition of the development allowed under Campus Town Specific Plan.

Intersections

For the purposes of the vehicular LOS analysis, the effects of the Plan on the study area roadway facilities were determined by measuring the effect Plan traffic would have on intersection operations during the morning (7:00 to 9:00 AM) and evening (4:00 to 6:00 PM) peak periods. A total of 11 intersections were selected as study locations in consultation with City of Seaside staff. The study intersections are listed below:

1. Lightfighter Drive / First Avenue
2. Lightfighter Drive / Second Avenue
3. Lightfighter Drive / General Jim Moore Boulevard
4. Colonel Durham Street / Malmedy Road
5. Gigling Road / General Jim Moore Boulevard
6. Gigling Road / Malmedy Road
7. Gigling Road / Parking Flatts Cut-Off Road
8. Normandy Road / General Jim Moore Boulevard
9. Coe Avenue / General Jim Moore Boulevard

[2] The AMBAG travel demand forecasting model uses a 2015 base year. The model results from 2015 and 2040 were interpolated to obtain 2018 base year results. Formula: $VMT_{2018} = VMT_{2015} + (2018 - 2015) * [(VMT_{2040} - VMT_{2015}) / (2040 - 2015)]$.

10. Colonel Durham Street / Seventh Avenue
11. Gigling Road / Seventh Avenue

These intersections were evaluated under the following analysis scenarios:

Scenario 1: *Existing Conditions* – Existing traffic volumes.

Scenario 2: *Existing with Plan Conditions* – Scenario 1 volumes plus traffic generated by the Campus Town Specific Plan

Scenario 3: *Background Conditions* - Projected traffic volumes from project under construction or approved, but not yet constructed development.

Scenario 4: *Background with Plan Conditions* – Scenario 5 volumes plus traffic generated by the Campus Town Specific Plan

Scenario 5: *Cumulative Conditions* – Projected traffic volumes from projects under construction, approved, and pending development, and planned closure of Inter-Garrison Road on CSUMB campus and Eighth Street extension from Third Avenue to General Jim Moore Boulevard-Fourth Avenue.

Scenario 6: *Cumulative with Plan Conditions* – Scenario 4 volumes plus traffic generated by the Campus Town Specific Plan.

Freeway Mainline Operations and Ramp Queuing

The study freeway segments were selected in consultation with the City of Seaside and were counted in spring 2017 to establish Existing Conditions. The analysis evaluated the operations of the following freeway segments:

- State Route 1 between Lightfighter Drive and Del Monte Boulevard
- State Route 1 between Del Monte Boulevard and Canyon Del Rey Boulevard

The freeway ramps listed below provide access to the Plan area. This transportation analysis evaluated the off-ramp queuing to determine if additional lanes and/or storage space is needed to reduce queuing onto the freeway.

- State Route 1 Southbound Off-Ramp
  - Imjin Parkway
  - Lightfighter Drive
- State Route 1 Northbound Off-Ramp
  - Lightfighter Drive

These intersections were evaluated under the following analysis scenarios:

Scenario 1: *Existing Conditions* – Existing traffic volumes.

Scenario 2: *Existing with Plan Conditions* – Scenario 1 volumes plus traffic generated by the Campus Town Specific Plan

Scenario 3: *Cumulative Conditions* – Projected traffic volumes from projects under construction, approved, and pending development, and planned closure of Inter-Garrison Road on CSUMB campus and Eighth Street extension from Third Avenue to General Jim Moore Boulevard-Fourth Avenue.

Scenario 4: *Cumulative with Plan Conditions* – Scenario 4 volumes plus traffic generated by the Campus Town Specific Plan.

Report Organization

This report is divided into three sections with eight total chapters as described below:

- **Existing Conditions**
  - **Chapter 2 – Existing Conditions** describes the transportation system near the Plan site, including the surrounding roadway network, morning and evening peak hour turning movement volumes, existing bicycle, pedestrian, and transit facilities.
- **Environmental Analysis**
  - **Chapter 3 –Significance Criteria** presents the CEQA guidelines and other criteria for determining the significance of impacts.
  - **Chapter 4 – Vehicle Miles Traveled (VMT)** presents the estimated daily vehicle travel used for the greenhouse gas emissions analysis. This chapter also includes a SB 743 VMT assessment.
  - **Chapter 5 – Transit, Bicycle, and Pedestrian Evaluation** considers applicable policies, regulations, goals, and guidelines to evaluate the effects of the Campus Town Specific Plan on the nearby transit, bicycle, and pedestrian facilities.
- **Transportation Level of Service**
  - **Chapter 6 – Level of Service Traffic Estimates** describes the Plan trip generation, distribution and assignment methods for intersections and ramps.
  - **Chapter 7 – Intersection Operations** presents the level of service results for the 11 study intersections under eight scenarios. This chapter includes an evaluation of potential secondary effects of the proposed improvements on the transit, bicycle, and pedestrian facilities.
  - **Chapter 8 – Freeway Operations** presents the freeway mainline density calculations and off-ramp queuing results for the three ramps that provide access to the Campus Town Specific Plan area.

- **Chapter 9 –Site Access and Circulation** presents intersection operational improvements, pedestrian circulation at a mid-block crosswalk on General Jim Moore Boulevard, and the Plan's proposed parking policies.

Chapter 10 – Construction Traffic presents the estimated peak trip generation during the construction period and provides operations considerations for the construction traffic management plan.

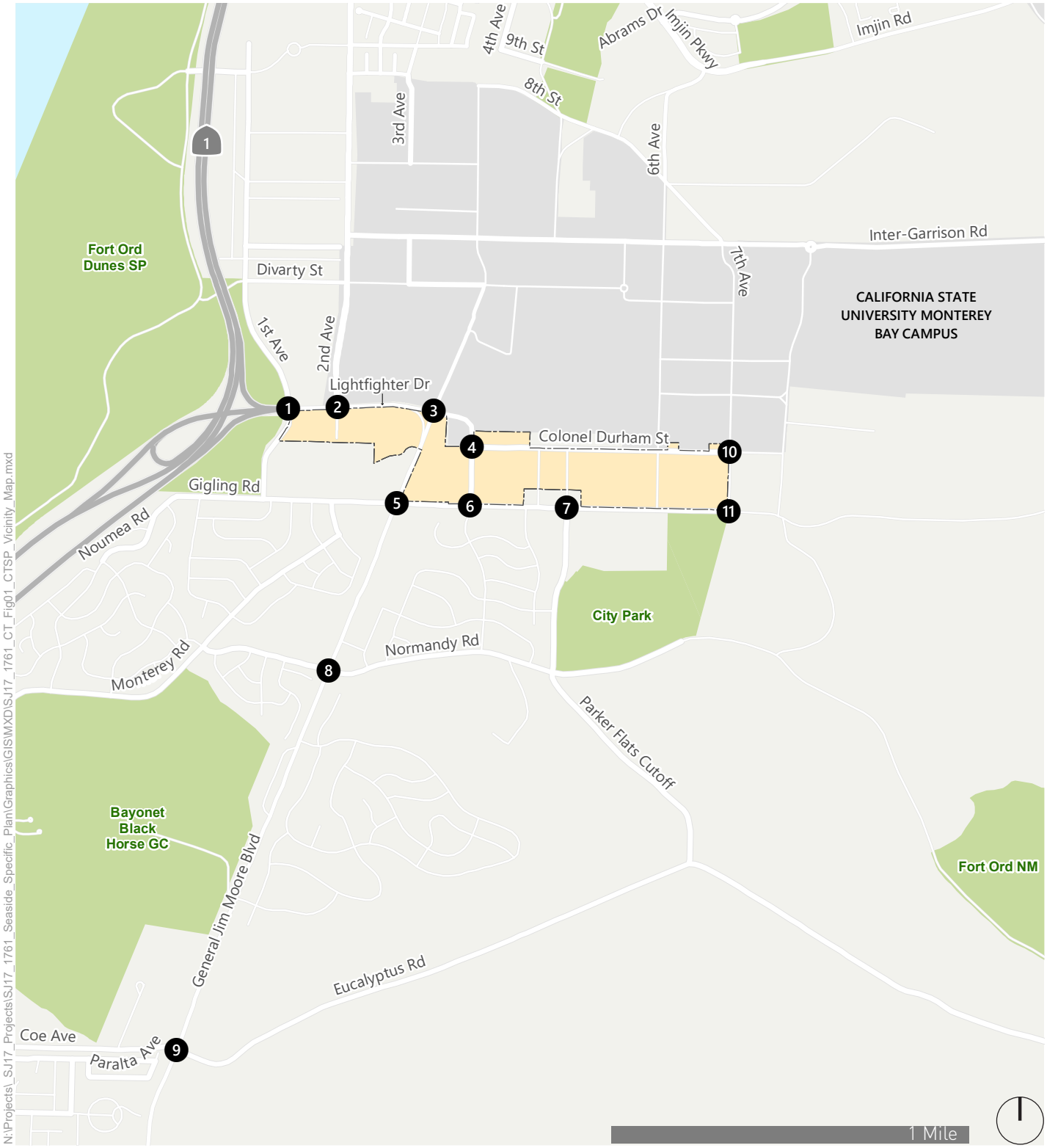
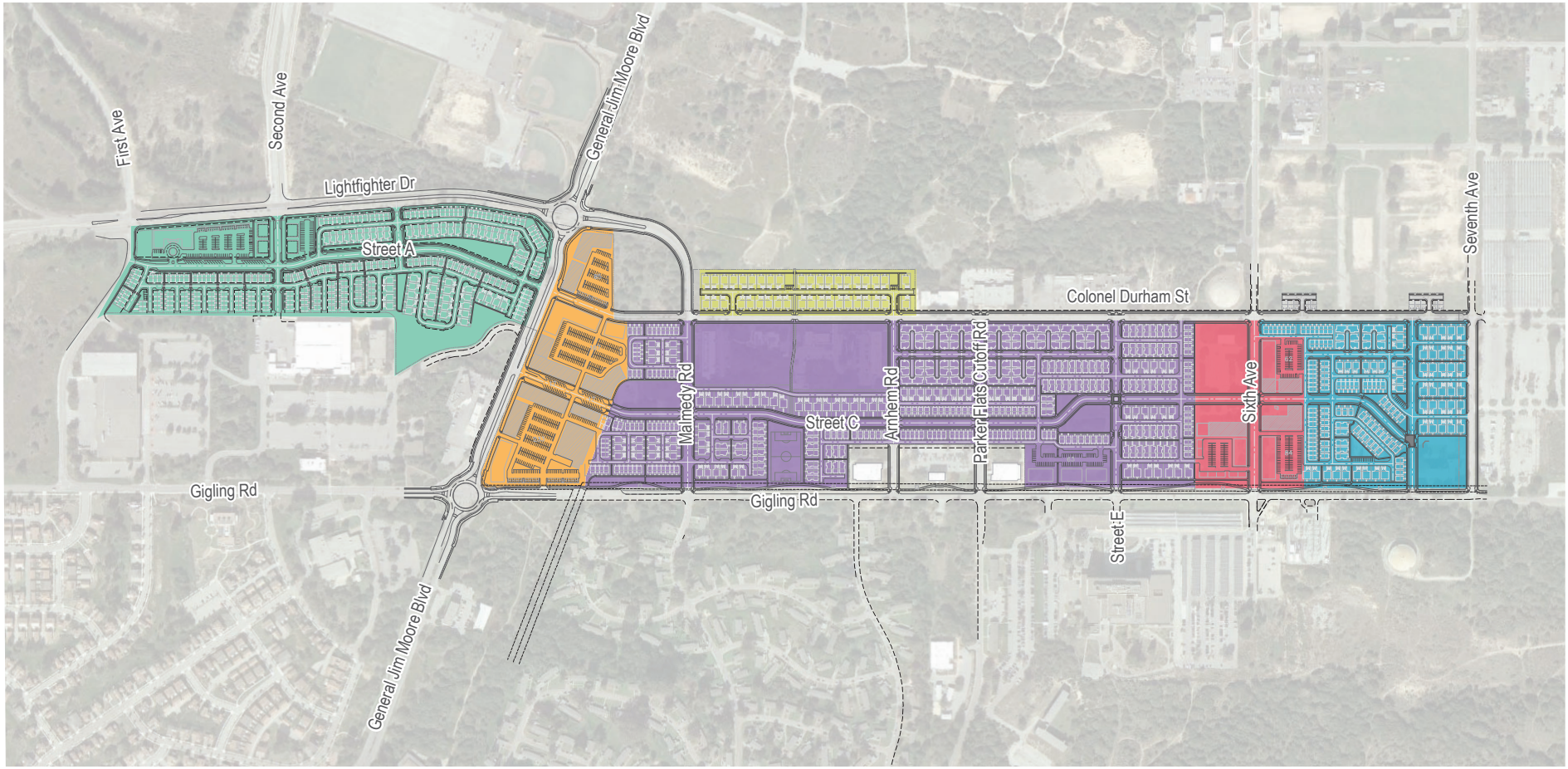


Figure 1

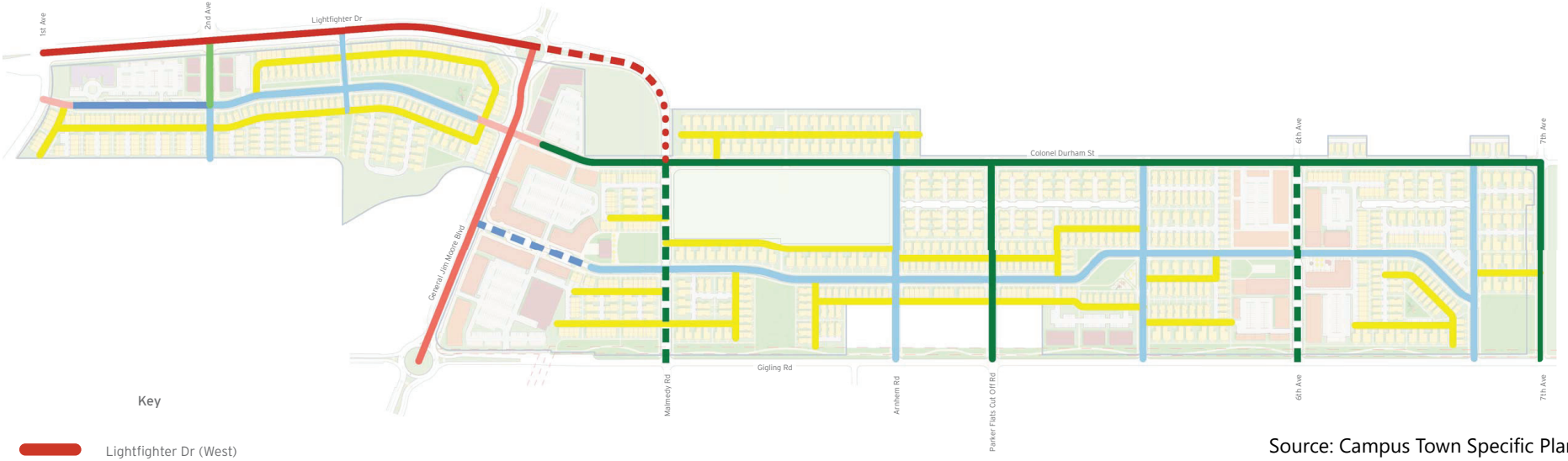
Campus Town Specific Plan Vicinity Map



Source: Ruggeri - Jensen - Azar

Figure 2

Campus Town Specific Plan Site Area



Source: Campus Town Specific Plan

Key

- Lightfighter Dr (West)
- Lightfighter Dr (East)
- Lightfighter Dr (at Malmedy Rd)
- General Jim Moore Blvd
- Main Street - 1 A
- Main Street - 1 B
- Main Street - 2
- Main Street - 3 A
- Main Street - 3 B
- Local Street Entry
- Local Street - 1
- Alley - 1 or 2

N

0 50 100 ft 200

Figure 3

Proposed Roadway Classifications

2. Existing Conditions

This chapter describes the Existing Conditions of the streets, pedestrian and bicycle facilities, and transit service near the Plan site. It also presents existing vehicle volumes, and operations for nearby intersections and freeway segments.

Existing Roadway Network

Existing Street System

Regional access to the Plan area is provided by State Route (SR) 1. Primary local access to the Plan site is through Second Avenue, General Jim Moore, Sixth Avenue, and Seventh Avenue on the north side of the Plan, Lightfighter Drive and Gigling Road on the west of the Plan, General Jim Moore Boulevard and Parker Flats Cutoff on the south side of the Plan, and Colonel Durham Street and Gigling Road on the east side of the Plan. These streets are described below and illustrated in **Figure 1**.

State Route 1 (SR 1) is a state highway within Monterey County, providing access to Watsonville and Santa Cruz to the north via Seaside, Marina, and Castroville, and to San Luis Obispo to the south via Monterey and Carmel. Through its connection to SR 156 in Castroville, it also provides access to US 101 and the greater San Francisco Bay Area. Through Marina and Seaside, SR 1 has a posted speed limit of 65 miles per hour (mph), and provides four lanes north of the Del Monte Boulevard interchange, six lanes south of Del Monte Boulevard interchange to the Fremont Boulevard/Del Monte Boulevard interchange, and returns to four lanes south of the Fremont Boulevard/Del Monte Boulevard interchange.

Second Avenue connects Lightfighter Drive in Seaside with Imjin Parkway in Marina, along the western edge of CSUMB. Second Avenue is a north-south arterial street in Marina and Seaside with four lanes from Imjin Parkway to Tenth Street, two lanes from Tenth Street to Divarty Street, and returns to four lanes south of Divarty Street. Second Avenue has right-turn and left-turn channelization on the entire stretch of the street. Second Avenue has bike lanes north of Divarty Street to Imjin Parkway. The speed limit on Second Avenue is 35 mph.

General Jim Moore Boulevard is a four-lane arterial with a 45-mph speed limit that extends from Canyon del Rey Boulevard to Lightfighter Drive in Seaside. In Marina, the street is a two-lane arterial from Lightfighter Drive to Fifth Street with a posted speed limit of 30 miles per hour.

Sixth Avenue is a north-south connector that connects the Plan and the CSUMB campus. Sixth Avenue extends from Gigling Road to the south to Eighth Street to the north.

Seventh Avenue is a north-south connector that connects the Plan and the CSUMB campus. Seventh Avenue extends from Gigling Road to the south to Inter-Garrison Road to the north.

Parker Flats Cutoff is a four-lane arterial with a 35-mph speed limit that extends from Canyon del Rey Boulevard to Lightfighter Drive in Seaside. In Marina, the street is a two-lane arterial from Lightfighter Drive to Fifth Street with a posted speed limit of 30 miles per hour.

Lightfighter Drive starts from the SR 1 ramps as an east-west street that continues as north-south street Malmedy Road at Colonel Durham Street from the SR 1 interchange to General Jim Moore Boulevard, the street is a four-lane divided major arterial with a 40-mph speed limit. East of General Jim Moore Boulevard, Lightfighter Drive is a two-lane minor arterial with a 25-mph speed limit.

Colonel Durham Street is a two-lane local street that extends between Lightfighter Drive to the west and Eighth Avenue to the east. The street has pedestrian facilities along one or both sides west of Sixth Avenue, and although it is a local street, the speed limit is 35 mph along its entirety.

Gigling Road is a two-lane arterial that extends from east of SR 1 to Eighth Avenue, and extends past Seaside as Watkins Gate Road that ends at Reservation Road. This street has a 30-mph speed limit.

Existing Truck Routes

SR 1 is identified as part of the regional truck network. The freeway is intended to move goods efficiently within the cities of Marina and Seaside, between outlying agricultural uses, and packing/distribution centers. Additionally, the freeway serves to separate truck traffic from local streets where the larger vehicles may conflict with other uses.

The City of Seaside designates and describe streets that permit commercial vehicles exceeding three tons as truck routes with appropriate signage. However, the City of Seaside does not have an existing truck route network; though, in the Mobility chapter of *Seaside 2040*, a truck route network is presented and polices are included to reduce impacts on residential neighborhoods.

Existing Intersection Volumes and Lane Configurations

Weekday morning (7:00 to 9:00 AM) and evening (4:00 to 6:00 PM) peak period intersection turning movement counts were conducted at the study locations in spring 2017 and 2018 on clear days with area schools in session. For the study intersections, the single hour with the highest traffic volumes during the count period was identified. Existing lane configurations and signal controls were obtained through field

observations. The peak hour volumes are presented on **Figure 4** along with the existing lane configurations. Detailed traffic count data are contained in **Appendix A**.

Existing Transit Service

The public transit system that connects the Plan to the greater Monterey and Salinas area is operated by the Monterey-Salinas Transit District (MST). Five bus routes serve stops in or along the boundary of the Plan: Routes 12, 18, 67, 74, and 75. **Figure 5** shows the map of the transit service and route access from the Plan to major points of interest throughout the region. **Table 1** shows the average weekday headway for each of the five routes.

Table 1: Existing Transit Route Headways

Route	Description (to/from)	Hours of Operation	Average Weekday Headway
12	The Dunes – NPS	6:45am to 5:38pm	Varies between one and four hours
18	Monterey – Marina	6:07am to 10:45pm	Every 60 minutes
67	Presidio – Marina	Friday from 2:15pm to 10:10pm Weekends from 10:15am to 10:10pm	Every 120 minutes on Fridays Every 60 minutes on weekends
74	Presidio – Toro Park	6:30am to 6:00pm	One route in each direction in the morning and one evening route towards Toro Park
75	Presidio – Marshall Park Express	5:55am to 9:56pm	Varies between 60 to 120 minutes

Source: Monterey Salinas Transit, November 2018.

Most of the bus stops serving the Plan stop along Lightfighter Drive to the north and along Gigling Road to the south. Route 12 has one stop at General Jim Moore Boulevard / Lightfighter Drive and three stops along Gigling Road between General Jim Moore Boulevard and Sixth Avenue to the east. Route 18 has one stop at General Jim Moore Boulevard / Lightfighter Drive and three stops along Gigling Road between General Jim Moore Boulevard and Noumea Road to the west. Routes 64, 74, and 75 all stop at bus stops along Gigling Road between General Jim Moore Boulevard and Noumea Road, and Route 64 stops at several more bus stops along Gigling Road between General Jim Moore Boulevard and Sixth Avenue.

As part of MST's coordination efforts with AMBAG, the areas around CSUMB (i.e. the Plan area) have been identified as a planned "2040 High Quality Transit" corridor in the 2014 Sustainable Communities Strategy, which has headways of 15 minutes or greater during the peak.

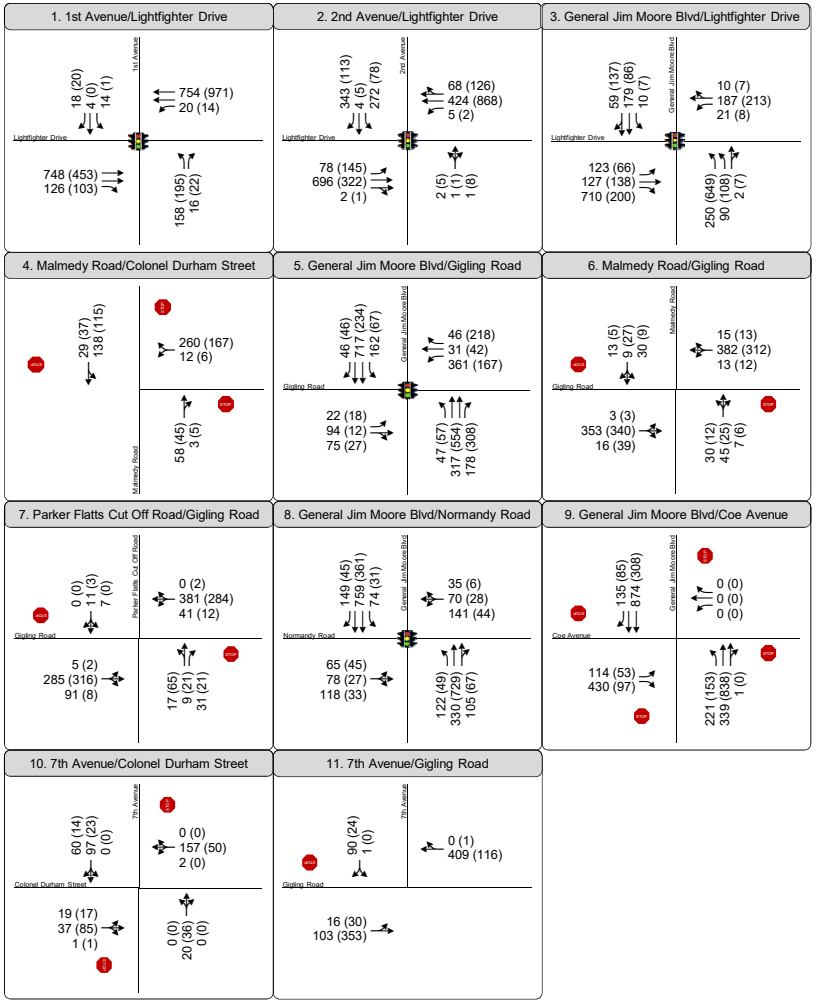


Figure 1
Traffic Volumes, Lane Configurations, and Level of Service
Campus Town Specific Plan - Existing Conditions

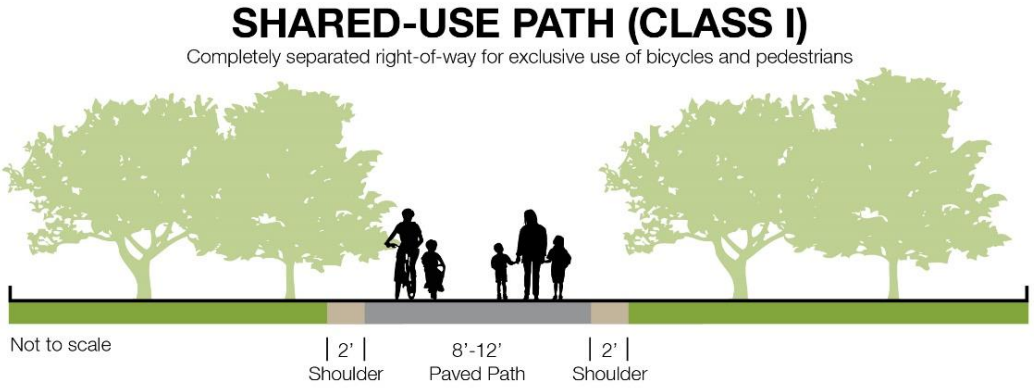
Students, staff, and faculty of CSUMB receive free unlimited access on all MST regular bus routes with their CSUMB Otter ID card. Additionally, all transit users with physical disabilities have access to the MST para-transit program (RIDES). This service operates on a point-to-point basis.

Existing Bicycle Facilities

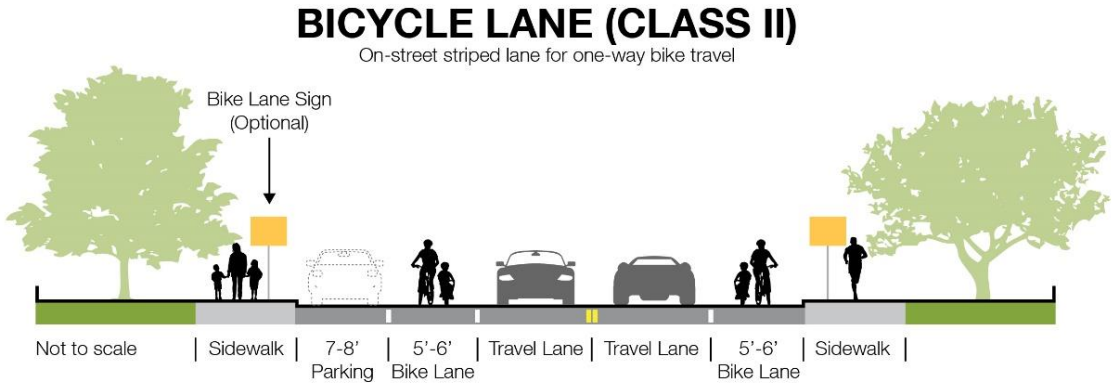
While a number of bicycle routes are planned, the only existing bicycle facility in the Plan area is a Class III bicycle route along Sixth Avenue as identified in the TAMC *Active Transportation Plan for Monterey County* (2018), which ends north of the Plan area and the CSUMB campus as seen on **Figure 6**. However, this route is not currently delineated with signage or pavement markings.

Bikeway planning and design in California typically relies on guidelines and design standards established by California Department of Transportation (Caltrans) in the Highway Design Manual (Chapter 1000: Bikeway Planning and Design). The City of Seaside uses these guidelines to create four general bikeway facility classifications, as outlined below.

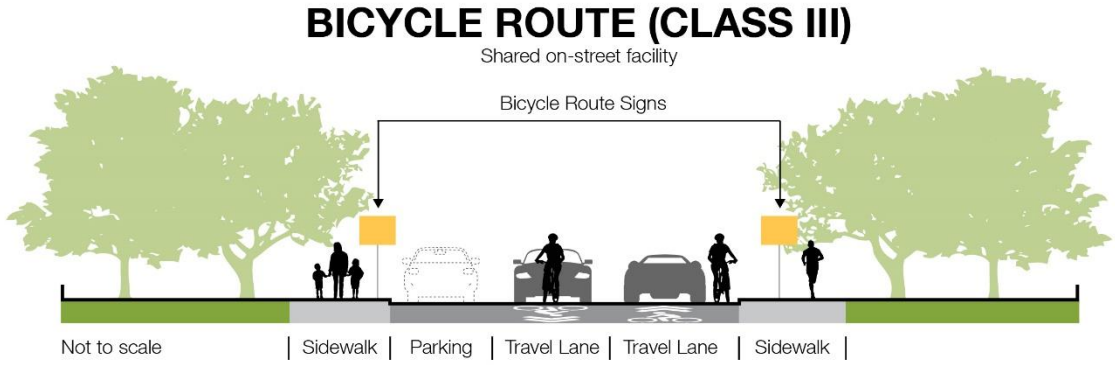
- *Class I Bikeways (Multi-Use Paths)* provide a completely separate right-of-way and are designated for the exclusive use of bicycles and pedestrians, with vehicle and pedestrian crossflow minimized. In general, bike paths serve corridors where on-street facilities are not feasible or where sufficient right-of-way exists to allow them to be constructed. Regionally, the Monterey Recreational Trail is a multi-use path that provides north-south connectivity for Seaside and Marina along SR 1. Additionally, a multi-use path exists along Second Avenue between Lightfighter Drive and Divarty Street. Class I bikeways have been proposed along Second Avenue north of Gigling Road, along General Jim Moore Boulevard south of Inter-Garrison Road, and through CSUMB from the Monterey Recreational Trail to Seventh Avenue.



- *Class II Bikeways (Bicycle Lanes)* are dedicated lanes for bicyclists generally adjacent to the outer vehicle travel lanes. These lanes have special lane markings, pavement legends, and signage. Bicycle lanes are at least five (5) feet wide. Adjacent vehicle parking and vehicle/pedestrian crossflow are permitted. Within the Plan, bicycle lanes have previously been proposed along Lightfighter Drive/Malmedy Road between General Jim Moore Boulevard and Gigling Road. Bicycle lanes are also proposed along Colonel Durham Street between Malmedy Road to Seventh Avenue. Surrounding the Plan, bicycle lanes are proposed along Parker Flats Cut Off Road south of Gigling Road, along Seventh Avenue north of Gigling Road, and along Monterey Road south of Gigling Road.



- *Class III Bikeways (Bicycle Boulevards/Bicycle Routes)* are designated by signs or pavement markings for shared use with pedestrians or motor vehicles, but have no separated bike right-of-way or lane striping. Bike routes serve either to: a) provide a connection to other bicycle facilities where dedicated facilities are infeasible, or b) designate preferred routes through high-demand corridors. Bike boulevards give bicycles priority on campus streets and allow them to use the whole lane. Bike boulevards use signs and pavement markings to inform motorists. A future bicycle route has been proposed along Gigling Road between Second Avenue and SR 1.



- *Class IV Bikeways (Separated Bikeways)* provide a right-of-way designated exclusively for bicycle travel within a street and are protected from other vehicle traffic by physical barriers, including, but not limited to, grade separation, flexible posts, inflexible vertical barriers such as raised curbs, or parked cars. Future Class IV facilities have been proposed along Gigling Road between Second Avenue and Seventh Avenue and along Lightfighter Drive between General Jim Moore Boulevard and SR 1.

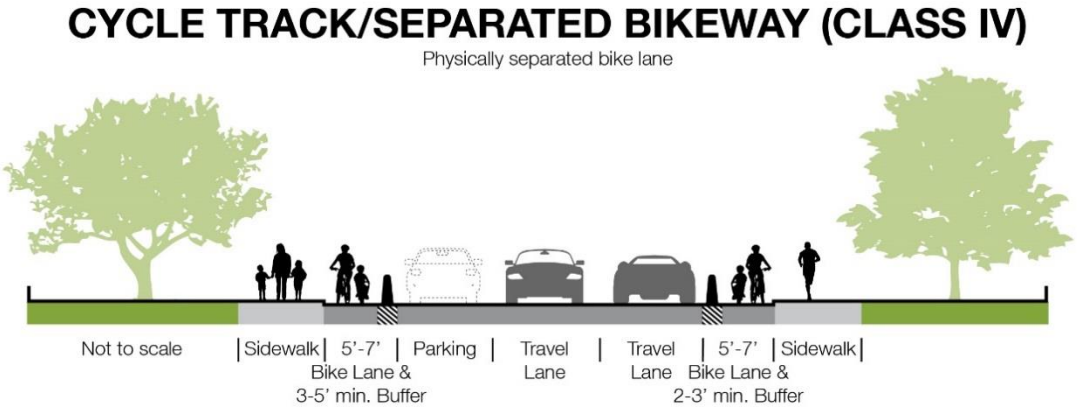


Figure 6 shows both existing and planned bicycle facilities within and surrounding the Plan.

Existing Pedestrian Facilities

The existing pedestrian network on the Plan site has many gaps. Some portions of the Plan, the areas along General Jim Moore Boulevard and Gigling Road have a walking environment with many destinations within a close walking distance. Other areas within and near the Plan lack sidewalks. **Figure 7** shows where existing sidewalks and sidewalk gaps are located on and near the Plan.

Arterials such as Lightfighter Drive and Gigling Road have sidewalks on one side of their street. Many local streets within and near the Plan do not have sidewalks and create gaps in the pedestrian network, although several local streets have sidewalks along one side of the street. In some areas, the natural topography is at a moderate grade that may impede pedestrian travel for some users. Some pedestrian crossings at intersections also do not have ADA-accessible ramps. Distances between major destinations are beyond a 10-minute walk coupled with a windy, foggy coastal climate can deter pedestrian or bicycle movement.

Source: Monterey-Salinas Transit, 2018

Specific Plan Area

California State University Monterey Bay Campus

Monterey-Salinas Transit (MST)

Regular Service Routes

Express/Select Trips

20 minutes: 26

60 minutes: 18, 16, 19, 25, 75, 76

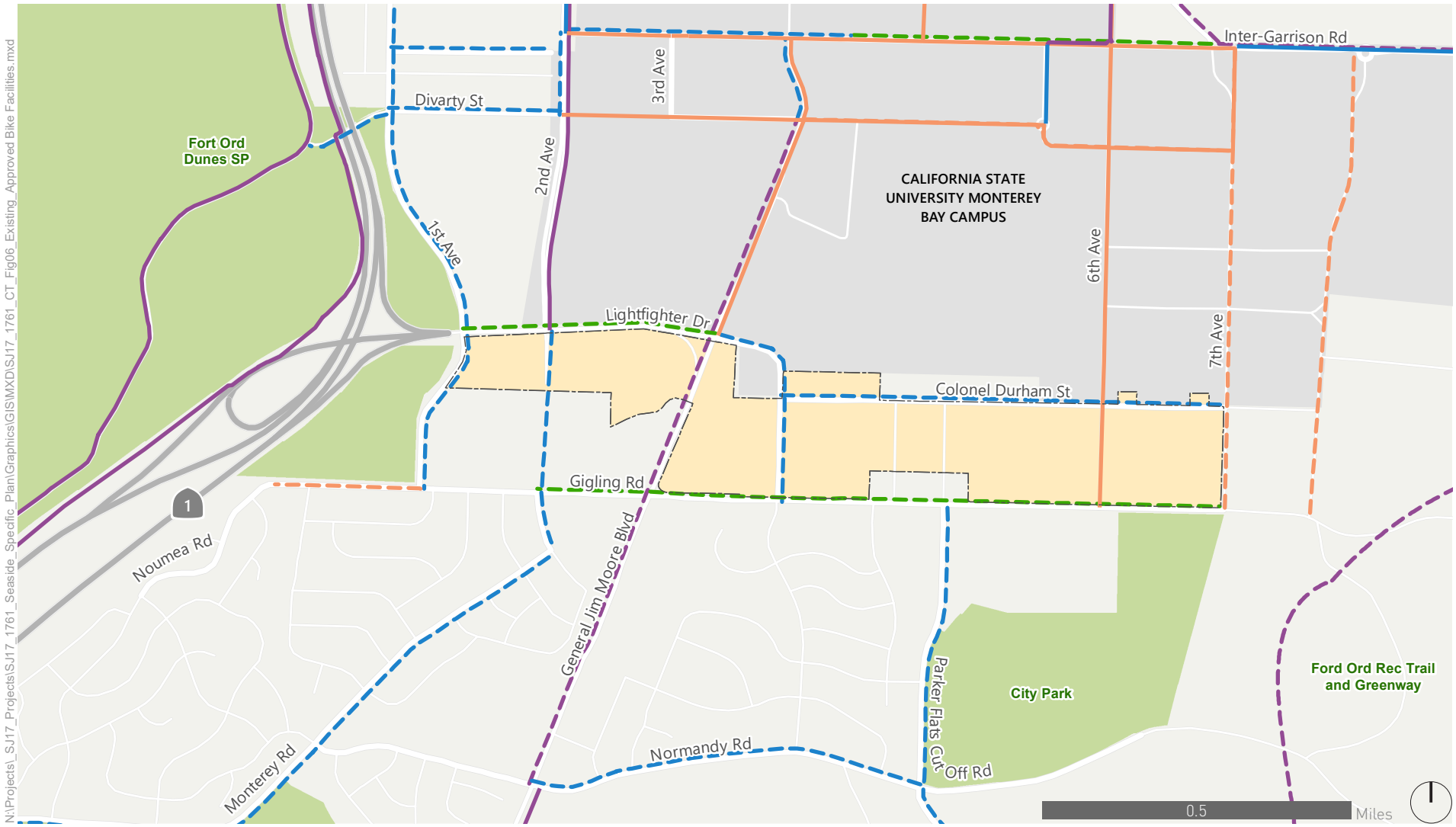
120 minutes: 67

Limited: 12, 74, 75

Planned Monterey LRT

Figure 5

Existing and Approved Transit Network



Specific Plan Area

California State University Monterey Bay Campus

Existing Bicycle Network

Class I - Shared Use Path

Class II - Bicycle Lane

Class III - Bicycle Route

Planned Bicycle Network

Class I - Shared Use Path

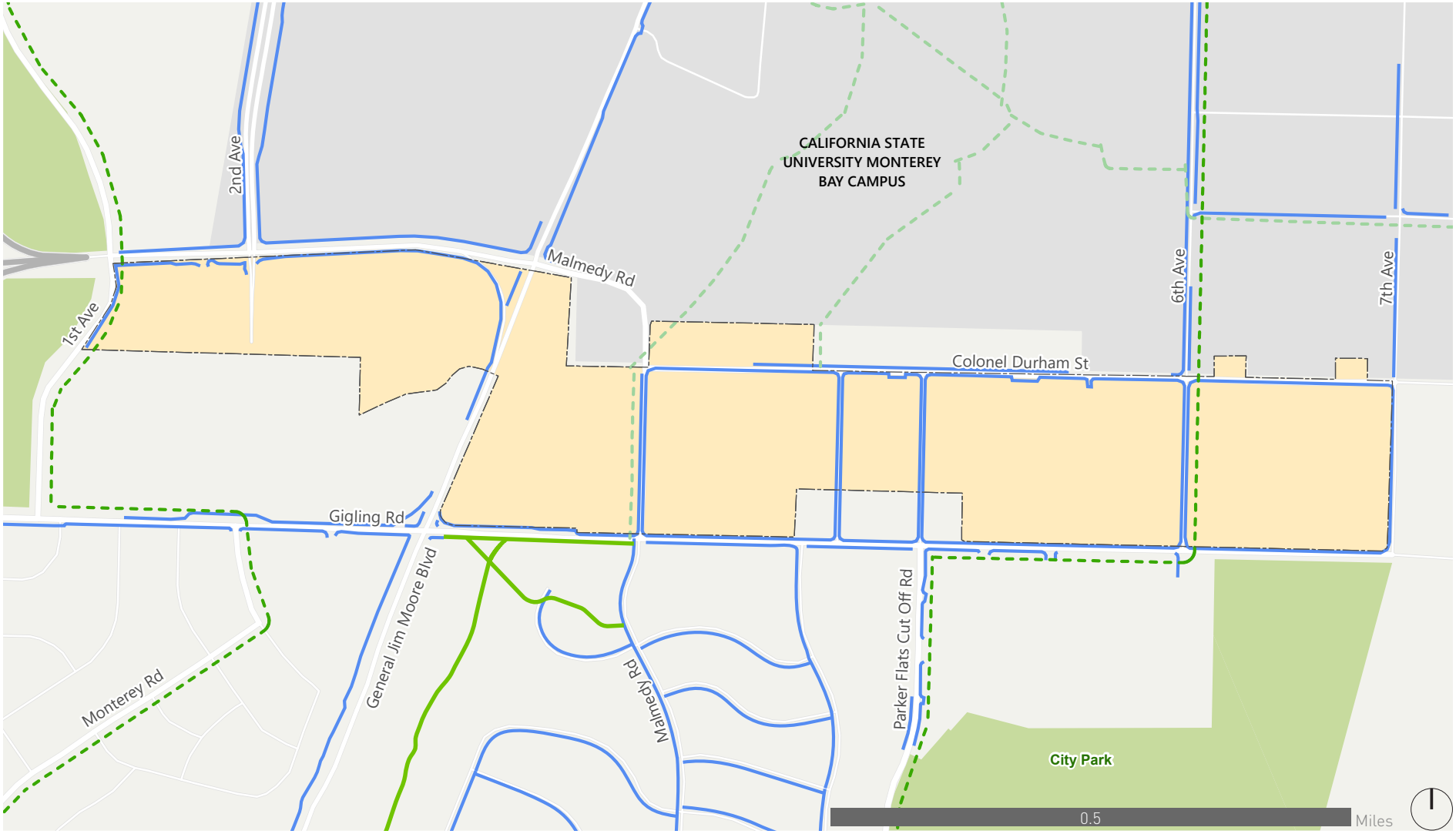
Class II - Bicycle Lane

Class III - Bicycle Route

Class IV - Cycle Track/Separated Bikeway

Figure 6

Existing and Approved Bicycle Facilities



Specific Plan Area

California State University Monterey Bay Campus

Existing Pedestrian Network

Existing Sidewalks

Existing Trails

Planned Pedestrian Network

FORTAG Trail

Trail

Figure 7

Existing and Approved Pedestrian Network

3. Significance Criteria

The detailed impact criteria presented below focuses on elements of the roadway system operations and its effects on users, including drivers, pedestrians, bicyclists, transit passengers.

SB 743 VMT Assessment Overview

As described in the CEQA Guidelines (2018), the Plan may cause a significant impact to VMT if an element of the Plan would:

- Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b).[3]

SB 743, signed by Governor Jerry Brown in 2013, changes the way transportation impacts are identified under the California Environmental Quality Act (CEQA). The CEQA Guidelines were updated in December 2018, such that vehicle LOS will no longer be used as a determinant of significant environmental impacts, and an analysis of VMT will be required. This SB 743 VMT assessment is one of the City of Seaside's first evaluations using VMT. A complete discussion of the VMT methods is presented in the VMT chapter.

CEQA Guidelines Section 15064.3(b)(1) provides recommended guidance on significance thresholds for VMT analysis for Land Use Projects. More specifically, this subsection states:

> 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.

OPR also provided more specific guidance in its Technical Advisory for implementing SB 743. Consistent with that guidance, one of the thresholds for project generated VMT, is whether the project would result in a VMT per service population which is 15 percent below the Existing Conditions VMT per service population for the AMBAG region (Santa Cruz, San Benito and Monterey Counties). Selection of the AMBAG region is based upon the area where most of the residents and workers are anticipated to reside and work within the

[3] CEQA Guidelines section 15064.3 describes the purpose, criteria, and applicability or determining the significance of transportation impacts using vehicle miles traveled.

Plan area.[4]As described in OPR's *Technical Advisory Prepared for Implementing SB 743* (December 2018), "lead agencies should not truncate any VMT analysis because of jurisdictional or other boundaries, for example, by failing to count the portion of a trip that falls outside the jurisdiction or by discounting the VMT from a trip that crosses a jurisdictional boundary." To ensure that the most trips generated by the Plan were considered, the AMBAG region was selected.

Plan Generated VMT per Service Population Threshold

As explained in the Technical Advisory prepared for Implementing SB 743:

> Based on OPR's extensive review of the applicable research, and in light of an assessment by the California Air Resources Board (CARB) quantifying the need for VMT reduction in order to meet the State's long-term climate goals, OPR recommends that a per capita or per employee VMT that is fifteen percent below that of existing development may be a reasonable threshold. [¶] Fifteen percent reductions in VMT are achievable at the project level in a variety of place types.[5] [¶] Moreover, a fifteen percent reduction is consistent with SB 743's direction to OPR to select a threshold that will help the State achieve its climate goals. As described above, section 21099 states that the criteria for determining significance must "promote the reduction in greenhouse gas emissions." In its document California Air Resources Board 2017 Scoping Plan-Identified VMT Reductions and Relationship to State Climate Goals[6], CARB assesses VMT reduction per capita consistent with its evidence-based modeling scenario that would achieve State climate goals of 40 percent GHG emissions reduction from 1990 levels by 2030 and 80 percent GHG emissions reduction levels from 1990 by 2050. Applying California Department of Finance population forecasts, CARB finds per-capita light-duty vehicle travel would need to be approximately 16.8 percent lower than existing, and overall per-capita vehicle travel would need to be approximately 14.3 percent lower than existing levels under that scenario. Below these levels, a project could be considered low VMT and would, on that metric, be consistent with 2017 Scoping Plan Update

[4] The City of Seaside and Monterey County jurisdictional boundaries were considered but rejected because the Plan land use could be constructed within another jurisdiction within the AMBAG region. Selecting the City of Seaside would be comparing neighborhoods only in the City of Seaside. Selecting the Monterey County jurisdictional boundary would have only compared jurisdictions within Monterey County. This mix of land uses could be built in one or more neighborhoods in the AMBAG region. Furthermore, the residents and employees of this Plan area will travel to complementary land uses outside the City of Seaside.

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

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

assumptions that achieve climate state climate goals… [¶] In summary, achieving 15 percent lower per capita (residential) or per employee (office) VMT than existing development is both generally achievable and is supported by evidence that connects this level of reduction to the State's emissions goals.

The threshold for Plan generated VMT per service population is 15 percent below the Existing VMT per service population for the AMBAG region:

- Regionwide: AMBAG region generated VMT per service population of 36.20 x 85% = 30.77.

The VMT per service population threshold set to 15 percent below Existing Conditions establishes the expectation that the Plan increases in density and diversity of land uses a would increase the use of walk, bicycle, scooter, shared vehicle and transit modes and decrease vehicle use. Therefore, a Plan generated impact would occur if:

- The daily project generated VMT per service population is above the regionwide VMT per service population threshold of 30.77.

The Existing with Plan Conditions, Buildout Year (2034) with Plan, and Cumulative (2040) with Plan Conditions VMT estimates for the Plan are compared to these thresholds to identify project and cumulative impacts. The Plan generated VMT comparison is done to determine if the proposed Plan will generate more or less VMT than the regional threshold. A Plan generated VMT below the regional threshold indicates the Plan area is likely not to rely on vehicle travel as much as other jurisdictions in the region. The Plan generated VMT is compared under different time horizons to test if the Plan area would remain a low VMT generator over time as the future land use and transportation network changes.

Plan's Effect on VMT Per Service Population

The threshold for the Plan's effect on VMT per service population is less than or equal to the respective Existing Conditions, Buildout Year (2034) Conditions, and Cumulative (2040) Conditions without the Plan VMT per service population:

- Existing Conditions: AMBAG region boundary VMT per service population of 15.20;
- Buildout Year (2034) Conditions: AMBAG region boundary VMT per service population of 16.06;
- Cumulative (2040) Conditions: AMBAG region boundary VMT per service population of 16.34.

Therefore, the Plan's effect on VMT impact would occur if:

- The proposed Plan under Existing with Plan Conditions causes the existing regionwide daily boundary VMT per service population to increase above 15.20; or

- The proposed Plan under Buildout Year (2034) with Plan Conditions causes the existing regionwide daily boundary VMT per service population to increase above 16.06; or
- The proposed Plan under Cumulative (2040) with Plan Conditions causes the cumulative regionwide daily boundary VMT per service population to increase above 16.34.

As shown above, the boundary VMT per service population is shown to increase over time. This means that overtime, as the AMBAG region population grows their travel behavior will become more reliant on vehicle travel by traveling more by vehicle and/or longer travel distance. The with Plan scenarios were compared back to their respective without Plan scenarios to determine if the Plan would have a notable effect on VMT such as generating excessive new VMT, shifting existing trips to/from other neighborhoods, and/or causing existing traffic to shift to alternate longer travel routes than the without Plan Condition.

Transit Service and Facilities

As described in the CEQA Guidelines (2018), the Plan may cause a significant impact to transit facilities and services if an element of the Plan would:

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

The transit analysis was conducted two ways: (1) transit capacity, and (2) the Plan's adherence to local regulation. For the transit capacity analysis, an impact occurs when the Plan creates demand for public transit above the capacity which is provided or planned. To determine the Plan's adherence to local regulation, significant impacts to transit service would occur if the Plan or any part of the Plan:

- Disrupts existing transit services or facilities;[7] or
- Conflicts with an existing or planned transit facility; or
- Conflicts with transit policies adopted by the City of Seaside, Monterey County, Fort Ord Reuse Authority, Transportation Agency for Monterey County, or Caltrans for their respective facilities in the study area.

As discussed in OPR's Technical Advisory for implementing SB 743, the addition of new transit users is generally not treated as an adverse environmental impact." (OPR Technical Advisory, p. 19.) As further described in Section 1, under *Recent Changes to Transportation Planning and Analysis*, the legislature is promoting public transit use to reduce environmental impacts.

[7] This includes disruptions caused by proposed Plan driveways on transit streets and impacts to transit stops/shelters; or impacts to transit operations from traffic improvements proposed or resulting from the Plan.

Pedestrian and Bicycle Facilities

As described in the CEQA Guidelines (2018), the Plan may cause a significant impact to bicycle and/or pedestrian facilities and services if an element of the Plan would:

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

The existing *2004 General Plan* describes related policies necessary to ensure pedestrian and bicycle facilities are safe and effective for City residents. Using the *2004 General Plan* as a guide, significant impacts to these facilities would occur when the Plan or an element of the Plan:

- Creates a hazardous condition that does not currently exist for pedestrians and bicyclists, or otherwise interferes with pedestrian accessibility to the site and adjoining areas; or
- Conflicts with an existing or planned pedestrian or bicycle facility; or
- Conflicts with policies related to bicycle and pedestrian activity adopted by the City of Seaside, Monterey County, Fort Ord Reuse Authority, Transportation Agency for Monterey County, or Caltrans for their respective facilities in the study area.

4. Vehicle Miles Traveled (VMT)

VMT estimates were made using the AMBAG model to calculate both the number of daily trips and the trip lengths. The VMT estimates are presented on a per service population (residents plus employees) basis. This metric is useful in distinguishing the effects of population and/or employment growth from the effects of changes in personal travel behavior. For example, population growth may cause an increase in total VMT, but if travelers change their behavior by using different travel modes or decreasing their trip lengths, then the VMT per service population metric would also decrease.

Results from the AMBAG model were provided by TJKM for use in this analysis. Additional information about the model, any changes that were made, and how the data was extracted can be found in the model documentation provided by TJKM as part of the draft *Seaside 2040* General Plan. VMT estimates were developed for the Plan area, for the following scenarios:

- Existing Conditions
- Existing with Plan Conditions
- Buildout Year (2034) Conditions
- Buildout Year (2034) with Plan Conditions
- Cumulative (2040) Conditions
- Cumulative (2040) with Plan Conditions

To establish the VMT threshold, the Existing Conditions Plan generated VMT per service population was prepared for the AMBAG region (Santa Cruz, Monterey, and San Benito Counties). The Plan's effects on VMT was evaluated under Existing with Plan Conditions, Buildout Year (2034) with Plan Conditions, and Cumulative (2040) with Plan Conditions for the AMBAG region.

VMT Estimation Process for SB 743 VMT Assessment Overview

As discussed in Chapter 1: Vehicle Miles Traveled, SB 743, signed by Governor Jerry Brown in 2013, changes the way transportation impacts are identified under the California Environmental Quality Act (CEQA). Specifically, the legislation directed the State of California's Office of Planning and Research (OPR) to look at different metrics for identifying transportation impacts. Following several years of draft proposals and related public comments, OPR revised the CEQA Guidelines and issued *Technical Advisory on Evaluating Transportation Impacts in CEQA* (December 2018) to assist practitioners in implementing the CEQA Guidelines revisions to use VMT as the preferred metric for assessing transportation impacts. The CEQA

Guidelines were updated in December 2018, such that vehicle LOS will no longer be used as a determinant of significant environmental impacts. This SB 743 VMT assessment is one of the City of Seaside's first evaluations using VMT. The following steps are necessary to fully implement an SB 743 VMT assessment:

1. Selecting a VMT calculation model

The City of Seaside selected the AMBAG travel model as the VMT calculation tool to estimate daily VMT.

2. Selecting the VMT accounting method(s)

This VMT analysis evaluates both Plan generated VMT and the Plan effects on VMT (using regional boundary VMT) to fully account for the VMT effects that may include changes to VMT generation from neighboring land uses and transportation network changes. Both methods are expressed on a per service population basis to distinguish the effects of population and/or employment growth from the effects of changes in personal travel behavior. Considering current state of practice for air quality, greenhouse gases, and energy consumption impact analysis, this analysis focuses on the VMT for all trip purposes and vehicle types. In general, VMT is used as an input for these other analyses a current state of practice to produce VMT estimates and forecasts that comply with CEQA guidelines expectations that have been reinforced through court decisions. Selecting the total VMT provides a complete picture of the VMT effects on the environment.

3. Calculating the baseline and cumulative regional VMT estimates

This VMT analysis evaluates both the short-term and long-term effects under Existing with Plan Conditions, Buildout Year (2034) with Plan Conditions, and Cumulative (2040) with Plan Conditions.

4. Setting a VMT threshold(s)

This analysis uses a threshold for Plan generated VMT per service population of 15 percent below the Existing Conditions VMT per service population for the AMBAG region. Selection of the AMBAG region is based upon the understanding that most of the residents and workers are anticipated to reside and work within the AMBAG region. Therefore, under this threshold a VMT impact would occur if the Plan's VMT per service population we not at least 15 percent below existing conditions. The City selected the 15 percent reduction based on the *Technical Advisory on Evaluating Transportation Impacts in CEQA* prepared by OPR (December 2018). The Plan's effect on VMT threshold is no net increase in the boundary VMT per service population (to isolate the travel behavior change from the Plan population growth) between no project and project conditions.

The AMBAG travel model is used to estimate daily VMT. To provide a complete picture of the effects of the Project on VMT, this analysis looks at the:

1. Plan generated VMT: The sum of the "VMT from" and "VMT to" the Plan.
2. Plan's effect on VMT: The Project's effect on VMT is an evaluation of the change in travel on all roadways within the AMBAG region.

The Project generated VMT per service population is used to evaluate how the Plan VMT changes between scenarios, considering both VMT increases due to growth and VMT reductions due to changes in travel behavior. However, the VMT estimates are primarily affected by the dominate land use in the Plan area, the residential development. Plan generated VMT is used to evaluate changes in the VMT rate at the Plan; however, it does not evaluate the Plan's effect on VMT on the entire roadway system[8].

The Plan land use changes are relatively small compared to the AMBAG region residential population and employment; therefore; it is likely to have more localized VMT effects such as shifting some existing trips to/from other neighborhoods. Furthermore, this Plan may cause existing pass-through traffic to shift to alternate routes as more Plan traffic uses the local streets within and near the Plan area and existing trips divert to use the retail within the Plan area. Therefore, the Project's effect on VMT is evaluated under Existing with Plan Conditions, Buildout Year (2034) with Plan Conditions, and Cumulative (2040) with Plan Conditions to assess the effects of the Plan land use changes on VMT by comparing the boundary VMT per service population[9] between no project and project conditions. As noted earlier, the analysis focuses on the VMT for all trip purposes and vehicle types (i.e., there is no separation of VMT by land use).

Plan Generated VMT per Service Population Estimation Method

The Plan generated VMT is the VMT from all vehicle trips for all trip purposes and types. It is calculated by summing the "VMT from" (II + IX) and "VMT to" (II + XI) a specified area. The VMT accounting is:

$$Plan\ Generated\ VMT = (II + IX) + (II + XI) = 2 * II + IX + XI$$

- Internal-internal (II): The VMT with both trip ends within the geographic area.
- Internal-external (IX): The VMT with an origin (I) within the geographic area and destination outside of the area (X).
- External-internal (XI): The VMT with an origin outside of the geographic area (X) and destination within the area (I).

[8] An often-cited example of how a project can affect VMT is the addition of a grocery store in a food desert. Residents of a neighborhood without a grocery store have to travel a great distance to an existing grocery store. Adding the grocery store to that neighborhood will shorten many of the grocery shopping trips and reduce the VMT to/from the neighborhood. This concept is likely to occur with the Plan.

[9] Boundary VMT captures all VMT on a roadway network within a specified geographic area including local trips plus interregional travel that does not have an origin or destination within the area.

Because the Plan generated VMT is a trip end based VMT, the intrazonal VMT and VMT between TAZs that are both in the geographic area are double counted. To calculate a Plan generated VMT rate, the Plan generated VMT is divided by the service population that generates the VMT. In other words, to cancel out the double counting, the Plan generated VMT is divided by the service population (residential population plus employment population), the generators of both trip ends of the VMT. This is necessary when expressing VMT as an efficiency metric that also represents the VMT generation rate of the service population.

Plan's Effect on VMT Estimation Method (Using Boundary VMT)

As noted earlier, the Plan's effect on VMT is evaluated using the boundary VMT, which captures all VMT on a roadway network within a specified geographic area including local trips plus interregional travel that does not have an origin or destination within the area. The boundary VMT method is used by some air districts because particulate air pollutants are typically measured with stationary monitoring devices that can only register emissions from the vehicle traffic passing a location. Further, most air districts have historically focused on criteria air pollutants. Regulations require this focus, which largely stems from the fact that air pollutants affect the population directly within the air district, while GHG emissions affect the entire planet; tracking the full amount of travel is more relevant than in air pollutant analysis. The geographical boundary method only considers traffic within the physical limits of the selected study area and does not include the impact of vehicles once they travel outside the area limits. The boundary VMT is divided by the service population (residents plus employees) to distinguish the effects of population and/or employment growth from the effects of changes in personal travel behavior.

VMT Forecasts and Estimates

For purposes of analyzing VMT, the AMBAG travel demand forecasting model was applied. The 2018 AMBAG Regional Travel Demand Model (RTDM) is a technical update to the previously calibrated and validated 2014 RTDM. The update uses a new base year 2015 to incorporate land use and transportation network changes. For the VMT analysis the base year, VMT was adjusted to 2018 conditions by interpolating between the 2015 and 2040 conditions. It has a 2040 future forecast year.

The model contains freeways, arterials, and local streets within the Monterey Bay region. Land uses are summarized in traffic analysis zones. The model includes similar detail in the rest of the AMBAG area of Santa Cruz and San Benito Counties. Information regarding VMT, service population and number of trip ends for the Plan traffic analysis zone (TAZ) and the AMBAG region was provided for the base year and 2040 future year by the City of Seaside's *Seaside 2040* General Plan transportation consultant, TJKM, on May

8, 2019. These future year estimates include growth assumed in Seaside as presented in the preliminary *Seaside 2040* General Plan.

SB 743 VMT Assessment Results

Plan Generated VMT per Service Population

The results of the Plan generated VMT is presented in **Table 2** for the four scenarios. The Plan generated VMT impact under Existing with Plan Conditions based on the regionwide threshold is determined as follows:

- Regionwide: The Campus Town Specific Plan generated VMT per service population of 22.37 is less than the three-county AMBAG region threshold of 30.77. Therefore, the Campus Town Specific Plan **would not have a significant project generated VMT impact under Existing with Plan Conditions**.

The Plan proposes residential development near regional destinations like the CSUMB campus and other nearby potential job sites resulting in a lower average VMT rate than the average regionwide VMT rate.

The regionwide project generated VMT impact under Buildout Year (2034) with Plan Conditions is determined as follows:

- Regionwide: The Campus Town Specific Plan generated VMT per service population of 25.22 is less than the three-county AMBAG region generated VMT per service population threshold of 30.77. Therefore, the Plan **would not have a significant Plan generated VMT impact under Buildout Year (2034) with Plan Conditions**.

The regionwide project generated VMT impact under Cumulative (2040) with Plan Conditions is determined as follows:

- Regionwide: The Campus Town Specific Plan generated VMT per service population of 26.29 is less than the three-county AMBAG region generated VMT per service population threshold of 30.77. Therefore, the Plan **would not have a significant Plan generated VMT impact under Cumulative (2040) with Plan Conditions**.

Under Existing with Plan Conditions, Buildout Year (2034) with Plan, and Cumulative (2040) with Plan Conditions, the Plan is not expected to have a Plan generated VMT per service population impact because the Plan generates VMT at a lower rate than the AMBAG region under Existing Conditions.

Table 2: Campus Town Specific Plan Generated Vehicle Miles Traveled Assessment

Scenario	Threshold[1]	VMT per Service Population [2,3]
Existing	30.77	0.00
Existing with Plan		22.37
Buildout Year (2034)		0.00
Buildout Year (2034) with Plan		25.22
Cumulative (2040)		0.00
Cumulative (2040) with Plan		26.29

Notes:

1. The threshold for Plan generated VMT per service population is discussed in more detail in Chapter 3.
2. Plan generated SB 743 VMT = Internal-Internal (II)x2 + Internal-External (IX) + External-Internal (XI) VMT.
3. Service population = residents + employees.

Source: Fehr & Peers, 2019.

Plan's Effect on VMT per Service Population

The results of the Plan's effect on regional VMT is presented in **Table 3** for the four scenarios. Regionwide Plan effect on VMT impacts under Existing with Plan, Buildout Year (2034) with Plan, and Cumulative (2040) with Plan Conditions are as follows:

- Existing with Plan Conditions: The regionwide boundary VMT per service population of 15.18 under Existing with Plan Conditions is lower than the regionwide threshold of 15.20. Therefore, the Plan **would not have a significant effect on VMT under Existing with Plan Conditions**.
- Buildout Year (2034) with Plan Conditions: The regionwide boundary VMT per service population of 16.04 under Buildout Year (2034) with Plan Conditions is lower than the regionwide threshold of 16.06. Therefore, the Plan **would not have a significant effect on VMT under Buildout Year (2034) with Plan Conditions**.
- Cumulative (2040) with Plan Conditions: The regionwide boundary VMT per service population of 16.32 under Cumulative (2040) with Plan Conditions is lower than the regionwide threshold of 16.34. Therefore, the Plan **would not have a significant effect on VMT under Cumulative (2040) with Plan Conditions**.

Table 3: Campus Town Specific Plan's Effect on Vehicle Miles Traveled Assessment

Scenario	AMBAG Boundary VMT[1]			VMT per Service Population [1,2]		
	No Plan	With Plan	Difference	No Plan	With Plan	Difference
AMBAG Region						
Existing Conditions	17,045,966	17,108,263	62,297	15.20	15.18	-0.02
Buildout Year (2034) Conditions	19,840,727	19,895,877	55,150	16.06	16.04	-0.02
Cumulative (2040) Conditions	20,888,763	20,941,233	52,470	16.34	16.32	-0.02

Notes:

1. Plan's effect on SB 743 VMT includes all trips within the AMBAG region, including pass-through trips.
2. Service population = residents + employees.

Source: Fehr & Peers, 2019.

5. Transit, Bicycle, and Pedestrian Evaluation

This chapter provides an overview of the transit, bicycle, and pedestrian evaluations and identifications of potential impacts.

Transit Evaluation

Transit Capacity Analysis

A transit capacity analysis was conducted for the nearby public bus routes to determine whether transit demand exceeds existing transit capacity. The analysis is based on peak hour volumes and the capacity of each transit route during the full peak hour. The peak load factor is evaluated during the PM peak hour for bus routes because the Plan is estimated to add more passengers in the PM peak hour than the AM peak hour.

OPR's December 2018 *Technical Advisory on Evaluating Transportation Impacts under CEQA* explains "When evaluating impacts to multimodal transportation networks, lead agencies generally should not treat the addition of new transit users as an adverse impact" (OPR Technical Advisory, p. 19). As also discussed in OPR's SB 743 amendment package transmittal letter "Legislative findings in Senate Bill 743 plainly state that CEQA can no longer treat vibrant communities, transit, and active transportation options as adverse environmental outcomes."

Transit Ridership

The Plan is served by several public transit service routes as identified in Chapter 2. The development of the Plan is anticipated to generate transit trips that reduce the Plan's vehicle trips. MainStreet's mixed-use trip reductions account for internal trips (trips between uses within the Plan) and external walk, bike, and transit trips. A mixed-use reduction of 10.8 percent and 9.4 percent was applied to morning peak hour and evening peak hour vehicle trips, respectively. An estimated 35 percent of these trips would be transit trips. (Thirty-five percent of the mixed-use trip reduction from MainStreet is due to access to transit ridership as shown in Chapter 6, **Table 6**.) As a result, the Plan would generate 50 morning peak hour public transit trips, and 68 evening peak hour public transit trips. The Plan transit ridership is shown in **Table 4**. For comparison the morning peak hour work trip person mode share for Monterey County is approximately two percent (2011-2015 American Community Survey (ACS), and 2012 California Household Travel Survey (CHTS)).

Table 4: Campus Town Specific Plan Transit Ridership

	AM Peak Hour			PM Peak Hour		
	Total	**In**	**Out**	**Total**	**In**	**Out**
Net Raw Plan Trips (A)	1,327	446	881	2,048	1,169	880
Mixed-Use Reduction Percent (B)	*10.8%*			*9.4%*		
External Walk, Bike and Transit Trips (C=A x B)	143	48	95	193	110	83
Transit Trip Percent (D)	*35%*					
Total Estimated Transit Ridership (C x D)	**50**	**17**	**33**	**68**	**39**	**29**

Notes:
1. du=dwelling units; rm=rooms; ksf=1,000 square feet
Source: Fehr & Peers, 2019.

Existing with Plan Transit Capacity Analysis

A public transit capacity analysis for buses was conducted during the weekday AM and PM peak hour when the Plan's estimated public transit ridership is highest. Routes 12, 18, 74, and 75 serve the Plan during the weekday peak hours.[10] The peak hour public transit trips were assigned to the bus routes serving the Plan site and added to each line's/route's existing peak-hour peak passenger load to produce the peak-hour peak boarding with the Plan. Next, this peak-hour peak boarding was divided by vehicle capacity to determine if the Plan creates demand for public transit above the capacity which is provided or planned. A summary of the boarding by route is presented in **Table 5** and the corresponding calculation sheets are presented in **Appendix B**.

Route 18, which runs from the Monterey Transit Plaza to the Marina Transit Exchange, has the highest existing ridership compared to the other weekday routes serving the Plan. The Plan is expected to increase the ridership for Route 18 to approximately 82 passengers during the PM peak hour. Overall, the Plan is not expected to substantially increase ridership for the existing transit routes beyond capacity.

[10] Route 67 is a new route that also serves the Plan site. It was not included in this analysis because it only operates on Friday evenings and weekends.

Table 5: Weekday Peak Hour Bus Route Capacity Analysis

Route[1]	Peak Hour	Total Peak Hour Capacity [A][1]	Average Existing Peak Hour Boarding[2]	Plan Boarding Per Route[3]	Total Boarding Per Route [B]	Over Capacity? (B/A>1?)
12	AM PM	123 74	8 6	5 4	13 10	No No
18	AM PM	118 118	22 33	19 36	41 69	No No
74	AM PM	56 56	33 7	19 5	52 12	No No
75	AM PM	54 147	13 41	7 23	20 64	No No

Notes:

1. Bus capacity is a product of the average number of buses serving the route during the weekday AM and PM peak hours, and sitting and standing capacity. Peak hour capacity was calculated by dividing the peak period capacity by two.
2. Calculations based on Spring 2017 Tuesday through Thursday peak period ridership data provided by MST. Peak hour boardings were calculated by dividing the peak period capacity by two.
3. Plan transit ridership per route estimated based on the proportion of ridership for the route.

Source: Fehr & Peers, 2019.

Transit Impacts

While the Plan would add between 50-70 more peak hour transit riders, the Plan is not anticipated to create demand for public transit above the existing capacity.

Implementation of the proposed Plan would not interfere with existing transit facilities or conflict with planned transit facilities or adopted transit system plans, guidelines, policies, or standards. The Plan would also increase the residential and commercial density in the area adjacent to the university, which will allow for increased opportunities to implement additional transit service. The Plan would also implement and design any new transit facilities within the Plan area per guidance from Monterey-Salinas Transit and be consistent with the *2004 General Plan* and the proposed *Seaside 2040* policies that support multimodal transportation options. Furthermore, implementation of the proposed Plan will likely result in new transit routes, to be determined by the Monterey-Salinas Transit, and would have a beneficial impact on transit ridership, circulation, and access. The Plan proposes a new bus stop and other transit amenities along General Jim Moore Boulevard between Lightfighter Drive and Gigling Road. Therefore, this Plan would have a **less-than-significant** impact on transit capacity and facilities, and no mitigation measures would be required.

Bicycle and Pedestrian Evaluation

Bicycle Impacts

While a number of bicycle routes are planned, the only existing bicycle facility in the Plan area is a Class III bicycle route along Sixth Avenue, which ends north of the Plan area and the CSUMB campus as seen on **Figure 6**. Within the Plan area, bicycle facilities are proposed on the following roadway segments:

- Gigling Road (Class I multi-use path located on the north side of Gigling Road),
- General Jim Moore Boulevard (Class II bicycle lanes),
- Lightfighter Drive west of the bend in the road between Colonel Durham Street and General Jim Moore Boulevard (Class II bicycle lanes),
- Lightfighter Drive south of the bend to Colonel Durham Street (Class I multi-use path),
- Malmedy Road (Class I multi-use path), and
- Sixth Avenue (Class II bicycle lanes).

Bicycle routes are provided on all other streets within the Plan area. The proposed Plan encourages bicycling by improving bicycle connectivity with a street grid network and off-street paths to shorten bicycling distances and provide a higher quality bicycle network (with lower vehicle speeds and volumes where possible).

Implementation of the proposed Plan would not interfere with existing bicycle facilities. The Plan includes detailed thoroughfare designs, which provide for multi-modal roadways, including bicycle paths. (Specific Plan Section 3.2 and 3.3.) The proposed bicycle facilities were compared to those identified in the TAMC Active Transportation Plan (2018). The vision of the Plan is: "Active transportation will be an integral, convenient and safe part of daily life in Monterey County for residents and visitors of all ages and abilities." The goals of the Plan are as follows:

- **Active Transportation Trips:** Increase the proportion of trips accomplished by biking and walking throughout Monterey County.
- **Safety:** Improve bicycle and pedestrian safety.
- **Connectivity:** Remove gaps and enhance bicycle and pedestrian network connectivity.
- **Equity:** Provide improved bicycle and pedestrian access to diverse areas and populations in Monterey County via public engagement, program delivery and capital investment.
- **Education:** Increase awareness of the environmental and public health benefits of bicycling and walking for transportation and recreation.
- **Quality Facilities:** Improve the quality of the bike and pedestrian network through innovative design and maintenance of existing facilities.

The proposed bicycle facilities would not conflict with the general intent and goals of the planned bicycle facilities or adopted bicycle system plans, guidelines, policies, or standards. There are three bicycle facilities proposed as part of the Plan that differ from the facilities planned within the TAMC *Active Transportation Plan* (2018) as listed below.

1. The Plan proposes to change the roadway classification of Colonel Durham Street from an arterial to a multi-modal street and is proposed to have a Class III bicycle route facility between Lightfighter Drive and Seventh Avenue. Under the Plan, this roadway will have retail storefronts and heavy pedestrian traffic with a goal to reduce the speeds to 25 miles per hour, making this an acceptable road for bicycle route. Under the Monterey County *Active Transportation Plan* 2018, Colonel Durham Road is planned as a Class II bicycle lane facility. The TAMC *Active Transportation Plan* recommendation for Class II bicycle lanes did not take into consideration the change in roadway classification proposed by the Plan. A Class III bicycle route is appropriate for the proposed roadway classification due to the lower speeds and roadway context and meets the intent of providing a bicycle facility along Colonel Durham Street.
2. Lightfighter Drive borders the northern boundary of the Plan west of General Jim Moore Boulevard and is proposed to have a Class II bicycle lane facility on the south side of Lightfighter Drive. Under the *Active Transportation Plan 2018*, this section of Lightfighter Drive is planned for a Class IV protected bicycle lane facility. Due to other environmental restrictions, which were not considered as part of the TAMC *Active Transportation Plan*, an 8-foot, Class II bicycle lane is proposed in place of a Class IV protected bicycle lane. This Class II bicycle lane meets the intent of providing a bicycle facility along Lightfighter Drive.
3. Second Avenue between Lightfighter Drive and the southern Plan boundary is proposed to have a Class III bicycle route. The Plan also proposes to maintain Second Avenue as a local roadway with heavy pedestrian traffic and a speed limit of 25 miles per hour, making this an acceptable road for a bicycle route. Under the Monterey County *Active Transportation Plan 2018*, Second Avenue is planned as a Class I multi-use path facility. Although this Plan proposes a different bicycle facility, a Class III bicycle route meets the intent of providing a bicycle facility along Second Avenue within the Plan area.

Implementation of the proposed Plan will create new bicycle facilities and would have a beneficial impact on bicycle circulation and access in comparison to existing conditions. Although this Plan proposes to construct a different bicycle facility along Colonel Durham Road, Lightfighter Drive, and Second Avenue, the Plan is determined to have a **less-than-significant** impact on bicycle facilities because it meets the intent of the planned bicycle facilities identified in the TAMC *Active Transportation Plan* (2018).

Pedestrian Impacts

The existing pedestrian network in the Specific Plan area has many gaps, including missing sidewalks. Arterial streets such as Lightfighter Drive and Gigling Road currently have inconsistent pedestrian sidewalks

where sidewalks are not provided on both sides of the street in some areas. Implementation of the proposed Plan will create new pedestrian facilities and would have a beneficial impact on pedestrian circulation and access. The Plan would eliminate many of these existing gaps in the pedestrian system and would provide increased intersection density to improve the pedestrian experience.

Where sidewalk gaps exist, the Plan would close those sidewalk gaps and/or create an alternative route for pedestrians. The proposed Plan encourages walking by improving pedestrian connectivity with a street grid network and off-street paths to CSUMB to shorten walking distances and improve pedestrian connections to transit stops and to adjacent buildings. The Plan also provides for increased intersection density (Policy 1.6.8), which are designed to encourage pedestrian access and activity. Furthermore, all of the policies, standards, and guidelines in the Plan have been oriented towards creating a pedestrian friendly environment. As discussed in Section 4.1 of the Specific Plan, the Plan incorporates numerous standards and guidelines including thoroughfare designs (with protected pedestrian crossings), building types, building frontage, landscaping, and streetscaping regulations designed to provide a pedestrian-oriented development.

Implementation of the proposed Plan would not interfere with existing pedestrian facilities or conflict with planned pedestrian facilities or adopted pedestrian system plans, guidelines, policies, or standards. Furthermore, implementation of the proposed Plan will create new pedestrian facilities and would have a beneficial impact on pedestrian circulation and access. Therefore, this Plan would have a **less-than-significant** impact on pedestrian facilities, and no mitigation measures would be required.

6. Level of Service Traffic Estimates

This chapter describes the Plan's peak hour trip generation, distribution, and assignment. The amount of traffic associated with the Campus Town Specific Plan was estimated using a three-step process:

1. **Trip Generation** – The *amount* of peak hour vehicle traffic entering/exiting the Plan site is estimated.
2. **Trip Distribution** – The *directions* trips would use to approach and depart the site are projected.
3. **Trip Assignment** – Trips are then *assigned* to specific roadway segments and intersection turning movements.

The results of the process are described in the following sections.

Vehicle Trip Generation

To capture the effect of the proposed land use mix on peak hour vehicle trip generation, the proposed Plan trip generation was estimated using the MainStreet web-based transportation analysis method. MainStreet creates adjustments to the Institute of Transportation Engineers (ITE) *Trip Generation Manual, 9th Edition* method of applying rates to the individual land uses and summing the results, which has been shown to overestimate traffic generation for mixed-use developments (MXDs) by an average of 35 percent.[11] Specifically, MainStreet accounts for the balanced mix of land uses, compact design, good neighborhood connectivity and walkability, and location efficiency of the proposed Plan. Further documentation on MainStreet may be found in **Appendix C**. **Appendix C** also includes a brief explanation of the land use types considered for use in the trip generation estimates.

Table 6 presents the peak hour trip generation summary for the Plan. It includes the base trip generation estimates and the mixed-use reductions estimated by the MainStreet model. The Plan's external vehicle trip generation (amount of traffic added to the streets) is approximately 1,086 morning peak-hour trips (387 inbound trips and 699 outbound trips) and 1,561 evening peak-hour trips (875 inbound trips and 687 outbound trips).

[11] MainStreet web-based transportation analysis adjusts standalone trip generation rates from the ITE Trip Generation Manual 9th or 10th Edition to reflect the trip generation rates of comparable mixed-use developments. Typically, the vehicle trip rates from the ITE Trip Generation Manual 9th Edition require a greater reduction than the vehicle trip rates from similar land uses described in the ITE Trip Generation Manual 10th Edition. Therefore, using the standalone trip rates from either the 9th or 10th edition of the ITE Trip Generation Manual does not influence then net trip generation estimate for this mixed-use development.

Vehicle Trip Distribution

The directions of approach and departure of Plan trips were based on the locations of complementary land uses and existing and future travel patterns in the area. This information was used to develop the Plan's vehicular trip distribution, as shown on **Figure 8.**

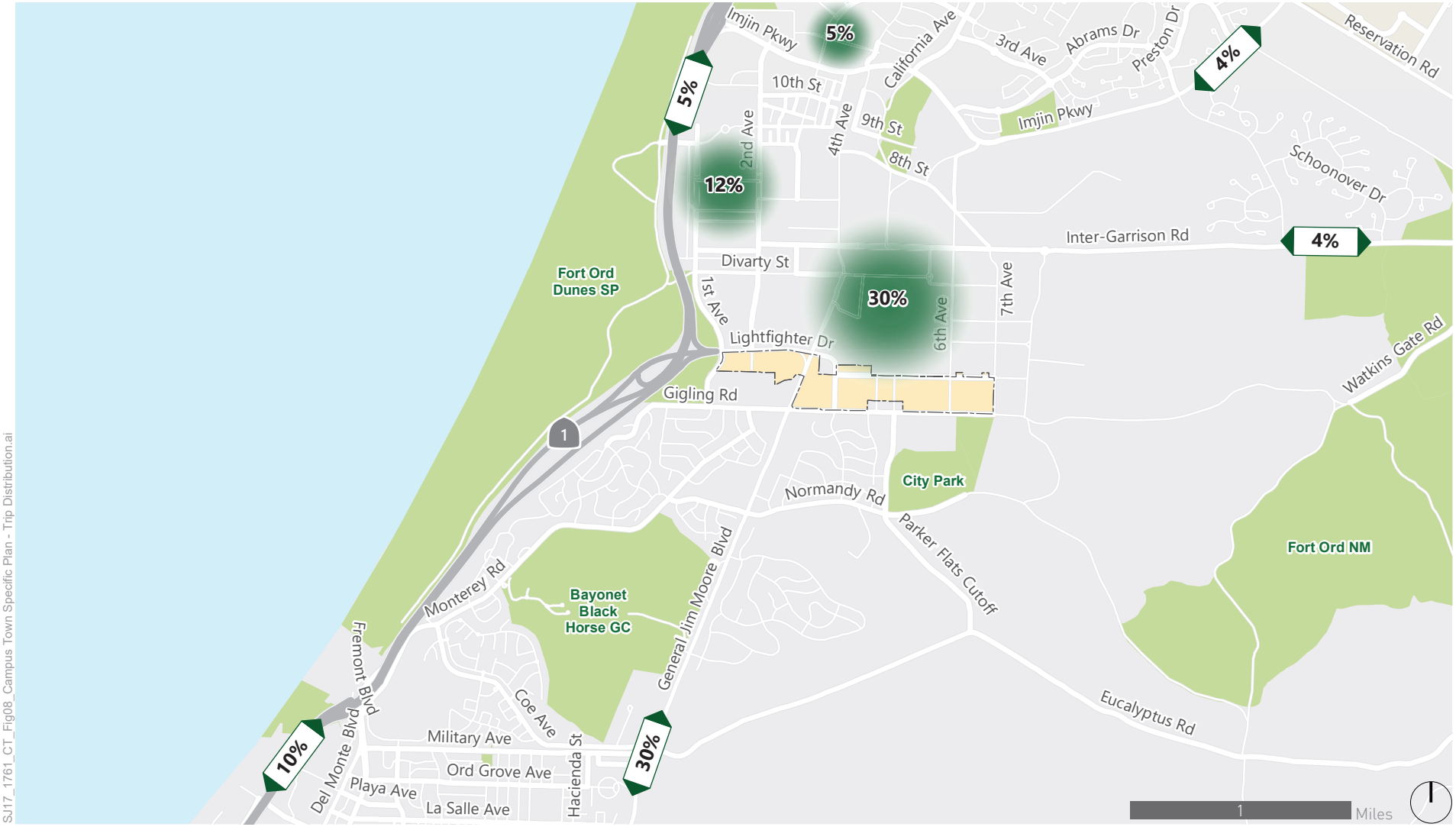
Table 6: Campus Town Specific Plan MainStreet Peak Hour Trip Generation for LOS Analysis

ITE #	Land Use Type	#	Unit[1]	AM Peak Hour			PM Peak Hour		
				Total	In	Out	Total	In	Out
Proposed Plan (A)									
210	Single-Family Detached Housing	885	du	664	166	498	885	558	327
220	Apartment	600	du	306	61	245	372	242	130
310	Hotel	250	rm	133	78	55	150	77	74
320	Motel (Youth Hostel)	75	rm	34	12	22	35	19	16
710	General Office Building	50	ksf	110	97	13	134	23	111
820	Shopping Center	150	ksf	144	89	55	557	267	290
	Net Raw Plan Trips (A)			**1,327**	**446**	**881**	**2,048**	**1,169**	**880**
MXD+ Trip Reductions (B)									
210	Single-Family Detached Housing			*-135*	*-34*	*-101*	*-202*	*-127*	*-75*
220	Apartment			*-62*	*-12*	*-50*	*-85*	*-55*	*-30*
310	Hotel			*-27*	*-16*	*-11*	*-34*	*-18*	*-16*
320	Motel (Youth Hostel)			*-7*	*-2*	*-5*	*-8*	*-4*	*-4*
710	General Office Building			*-22*	*-20*	*-2*	*-30*	*-5*	*-25*
820	Shopping Center			*-29*	*-18*	*-11*	*-127*	*-61*	*-66*
	Net MXD+ Trip Reductions (B)			***-282***	***-102***	***-180***	***-486***	***-270***	***-216***
Pass-By Trip Reductions (C)									
820	Shopping Center Pass-By Reduction of 25 Percent			*-23*	*-14*	*-9*	*-86*	*-41*	*-45*
	Net Pass-By Trip Reductions (C)			***-23***	***-14***	***-9***	***-86***	***-41***	***-45***
	Total Reductions (D=B+C)			***-305***	***-116***	***-189***	***-572***	***-311***	***-261***
	Total Trip Generation (A-D)			**1,086**	**387**	**699**	**1,561**	**875**	**687**

Notes:
1. du=dwelling units; rm=rooms; ksf=1,000 square feet
Source: Fehr & Peers, 2019.

Vehicle Trip Assignment

The Plan trips were assigned to the roadway system based on the directions of approach and departure discussed above. **Figure 9** and **Figure 10** shows the net new Plan trips assigned to each turning movement by intersection for the Background with Plan and Cumulative with Plan Conditions, respectively. The Plan trip assignment was added to the existing volumes to represent Existing with Plan Conditions.



SJ17_1761_CT_Fig08_Campus Town Specific Plan - Trip Distribution.ai

Figure 8

Campus Town Specific Plan - Trip Distribution

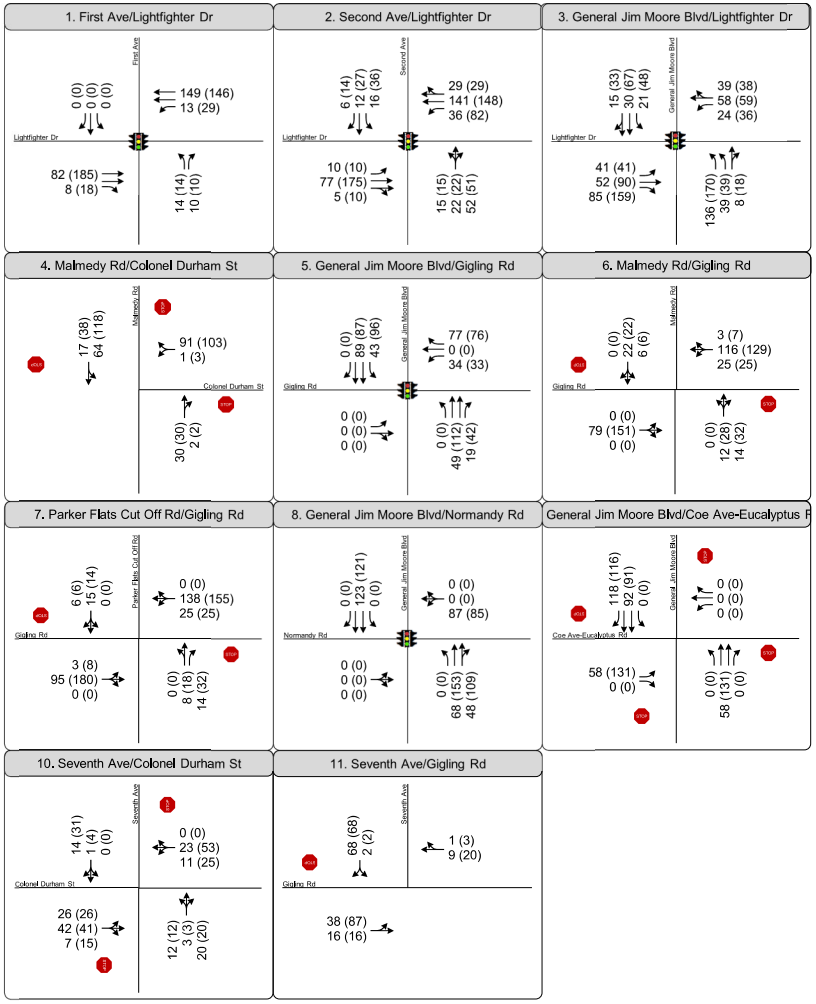


Figure 1
Traffic Volumes, Lane Configurations, and Level of Serive
Campus Town Specific Plan - Existing, Background No Dunes, and Background Trip Assignment

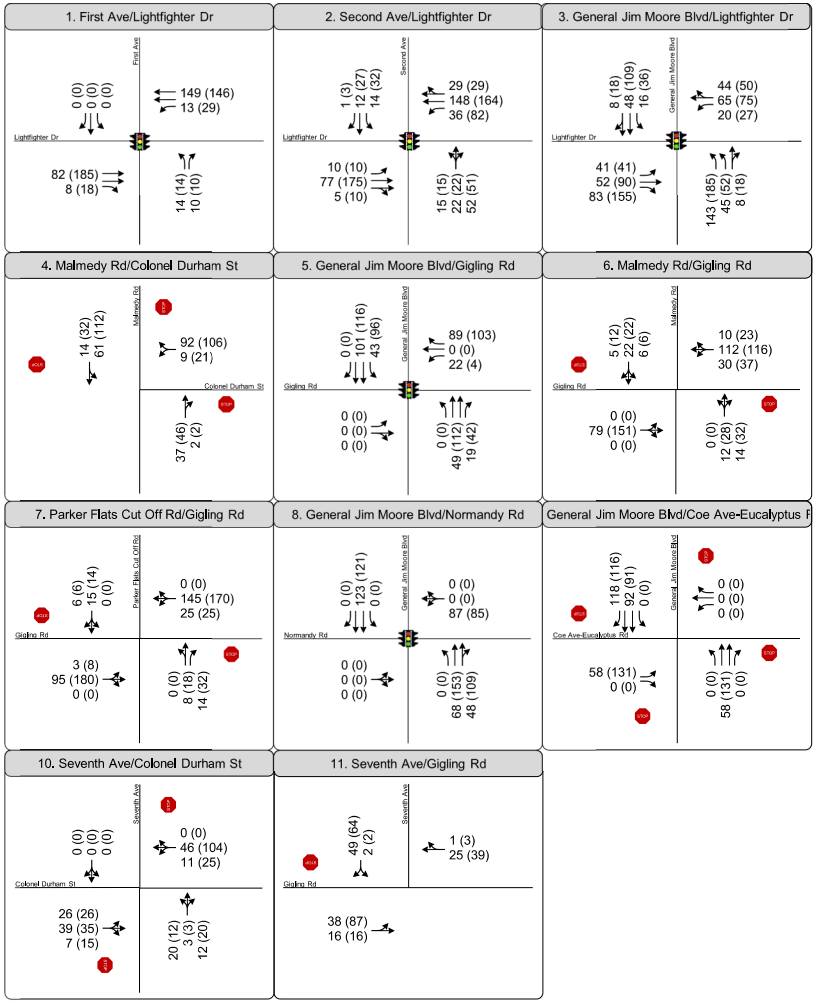


Figure 2
Traffic Volumes, Lane Configurations, and Level of Serive
Campus Town Specific Plan - Cumulative Trip Assignment

7. Intersection Operations

At the time this Transportation Analysis was prepared, the City of Seaside's currently adopted *2004 General Plan* was in in effect. The *2004 General Plan* includes a level of service policy that strives to maintain a LOS C standard during peak hours. However, this policy must be balanced with the other multimodal transportation policy directives in the *2004 General Plan* as a whole and must be interpreted in the context of subsequently enacted legislative amendments.

The State Office of Planning and Research acknowledges that given the long-term nature of a general plan, its diagrams and text should be general enough to allow a degree of flexibility in decision-making as times change." (Office of Planning and Research 2003 General Plan Guidelines, page 52.) Since the initial adoption of the City's General Plan Circulation Element in 2004, the legislature has adopted the Complete Streets Act (AB1358 [2008]) and SB 843 [2013], The Complete Streets Act requires that General Plan Circulation Elements "plan for a balanced, multimodal transportation network that meets the needs of all users of streets, roads, and highways" including "bicyclists, children, persons with disabilities, motorists, movers of commercial goods, pedestrians, users of public transportation and seniors." Similarly, SB 743 explains "It is the intent of the Legislature to balance the need for level of service standards for traffic with the need to build infill housing and mixed use commercial developments within walking distance of mass transit facilities, downtowns, and town centers and to provide greater flexibility to local governments to balance these sometimes competing needs." (Gov. Code § 65088.4(a).) Given all of these legislative changes, including those required by AB1358, the City interprets its existing LOS policy as a non-mandatory policy, which allows the City to balance this policy with its other multimodal goals and policies.

More specifically, the City's existing Circulation Element states that "[i]ncreasing the use of alternative transportation modes will produce a number of community benefits including reduced traffic, less need for costly roadway improvement projects, and improved air quality. Facilities for biking and walking provide recreational opportunities as well…" Policies C-2.2, C-3.1, C-3.3, and C-3.4 direct the City to support programs that help reduce congestion and encourage alternative modes of transportation. Similarly, Policy C-1.5 directs the City to use traffic calming methods within residential and mixed-use areas where necessary to create a pedestrian-friendly circulation system. Additionally, Policy C-1.4, contemplates providing adequate access to the University, which includes providing access in close proximity to the university to reduce reliance upon personal vehicles.

Furthermore, denial of the project or a reduction in density would not necessarily avoid the types vehicular LOS effects anticipated within implementation of this Plan. This concept is generally acknowledged under Gov. Code 65589.5, which explains that among the consequences of limiting the approval of housing] area…reduced mobility, urban sprawl, excessive commuting, and air quality deterioration. The Plan is

designed to cater to the adjacent CSUMB campus, which will continue to grow in enrollment regardless of the Campus Town Specific Plan. If housing and related uses are not provided adjacent to the campus, those individuals would continue to reside elsewhere resulting in increased vehicular LOS. Consequently, the City does not interpret an exceedance of LOS C as precluding a *2004 General Plan* consistency conclusion.

Furthermore, the City of Seaside is preparing an updated General Plan, *Seaside 2040*, which envisions a multimodal network of complete streets throughout the City and does not have a specific level of service policy. Therefore, this Chapter identifies transportation deficiencies for key intersections in the City of Seaside based on the *2004 General Plan* LOS policy and to refine the site access and circulation near and within the Plan area.

To identify deficiencies based on the *2004 General Plan*, this analysis adds future volumes to the existing transportation network to identify which planned transportation improvements are important in supporting the traffic growth from the Plan site. Under Existing and Background Conditions, the existing transportation network is used. Under Cumulative Conditions, to be consistent with the proposed CSUMB Master Plan, two transportation improvements on the CSUMB campus (closure of Inter-Garrison Road on CSUMB campus, Eighth Street extension from Third Avenue to General Jim Moore Boulevard-Fourth Avenue, and closure of Seventh Street to southbound traffic north of Colonel Durham Street) are included with the cumulative transportation network.

Transportation Analysis Methods

There are multiple ways to measure vehicular traffic operations, including vehicle miles traveled and level of service. This analysis primarily uses level of service to evaluate traffic operations. The operations of roadway facilities are typically described with the term level of service (LOS), a qualitative description of traffic flow based on factors such as speed, travel time, delay, and freedom to maneuver.

Signalized Intersections

The operations of roadway facilities have historically been described with the term level of service, a qualitative description of traffic flow based on factors such as speed, travel time, delay, and freedom to maneuver. The method described in Chapter 18 of the *2010 Highway Capacity Manual* (HCM) (Transportation Research Board) was used to prepare the level of service calculation for the study intersections. This level of service method analyzes a signalized intersection's operation based on average control delay per vehicle. Control delay includes the initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. The average control delay is calculated using Synchro 9.0 analysis software and is correlated to a level of service designation as shown in Table 2.

Table 7: Signalized Intersection Level of Service Definitions

Level of Service	Description	Average Control Delay per Vehicle (seconds)
A	Operations with very low delay occurring with favorable progression and / or short cycle lengths.	≤ 10.0
B	Operations with low delay occurring with good progression and / or short cycle lengths.	10.1 to 20.0
C	Operations with average delays resulting from fair progression and / or longer cycle lengths. Individual cycle failures begin to appear.	20.1 to 35.0
D	Operations with longer delays due to a combination of unfavorable progression, long cycle lengths, and high volume-to-capacity (V / C) ratios. Many vehicles stop and individual cycle failures are noticeable.	35.1 to 55.0
E	Operations with high delay values indicating poor progression, long cycle lengths, and high V / C ratios. Individual cycle failures are frequent occurrences.	55.1 to 80.0
F	Operations with delays unacceptable to most drivers occurring due to over-saturation, poor progression, or very long cycle lengths.	> 80.0

Source: *Highway Capacity Manual*, Transportation Research Board, 2010.

Unsignalized Intersections and Roundabouts

Operations of the unsignalized study intersections and roundabouts were evaluated using the method contained in Chapters 19, 20, and 21 of the *2010 HCM* and calculated using Synchro analysis software. Level of service ratings for roundabouts and stop-sign controlled intersections are based on the average control delay expressed in seconds per vehicle. At two-way or side-street-stop controlled intersections, control delay is calculated for each movement, not for the intersection as a whole. For approaches composed of a single lane, control delay is computed as the average of all movements in that lane. For all-way stop-controlled and roundabout locations, a weighted average delay for the entire intersection is presented. **Table 3** summarizes the relationship between delay and level of service for unsignalized intersections and roundabouts.

Table 8: Unsignalized Intersection Level of Service Definitions

Level of Service	Description	Average Control Delay Per Vehicle (Seconds)
A	Little or no delay.	≤ 10.0
B	Short traffic delay.	10.1 to 15.0
C	Average traffic delays.	15.1 to 25.0
D	Long traffic delays.	25.1 to 35.0
E	Very long traffic delays.	35.1 to 50.0
F	Extreme traffic delays with intersection capacity exceeded.	> 50.0

Sources: *Highway Capacity Manual*, Transportation Research Board, 2010.

Additionally, the adjacent jurisdictions may apply the *California Manual on Uniform Traffic Control Devices* (CA MUTCD) peak-hour volume signal warrant to intersections operating unacceptably.

Warrant 3 – Peak hour vehicle volume

This warrant determines if the minor street traffic suffers undue delay when entering or crossing the major street for a minimum of one hour of an average day. This is based on the major street left-turn volume, the higher-volume minor-street approach volume, and calculated delay for vehicles on the higher-volume minor-street approach.

Vehicular LOS Criteria

Transportation deficiencies under the City's *2004 General Plan* vehicular LOS policies at signalized City of Seaside intersections are considered to occur when the addition of Plan traffic causes one of the following:

- Peak hour intersection operations degrade from an acceptable level (LOS C or better) to an unacceptable level (LOS D or worse); or
- For intersections already operating at unacceptable LOS D under without Plan conditions, peak hour intersection average delay increases by more than 2.0 seconds under with Plan conditions; or
- For intersections already operating at unacceptable LOS E or F under without Plan conditions, peak hour intersection average delay increases by more than 1.0 second under with Plan conditions.

A transportation deficiency occurs at an all-way stop-controlled intersection when:

- The Plan adds traffic to an intersection:
  - That causes the average intersection delay to degrade from an acceptable level of service (LOS C or better) to an unacceptable level of service (LOS D, E or F); or

- That already operates at LOS D, E or F, and
- The intersection satisfies the peak hour traffic signal warrant from the California Manual of Uniform Traffic Control Devices (CA MUTCD).

A transportation deficiency occurs at a side-street stop-controlled intersection when:

- The Plan adds traffic to an intersection:
  - That causes the average intersection delay to degrade from an acceptable level of service (LOS C or better) to an unacceptable level of service (LOS D, E or F) and the side-street operates at a LOS E or F; or
  - That already operates at LOS D, E or F and the side-street operates at a LOS E or F; and
- The intersection satisfies the peak hour traffic signal warrant from the California Manual of Uniform Traffic Control Devices (CA MUTCD).

For intersections with deficiencies, improvements that would bring the intersection back to the respective baseline condition or better are presented as options. Planned and funded transportation improvements of mitigation measures from nearby land development projects, a Capital Improvement Program (CIP), or Monterey County Regional Transportation Plan (RTP) transportation project were considered first before identifying additional improvement to return the deficient intersections back to the No Plan LOS.

Using this LOS C standard typically requires the construction of larger intersections, which can diminish the benefits of the Plan's proposed pedestrian and bicycle access improvements as well as the City's vision for the *Seaside 2040* General Plan.

The Plan includes street cross-sections that minimize the crossing distances of pedestrian and bicyclists at most intersections by using narrow travel lanes and traffic calming features like curb extensions at intersections. The deficiency and improvement discussion present the trade-offs of these street cross-sections with vehicle level of service. Consequently, the City may elect to not implement these LOS focused transportation improvements.

Vehicular LOS Organization

For LOS consistency discussion, the evaluation of improvements is organized as follows:

- Intersections operating below vehicular LOS criteria are listed along with a description of the improvement.
- Potential transportation improvements for affected intersections operating below the vehicular LOS criteria are identified that would return the intersection back to equal to or less than the No Plan intersection delay.

Based on input from the City, LOS effects were evaluated by comparing the results of the level of service calculations under without Plan Conditions to with Plan Conditions for all scenarios (Existing Conditions, Background Conditions, and Cumulative Conditions).

Existing with Plan Conditions

This section presents the transportation analysis under Existing Conditions and Existing with Plan Conditions.

Existing without Plan Traffic Volumes

Traffic volumes for Existing Conditions are based on turning movement counts as described in Chapter 3.

Existing with Plan Traffic Volumes

Existing with Plan Conditions are defined as Existing Conditions plus traffic generated by completion of the Plan.

Existing Intersection Level of Service

Level of service calculations were conducted to evaluate signalized and unsignalized intersection operations under Existing Conditions. The intersection volumes are shown in **Appendix D** and results of the level of service analysis are summarized in **Table 9**. The corresponding level of service calculation sheets are included in **Appendix E**. Peak hour signal warrant calculations for unsignalized intersections that are deficient are provided in **Appendix F**.

In the Existing with Plan Conditions, the following three intersections operate at an unacceptable level of service:

- Intersection #3: Lightfighter Drive/General Jim Moore Boulevard (PM peak hour)
- Intersection #8: Normandy Road/General Jim Moore Boulevard (AM peak hour)
- Intersection #9: Coe Avenue/General Jim Moore Boulevard (AM and PM peak hours)

Table 9: Existing Intersection Level of Service

ID	Intersection	Control Type[1]	LOS Thres.[2]	Peak Hour[3]	Existing		Existing with Plan		
					Delay[4]	LOS[5]	Delay[4]	LOS[5]	Signal Warrant Met?[6]
1	Lightfighter Drive & First Avenue	Signal	C	AM PM	4.0 3.0	A A	4.0 3.1	A A	--
2	Lightfighter Drive & Second Avenue	Signal	C	AM PM	18.3 20.3	B C	20.6 19.3	C B	--
3	Lightfighter Drive & General Jim Moore Boulevard	Signal	C	AM PM	20.0 29.7	B C	25.7 **115.4**	C **F**	--
4	Colonel Durham Street & Malmedy Road	AWSC	D	AM PM	9.9 8.3	A A	13.7 11.1	B B	No No
5	Gigling Road & General Jim Moore Boulevard	Signal	C	AM PM	25.9 14.8	C B	31.4 17.8	C B	--
6	Gigling Road & Malmedy Road	SSSC	C (D)	AM PM	3.7 (24.9) 2.0 (18.0)	A (C) A (C)	10.0 (**64.4**) 6.0 (**45.4**)	A (**F**) A (**E**)	No No
7	Gigling Road & Parker Flatts Cut Off Road	SSSC	C (D)	AM PM	2.0 (23.6) 2.8 (17.6)	A (C) A (C)	4.0 (**44.2**) 8.1 (**54.1**)	A (**E**) A (**F**)	No No
8	Normandy Road & General Jim Moore Boulevard	Signal	C	AM PM	22.0 9.9	C A	**37.3** 11.5	**D** B	--
9	Coe Avenue & General Jim Moore Boulevard	AWSC	D	AM PM	**97.3** 18.4	**F** C	**>120.0*** **52.8**	**F** **F**	**Yes** **Yes**
10	Colonel Durham Street & Seventh Avenue	SSSC	C (D)	AM PM	6.6 (12.3) 7.0 (10.5)	A (B) A (B)	8.6 (14.3) 9.0 (13.1)	A (B) A (B)	No No
11	Gigling Road & Seventh Avenue	SSSC	C (D)	AM PM	2.1 (12.7) 0.9 (9.0)	A (B) A (A)	3.8 (14.6) 2.5 (9.7)	A (B) A (A)	No No

Notes: **Bold text** indicates intersection operates at unacceptable level of service. **Bold and highlighted text** indicates a deficiency as defined in the *Transportation Deficiency Criteria* section of this document.
*Average delay for LOS F is a measurement of an unstable condition; therefore, unsignalized locations with delay greater than 120 seconds of average delay are reported as >120. The calculated delay may be found in **Appendix E**.
1. Signal = signalized intersection; AWSC = all-way stop-controlled intersection; SSSC = side-street stop-controlled intersection.
2. The LOS threshold is the least acceptable level of service. For side-street stop-controlled intersections in the City of Seaside, the whole intersection LOS threshold is provided with the worst approach LOS threshold in parenthesis.
3. AM = morning peak hour, PM = evening peak hour.
4. Whole intersection weighted average control delay expressed in seconds per vehicle calculated using methods described in the 2010 *Highway Capacity Manual* for signalized intersections and all-way stop-controlled intersections. For side-street stop-controlled intersections, the whole intersection weighted average control delay is reported with the control delay for the worst movement reported in parenthesis.
5. LOS = Level of Service. LOS calculations conducted using the Synchro 9.0 analysis software packages, which apply the methods described in the 2010 *Highway Capacity Manual*.
6. Peak hour traffic signal warrant analysis (as described in the California Manual of Uniform Traffic Control Devices) was conducted for all non-signalized intersections to determine transportation deficiencies. Yes = signal warrant is met; No = signal warrant is not met.
Source: Fehr & Peers, 2019.

Existing with Plan Improvements

Based on the deficiency criteria listed at the beginning of this chapter, the Plan causes transportation deficiencies at the following three intersections:

- Intersection #3: Lightfighter Drive/General Jim Moore Boulevard (AM and PM peak hours)
- Intersection #8: Normandy Road/General Jim Moore Boulevard (AM and PM peak hours)
- Intersection #9: Coe Avenue/General Jim Moore Boulevard (AM and PM peak hours)

Where physical capacity improvements or other operational improvements are potentially feasible, they have been identified and are described below along with the post-improvement level of service. The draft improvements described below are for the City of Seaside to consider as physical improvements to be consistent with the *2004 General Plan*. Under the forthcoming *Seaside 2040* General Plan none or only a portion of these improvements may be needed.

These deficiencies are described below. **Table 10** summarizes all this information for the three deficient intersections. **Appendix G** contains the improvement level of service calculations.

Table 10: Existing with Plan Intersection Improvement Levels of Service

ID	Intersection	Control Type[1]	LOS Threshold[2]	Peak Hour[3]	Existing with Plan		Existing with Plan with Improvement	
					Delay[4]	LOS[5]	Delay[4]	LOS[5]
3	Lightfighter Drive & General Jim Moore Boulevard	Signal	C	AM PM	25.7 **115.4**	C **F**	20.2 19.8	C B
8	Normandy Road & General Jim Moore Boulevard	Signal	C	AM PM	**37.3** 11.5	**D** B	25.1 10.1	C B
9	Coe Avenue & General Jim Moore Boulevard	AWSC	D	AM PM	**>120.0*** **52.8**	**F** **F**	34.0** 9.3**	C** A**

Notes: **Bold text** indicates intersection operates at unacceptable level of service. **Bold and highlighted text** indicates a deficiency.
*Average delay for LOS F is a measurement of an unstable condition; therefore, unsignalized locations with delay greater than 120 seconds of average delay are reported as >120. The calculated delay may be found in **Appendix E**.
*The proposed improvement for this intersection includes signalization. As outlined in this chapter**,** the level of service threshold for signalized intersections in the City of Seaside is LOS C.
1. Signal = signalized intersection; AWSC = all-way stop-controlled intersection; SSSC = side-street stop-controlled intersection.
2. Intersection jurisdiction describes the right-of-way owner. LOS Threshold is the threshold between acceptable and unacceptable level of service.
3. AM = morning peak hour; PM = evening peak hour.
4. Whole intersection weighted average control delay expressed in seconds per vehicle calculated using methods described in the 2010 *Highway Capacity Manual* for signalized intersections and all-way stop-controlled intersections. For side-street stop-controlled intersections, the whole intersection weighted average control delay is reported with the control delay for the worst movement reported in parenthesis.
5. LOS = Level of Service. LOS calculations conducted using the Synchro 9.0 analysis software packages, which apply the methods described in the 2010 *Highway Capacity Manual*.
Source: Fehr & Peers, 2019.

Intersection #3: Lightfighter Drive / General Jim Moore Boulevard

The addition of Plan traffic under Existing with Plan Conditions would cause a transportation deficiency based on the vehicular LOS criteria for signalized intersection during the AM and PM peak hours. Under Existing Conditions, it operates at a LOS B during the AM peak hour and LOS C during the PM peak hour. Intersection operations would degrade to LOS F under Existing with Plan Conditions during the PM peak hour.

The following physical improvements would reduce the severity of this potential deficiency:

- Reconfigure the intersection as follows as identified in *The Dunes at Monterey Bay EIR* (2005):
  - Northbound: add a third left-turn lane and second through-lane
  - Southbound: add a designated right-turn lane with overlap phase
  - Eastbound: add a second left-turn lane
  - Westbound: add a second left-turn lane and second through-lane
- Optimize the cycle length.

The proposed intersection geometry would require additional right-of-way from all corners of the intersection. Signal timing modifications would not require additional right-of-way. With this improvement, the level of service and delay would improve under AM and PM peak hours, as shown in **Table 10** and would alleviate the Plan deficiency.

Increasing vehicle capacity by widening streets generally has a detrimental effect on bicyclists and pedestrians because adding lanes increases the distance bicyclists and pedestrians must cross to navigate the intersection, increasing their exposure to vehicles. Additionally, intersections with three left-turn lanes and/or two right-turn lanes with an overlap phase increase the potential for conflicts between vehicles and pedestrians/bicyclists.

A new roundabout is also being considered for this intersection. Effects of installing a roundabout at this intersection are discussed in **Chapter 9.**

Intersection #8: Normandy Road / General Jim Moore Boulevard

The addition of Plan traffic under Existing with Plan Conditions would cause a transportation deficiency with vehicular LOS criteria for the signalized intersection during the AM and PM peak hours. Under Existing Conditions, it operates at a LOS C during the AM peak hour and LOS A during the PM peak hour. Intersection operations would degrade to LOS D under Existing with Plan Conditions during the AM peak hour.

The following physical improvements would reduce the severity of this potential deficiency:

- Add a third northbound and southbound through-lane as identified in *The Dunes at Monterey Bay EIR* (2005), and
- Optimize the cycle length.

The proposed intersection geometry would require additional right-of-way from all corners of the intersection. Signal timing modifications would not require additional right-of-way. With this improvement, the level of service and delay would improve under AM and PM peak hours, as shown in **Table 10** and would improve intersection operations to acceptable operations. With this improvement, the Plan deficiency would be alleviated.

Increasing vehicle capacity by widening streets generally has a detrimental effect on bicyclists and pedestrians because adding lanes increases the distance bicyclists and pedestrians must cross to navigate the intersection, increasing their exposure to vehicles. Additionally, intersections with three left-turn lanes and/or two right-turn lanes with an overlap phase increase the potential for conflicts between vehicles and pedestrians/bicyclists.

Intersection #9: Coe Avenue / General Jim Moore Boulevard

The addition of Plan traffic under Existing with Plan Conditions would cause a transportation deficiency based with vehicular LOS criteria for the City of Seaside signalized intersection during the AM and PM peak hours. Under Existing Conditions, it operates at LOS F during the AM peak hour and LOS C during the PM peak hour. Intersection operations would degrade to LOS F under Existing with Plan Conditions during both peak hours. Plan generated traffic would increase the intersection delay by more than one second between Existing Conditions and Existing with Plan Conditions. Additionally, the peak hour signal warrant is met for both peak hours under Cumulative with Plan Conditions.

The following physical improvements would reduce the severity of this potential deficiency:

- Signalize the intersection, and
- Restripe the existing eastbound left-turn lane and right-turn lane to a left-turn lane and shared through/right-turn lane as identified in *The Dunes at Monterey Bay EIR* (2005).

The proposed intersection geometry would not require additional right-of-way at this intersection. Signal timing modifications would not require additional right-of-way. With this improvement, the level of service and delay would improve under AM and PM peak hours, as shown in **Table 10** and would alleviate the Plan deficiency.

Background with Plan Conditions

This section presents the transportation analysis under Background Conditions and Background with Plan Conditions.

Background without Plan Traffic Volumes

Traffic volumes for Background Conditions include traffic generated by projects that are either under construction or are approved, but not yet constructed, within the Plan study area in the Cities of Seaside, and Sand City and California State University at Monterey Bay. A brief description of these projects is presented in **Table 11** and included under Background Conditions. Information about development projects that are under construction or are approved, but not yet constructed, was obtained from each city's planning department.

Table 11: Under Construction and Approved Projects

Background Project	Description
East Garrison Specific Plan	Mixed-use development project comprising residential, commercial, office, institutional, and recreational uses on approximately 244 acres. The project includes the construction of up to 1,470 dwelling units, 75,000 square feet of commercial uses, 11,000 square feet of public and institutional uses, 100,000 square feet of art/cultural/educational uses, and approximately 50 acres of open space. Development under the Specific Plan will be implemented in three phases.
The Dunes at Monterey Bay	Mixed-use development project comprising 1,237 residential units, 500 hotel rooms, and retail and office space on 297 acres. Phase 1 (378,000-square-foot retail center) built in 2007-2008. Phase 2 includes the following: (1) South County Housing to develop and build 108 low- and very low-income affordable apartments, many of which were completed by spring/summer 2014; (2) Cinemark multiple screen movie theater completed 2015; (3) Plans approved for two approximately 15,000 square foot retail buildings to be built near the movie theater; (4) Veterans Affairs Monterey Health Care Center located on a 14.31-acre project site within the Dunes on Monterey Bay Specific Plan area completed 2016; and (5) Springhill Suites, a 67,328-square-foot, 4-story hotel with 106 hotel rooms. The hotel includes a 1,750-square-foot meeting room and guest parking and is scheduled to open in April 2017
Schulman (3110 Seacrest Avenue)	Townhouse PUD (7 units)
Junsay Oaks Senior Apartments (CHISPA)	Low-income senior apartment units (47 units)
Sea Haven	Removal of 828 abandoned residential units and replacement with a combination of 1,050 new townhouse, cottage, estate homes, and single-family residential units. The project also includes 35 acres of parks, greenbelts, and open space. The first phase includes 299 housing units.

Table 11: Under Construction and Approved Projects

Background Project	Description
Marina Station	Redevelopment plan for Marina's 225-acre downtown area comprising mixed-use commercial, residential, educational, and civic uses. At full buildout, the plan would result in a net increase of 2,440 residential dwelling units, 718,000 square feet of multiple use, 70,000 square feet of office space, and 50,000 square feet of civic facilities, and a net decrease of 161,000 square feet of retail/service uses, 27,000 square feet of visitor-serving uses, and 270,000 square feet of industrial uses.
Monterey Bay Charter School (CSUMB)	60,000-gross-square-foot school. Phase I includes the construction of 19 K-8 classrooms; work rooms for administrators, teachers and custodians; resource and remedial instruction rooms; and storage. Phase II includes additional support facilities. Phase I is projected to accommodate approximately 430 students; full enrollment of 508 students is expected to be reached by Phase II.
Academic III (CSUMB)	50,800-gross-square-foot building.
Student Union (CSUMB)	80,000-gross-square-foot building.
Storage Facility Buildings (CSUMB)	50,000-gross-square-foot buildings.
West Broadway Avenue Urban Village Specific Plan	This Specific Plan development program would increase and modify allowable development in the project area to help encourage creation of a denser urban core or village within the city. Aspects of this new urban core or village include 494 residential units, 28,700 square feet of new office development, 296,800 square feet of commercial/retail development, a new hotel with approximately 250 rooms, a new 20,000-square-foot public library, 53,000 square feet of outdoor space, and 500 new off-street parking spaces.
Seaside Resort	The first phase, completed in 2009, involved upgrades to the Bayonet and Black Horse Golf Courses. The next phase of development features a four-star hotel with approximately 275 hotel rooms, 175 timeshare units, and 125 residential units.
Seaside Senior Living Projects	Removal of an existing vacant 5,000-square-foot structure and the development of a State of California licensed Residential Care Facility for the Elderly (RCFE) on a 5.47-acre site. The RCFE will include an assisted living facility (81,679 square feet; 88 residential units), a memory care facility (29,707 square feet; 43 residential units) and an assisted living co-housing facility (10,894 square feet; 13 residential units).
Concourse Auto Dealership	110,000 square feet of auto dealership showrooms and service within six dealership sites on 26 acres.
Monterey Bay Shores	Coastal resort project on 39.04-acre oceanfront site with 92 residential condominium units, 92 visitor-serving condominium units, and a 184-room hotel.
Bungalows at East Dunes	10 single-family dwellings (replaced dilapidated commercial storage yards).
10-20 Ryan Court	108,000-square-foot automobile storage facility and 9,800-square-foot office space.
2 Upper Ragsdale	66,173 square-foot office building.

Table 11: Under Construction and Approved Projects

Background Project	Description
Truck Yard Facility Project	The project would include a 7,200-square-foot office/ administration building, a 11,300-square-foot maintenance building, a 5,000-square-foot truck wash and repair building, as well as collection truck parking and steel bin storage areas, Compressed Natural Gas equipment, and associated employee parking.
The Projects at Main Gate Specific Plan	Development of a commercial center with up to 187,000 square feet of retail space, 410 housing units (210 single-family and 200 multifamily), 250 student housing units, and a 450-room hotel with a spa and conference facilities and 60,000 square feet of standalone restaurants on approximately 57 acres of the former Fort Ord.

Source: City of Seaside, City of Marina, City of Sand City, California State University at Monterey Bay, Monterey County, 2018.

Background with Plan Volumes

Background with Plan Conditions are defined as Background Conditions plus traffic generated by completion of the Plan.

Background Roadway Improvements

This analysis adds background volumes to the existing transportation network to provide complete disclosure of the transportation deficiencies.

Background Intersection Level of Service

Level of service calculations were conducted to evaluate signalized and unsignalized intersection operations under Background Conditions. The intersection volumes are shown in **Appendix D** and results of the level of service analysis are summarized in **Table 12**. The corresponding level of service calculation sheets are included in **Appendix E**. Peak hour signal warrant calculations for unsignalized intersections that are deficient are provided in **Appendix F**.

In the Background with Plan Conditions, the following five intersections operate below the vehicular LOS criteria:

- Intersection #2: Lightfighter Drive/Second Avenue (AM and PM peak hours)
- Intersection #3: Lightfighter Drive/General Jim Moore Boulevard (AM and PM peak hours)*
- Intersection #5: Gigling Road/General Jim Moore Boulevard (AM and PM peak hours)
- Intersection #8: Normandy Road/General Jim Moore Boulevard (AM and PM peak hours)*
- Intersection #9: Coe Avenue/General Jim Moore Boulevard (AM and PM peak hours)*

*Indicates that the intersection operates unacceptable under Existing with Plan Conditions.

Table 12: Background Intersection Level of Service

ID	Intersection	Control Type[1]	LOS Threshold[2]	Peak Hour[3]	Background		Background with Plan		
					Delay[4]	LOS[5]	Delay[4]	LOS[5]	Signal Warrant Met?[6]
1	Lightfighter Drive & First Avenue	Signal	C	AM PM	9.3 8.6	A A	10.2 10.0	B A	--
2	Lightfighter Drive & Second Avenue	Signal	C	AM PM	**144.2** **>180.0***	**F** **F**	**136.8**** **>180.0****	**F*** **F***	--
3	Lightfighter Drive & General Jim Moore Boulevard	Signal	C	AM PM	**77.6** **>180.0***	**E** **F**	**162.3** **>180.0***	**F** **F**	--
4	Colonel Durham Street & Malmedy Road	AWSC	D	AM PM	11.2 9.1	B A	17.2 13.2	C B	No No
5	Gigling Road & General Jim Moore Boulevard	Signal	C	AM PM	**74.1** **36.9**	**E** **D**	**111.7** **82.8**	**F** **F**	--
6	Gigling Road & Malmedy Road	SSSC	C (D)	AM PM	4.0 (30.7) 2.1 (20.6)	A (D) A (C)	14.0 (**102.8**) 7.2 (**60.6**)	B (**F**) A (**F**)	No No
7	Gigling Road & Parker Flatts Cut Off Road	SSSC	C (D)	AM PM	2.9 (**36.1**) 3.7 (20.1)	A (**E**) A (C)	7.1 (**91.4**) 14.7 (**91.7**)	A (**F**) B (**F**)	No **Yes**
8	Normandy Road & General Jim Moore Boulevard	Signal	C	AM PM	**158.7** 20.6	**F** C	**>180.0*** **60.4**	**F** **E**	--
9	Coe Avenue & General Jim Moore Boulevard	AWSC	D	AM PM	**>120.0*** **>120.0***	**F** **F**	**>120.0*** **>120.0***	**F** **F**	**Yes** **Yes**
10	Colonel Durham Street & Seventh Avenue	SSSC	C (D)	AM PM	7.8 (12.9) 8.3 (11.4)	A (B) A (B)	10.2 (16.9) 10.8 (15.6)	B (C) B (C)	No No
11	Gigling Road & Seventh Avenue	SSSC	C (D)	AM PM	2.0 (14.3) 0.8 (9.3)	A (B) A (A)	3.8 (17.3) 2.3 (10.1)	A (C) A (B)	No No

Notes: **Bold text** indicates intersection operates at unacceptable level of service. **Bold and highlighted text** indicates a deficiency as defined in the *Significand Criteria & Analysis Methods* section of this document.

*Average delay for LOS F is a measurement of an unstable condition; therefore, unsignalized locations with delay greater than 120 seconds of average delay are reported as >120 and for signalized locations with delay greater than 180 seconds of average delay are reported as >180. The calculated delay may be found in **Appendix E**.

**No deficiency at this intersection because average intersection delay decreases between Background and Background with Plan Conditions. During the PM peak hour, intersection delay at Intersection #2 decreases from 252.9 seconds to 227.2 seconds between No Plan and With Plan conditions.

1. Signal = signalized intersection; AWSC = all-way stop-controlled intersection; SSSC = side-street stop-controlled intersection.
2. The LOS threshold is the least acceptable level of service. For side-street stop-controlled intersections in the City of Seaside, the whole intersection LOS threshold is provided with the worst approach LOS threshold in parenthesis.
3. AM = morning peak hour, PM = evening peak hour.
4. Whole intersection weighted average control delay expressed in seconds per vehicle calculated using methods described in the 2010 *Highway Capacity Manual* for signalized intersections and all-way stop-controlled intersections. For side-street stop-controlled intersections, the whole intersection weighted average control delay is reported with the control delay for the worst movement reported in parenthesis.
5. LOS = Level of Service. LOS calculations conducted using the Synchro 9.0 analysis software packages, which apply the methods described in the 2010 *Highway Capacity Manual*.

6. Peak hour traffic signal warrant analysis (as described in the California Manual of Uniform Traffic Control Devices) was conducted for all non-signalized intersections to determine transportation deficiencies. Yes = signal warrant is met; No = signal warrant is not met.
Source: Fehr & Peers, 2019.

Background with Plan Improvements

Based on the vehicular LOS criteria listed at the beginning of this chapter, the Plan causes transportation deficiencies at the following four intersections:

- Intersection #3: Lightfighter Drive/General Jim Moore Boulevard (AM and PM peak hours)
- Intersection #5: Gigling Road/General Jim Moore Boulevard (AM and PM peak hours)
- Intersection #8: Normandy Road/General Jim Moore Boulevard (AM and PM peak hours)
- Intersection #9: Coe Avenue/General Jim Moore Boulevard (AM and PM peak hours)

Where physical capacity improvements or other operational improvements are potentially feasible, they have been identified and are described below along with the post-improvement level of service. The draft improvements described below are for the City of Seaside to consider as physical improvements to be consistent with the *2004 General Plan*. Under the forthcoming *Seaside 2040* General Plan none or only a portion of these improvements may be needed.

These deficiencies are described below. **Table 13** summarizes all this information for the four deficient intersections. **Appendix G** contains the improvement level of service calculations.

Table 13: Background with Plan Intersection Improvement Levels of Service

ID	Intersection	Juris-diction	Control Type[1]	LOS Threshold[2]	Peak Hour[3]	Background with Plan		Background with Plan with Improvement	
						Delay[4]	LOS[5]	Delay[4]	LOS[5]
3	Lightfighter Drive & General Jim Moore Boulevard	City of Seaside	Signal	C	AM PM	**162.3** **>180.0***	**F** **F**	23.4 28.5	C C
5	Gigling Road & General Jim Moore Boulevard	City of Seaside	Signal	C	AM PM	**111.7** **82.8**	**F** **F**	32.8 20.4	C C
8	Normandy Road & General Jim Moore Boulevard	City of Seaside	Signal	C	AM PM	**>180.0*** **60.4**	**F** **E**	**50.2** 12.5	**D** B
9	Coe Avenue & General Jim Moore Boulevard	City of Seaside	AWSC	D	AM PM	**>120.0*** **>120.0***	**F** **F**	**46.5**** **45.5****	**D**** **D****

Notes: **Bold text** indicates intersection operates at unacceptable level of service. **Bold and highlighted text** indicates a deficiency. *Average delay for LOS F is a measurement of an unstable condition; therefore, unsignalized locations with delay greater than 120 seconds of average delay are reported as >120 and for signalized locations with delay greater than 180 seconds of average delay are reported as >180. The calculated delay may be found in **Appendix E**.

The proposed improvement for this intersection includes signalization. As outlined in this chapter,** the level of service threshold for signalized intersections in the City of Seaside is LOS C. Thus, this intersection still operates deficiently based on the local jurisdiction's level of service threshold.
1. Signal = signalized intersection; AWSC = all-way stop-controlled intersection; SSSC = side-street stop-controlled intersection.
2. Intersection jurisdiction describes the right-of-way owner. LOS Threshold is the threshold between acceptable and unacceptable level of service.
3. AM = morning peak hour; PM = evening peak hour.
4. Whole intersection weighted average control delay expressed in seconds per vehicle calculated using methods described in the 2010 *Highway Capacity Manual* for signalized intersections and all-way stop-controlled intersections. For side-street stop-controlled intersections, the whole intersection weighted average control delay is reported with the control delay for the worst movement reported in parenthesis.
5. LOS = Level of Service. LOS calculations conducted using the Synchro 9.0 analysis software packages, which apply the methods described in the 2010 *Highway Capacity Manual*.
Source: Fehr & Peers, 2019.

Intersection #3: Lightfighter Drive / General Jim Moore Boulevard

The addition of Plan traffic under Background with Plan Conditions would cause a transportation deficiency based on the vehicular LOS criteria for signalized intersection during the AM and PM peak hours. Under Existing Conditions, it operates at a LOS B during the AM peak hour and LOS C during the PM peak hour. Intersection operations would degrade to LOS E during the AM peak hour and LOS F during the PM peak hour under Background Conditions, and intersection operations would further degrade to LOS F under Background with Plan Conditions during both peak hours. Plan generated traffic would increase the intersection delay by more than one second between Background Conditions and Background with Plan Conditions.

The following physical improvements would reduce the severity of this potential deficiency:

- Reconfigure the intersection as follows as identified in *The Dunes at Monterey Bay EIR* (2005):
  - Northbound: add a third left-turn lane and second through-lane
  - Southbound: add a designated right-turn lane with overlap phase
  - Eastbound: add a second left-turn lane
  - Westbound: add a second left-turn lane and second through-lane
- Optimize the cycle length.

The proposed intersection geometry would require additional right-of-way from all corners of the intersection. Signal timing modifications would not require additional right-of-way. With this improvement, the level of service and delay would improve under AM and PM peak hours, as shown in **Table 13** and would alleviate the Plan deficiency.

Increasing vehicle capacity by widening streets generally has a detrimental effect on bicyclists and pedestrians because adding lanes increases the distance bicyclists and pedestrians must cross to navigate the intersection, increasing their exposure to vehicles. Additionally, intersections with three left-turn lanes

and/or two right-turn lanes with an overlap phase increase the potential for conflicts between vehicles and pedestrians/bicyclists.

A new roundabout is also being considered for this intersection. Effects of installing a roundabout at this intersection are discussed in **Chapter 9.**

Intersection #5: Gigling Road / General Jim Moore Boulevard

The addition of Plan traffic under Background with Plan Conditions would cause a transportation deficiency based on the vehicular LOS criteria for signalized intersection during the AM and PM peak hours. Under Existing Conditions, it operates at a LOS C during the AM peak hour and LOS B during the PM peak hour. Intersection operations would degrade to LOS E during the AM peak hour and LOS D during the PM peak hour under Background Conditions, and intersection operations would further degrade to LOS F during both peak hours under Background with Plan Conditions. Plan generated traffic would increase the intersection delay by more than one second between Background Conditions and Background with Plan Conditions.

The following physical improvements would reduce the severity of this potential deficiency:

- Reconfigure the intersection as follows as identified in *The Dunes at Monterey Bay EIR* (2005):
  - Northbound: add a second left-turn lane and third through-lane
  - Southbound: add a second left-turn lane and third through-lane
  - Eastbound: add a designated right-turn lane and install overlap phase
  - Westbound: add a second left-turn lane and second through-lane
- Optimize the cycle length.

The proposed intersection geometry would require additional right-of-way from all corners of the intersection. Signal timing modifications would not require additional right-of-way. With this improvement, the level of service and delay would improve under AM and PM peak hours, as shown in **Table 13** and would alleviate the Plan deficiency.

Increasing vehicle capacity by widening streets generally has a detrimental effect on bicyclists and pedestrians because adding lanes increases the distance bicyclists and pedestrians must cross to navigate the intersection, increasing their exposure to vehicles. Additionally, intersections with three left-turn lanes and/or two right-turn lanes with an overlap phase increase the potential for conflicts between vehicles and pedestrians/bicyclists.

A new roundabout is also being considered for this intersection. Effects of installing a roundabout at this intersection are discussed in **Chapter 9.**

Intersection #8: Normandy Road / General Jim Moore Boulevard

The addition of Plan traffic under Background with Plan Conditions would cause a transportation deficiency based on the vehicular LOS criteria for signalized intersection during the AM peak hour. Under Existing Conditions, it operates at a LOS C during the AM peak hour and LOS A during the PM peak hour. Intersection operations would degrade to LOS F during the AM peak hour and LOS C during the PM peak hour under Background Conditions, and intersection operations would further degrade to LOS F during the AM peak hour and LOS E during the PM peak hour under Background with Plan Conditions. Plan generated traffic would increase the intersection delay by more than one second between Background Conditions and Background with Plan Conditions.

The following physical improvements would reduce the severity of this potential deficiency:

- Add a third northbound and southbound through-lane as identified in *The Dunes at Monterey Bay EIR* (2005), and
- Optimize the cycle length.

The proposed intersection geometry would require additional right-of-way from all corners of the intersection. Signal timing modifications would not require additional right-of-way. With this improvement, the level of service and delay would improve under AM and PM peak hours, as shown **Table 13** and would improve intersection operations to acceptable operations. With this improvement, the Plan deficiency would be alleviated.

Increasing vehicle capacity by widening streets generally has a detrimental effect on bicyclists and pedestrians because adding lanes increases the distance bicyclists and pedestrians must cross to navigate the intersection, increasing their exposure to vehicles. Additionally, intersections with three left-turn lanes and/or two right-turn lanes with an overlap phase increase the potential for conflicts between vehicles and pedestrians/bicyclists.

Intersection #9: Coe Avenue / General Jim Moore Boulevard

The addition of Plan traffic under Background with Plan Conditions would cause a transportation deficiency based on vehicular LOS criteria for signalized intersection during the AM and PM peak hours. Under Existing Conditions, it operates at a LOS F during the AM peak hour and LOS C during the PM peak hour. Intersection operations would degrade to LOS F during both peak hours under Background Conditions, and intersection operations would further degrade to LOS F under Background with Plan Conditions during both peak hours. Plan generated traffic would increase the intersection delay by more than one second between Background Conditions and Background with Plan Conditions. Additionally, the peak hour signal warrant is met for both peak hours under Background with Plan Conditions.

The following physical improvements would reduce the severity of this potential deficiency:

- Signalize the intersection, and
- Restripe the existing eastbound left-turn lane and right-turn lane to a left-turn lane and shared through/right-turn lane as identified in *The Dunes at Monterey Bay EIR* (2005).

The proposed intersection geometry would not require additional right-of-way at this intersection. Signal timing modifications would not require additional right-of-way. With this improvement, the level of service and delay would improve under AM and PM peak hours, as shown in **Table 13** and would alleviate the Plan deficiency.

Cumulative with Plan Conditions

This section presents the transportation analysis under Cumulative and Cumulative with Plan Conditions.

Cumulative without Plan Traffic Volumes

Traffic volumes for Cumulative Conditions include traffic generated by projects that are either under construction, approved, but not yet constructed, or pending within the Plan study area in the Cities of Marina, Seaside, and Sand City and California State University at Monterey Bay. Projects that are under construction or approved, but not yet constructed, are presented in **Table 11** and the pending projects are presented in **Table 14**. Information about development projects that are under construction, approved, but not yet constructed, or pending was obtained from each city's planning department. All the projects listed in the three tables are included in the Cumulative Conditions analysis.

Table 14: Pending Projects

Cumulative Project	Description
Mosaic Student Housing	Demolition of two existing dwellings and construction of multifamily apartment (12 units)
Filighera Apartment Complex	Demolition of an existing single-family dwelling and construction of multifamily apartment (10 units)
Veterans Transition Center Housing	Attached multifamily transitional housing (71 units)
Shores at Marina	Multifamily apartment (58 units)
Seacrest Apartments	Multifamily apartment (10 units)
Cypress Knolls Senior Residential	Senior residential community with active-adult housing, care services, senior community center, and supportive amenities and services on 188 acres.

Table 14: Pending Projects

Cumulative Project	Description
Marina Downtown Vitalization Specific Plan	Redevelopment plan for Marina's 225-acre downtown area comprising mixed-use commercial, residential, educational, and civic uses. At full buildout, the plan would result in a net increase of 2,440 residential dwelling units, 718,000 square feet of multiple use, 70,000 square feet of office space, and 50,000 square feet of civic facilities, and a net decrease of 161,000 square feet of retail/service uses, 27,000 square feet of visitor-serving uses, and 270,000 square feet of industrial uses.
The Collection at Monterey Bay	342-room coastal resort on the 26.46-acre site that may be constructed in two phases. Phase I is a 139-room hotel on a 7.9-acre site. Phase II is a coastal resort on a 16.25-acre site consisting of a 203 visitor rooms, a restaurant with banquet facilities, a health/wellness spa, parking, and other ancillary and related improvements, and public parking improvements on a 2.31-acre site.
Catalina Lofts	18,636-square-foot mixed-use project on a 15,000-square-foot vacant property with 8 residential units and 7 commercial units.
South of Tioga	Mixed-use project on 10.64-acre site replacing industrial uses with 356 residential units and a 216-room hotel, and a restaurant.
Stepanek Mixed-Use Project	8,000-square-foot, 2-story mixed-use development on a 5,625-square-foot parcel replacing existing commercial building with 1 residential unit and 1 commercial unit.
Dayton Residential Project	Two new single-family homes (one with an accessory unit) on a property previously used as a fenced commercial yard.
San Juan Pool's Commercial Project	7,000-square-foot, 1-story, 2-unit metal frame commercial warehouse on an approximately 10,000-square-foot parcel previously used as a commercial storage yard.
Monterey Motorsports Vehicle Storage	88-unit commercial condominium vehicle storage facility.
Fort Dunes State Park Campground	Construction and operation of a campground facility and associated infrastructure within Fort Ord Dunes State Park, including 45 RV sites and two host sites with electrical and water hookups, 10 hike/bike sites, and 43 tent sites; parking for 40 vehicles; restrooms with showers; a multi-purpose building; an outdoor campfire center; interpretation/ viewing areas; renovated bunkers; an entrance station near the 1st Street underpass; modular structures; storage yard and maintenance shop; improved beach access/trails; one plumbed restroom with outdoor shower for beach use; a 200-foot wildlife/habitat corridor; internal campground trail network, trail improvements, and roadway improvements; and offsite utilities.

Source: City of Seaside, City of Marina, City of Sand City, California State University at Monterey Bay, Monterey County, 2019.

Cumulative with Plan Volumes

Cumulative with Plan Conditions are defined as Cumulative Conditions plus traffic generated by completion of the Plan.

Cumulative Roadway Improvements

This analysis adds cumulative volumes to the existing transportation network plus the proposed CSUMB Master Plan, two transportation improvements on the CSUMB campus (closure of Inter-Garrison Road on CSUMB campus, Eighth Street extension from Third Avenue to General Jim Moore Boulevard-Fourth Avenue, and closure of Seventh Street to southbound traffic north of Colonel Durham Street). Other planned and funded street and intersection improvements associated with the approved projects and the Fort Ord Reuse Authority (FORA) will be considered as potential improvements under Cumulative Conditions.

Cumulative Intersection Level of Service

Level of service calculations were conducted to evaluate signalized and unsignalized intersection operations under Cumulative Conditions. The intersection volumes are shown in **Appendix D** and results of the level of service analysis are summarized in **Table 15**. The corresponding level of service calculation sheets are included in **Appendix E.** Peak hour signal warrant calculations for unsignalized intersections that are deficient are provided in **Appendix F**.

In the Cumulative with Plan Conditions, the following nine intersections operate below the vehicular LOS criteria:

- Intersection #2: Lightfighter Drive/Second Avenue (AM and PM peak hours)*
- Intersection #3: Lightfighter Drive/General Jim Moore Boulevard (AM and PM peak hours)*
- Intersection #4: Colonel Durham Street/Malmedy Road (AM and PM peak hours)
- Intersection #5: Gigling Road/General Jim Moore Boulevard (AM and PM peak hours)*
- Intersection #6: Gigling Road/Malmedy Road (AM and PM peak hours)
- Intersection #7: Gigling Road/Parker Flats Cut Off Road (PM peak hour)
- Intersection #8: Normandy Road/General Jim Moore Boulevard (AM and PM peak hours)*
- Intersection #9: Coe Avenue/General Jim Moore Boulevard (AM and PM peak hours)*
- Intersection #10: Colonel Durham Street/Seventh Avenue (AM and PM peak hours)

*Indicates that the intersection operates unacceptable under Background with Plan Conditions.

Table 15: Cumulative Intersection Level of Service

ID	Intersection	Control Type[1]	LOS Threshold[2]	Peak Hour[3]	Cumulative		Cumulative with Plan		
					Delay[4]	LOS[5]	Delay[4]	LOS[5]	Signal Warrant Met?[6]
1	Lightfighter Drive & First Avenue	Signal	C	AM PM	10.3 9.1	B A	11.8 10.9	B B	--
2	Lightfighter Drive & Second Avenue	Signal	C	AM PM	**146.7** **>180.0***	**F** **F**	**141.1**** **>180.0****	**F*** **F***	--
3	Lightfighter Drive & General Jim Moore Boulevard	Signal	C	AM PM	**166.2** **>180.0***	**F** **F**	**>180.0*** **>180.0***	**F** **F**	--
4	Colonel Durham Street & Malmedy Road	AWSC	D	AM PM	24.0 13.0	C B	**82.4** **38.2**	**F** **E**	No No
5	Gigling Road & General Jim Moore Boulevard	Signal	C	AM PM	**115.3** **62.2**	**F** **E**	**159.6** **105.5**	**F** **F**	--
6	Gigling Road & Malmedy Road	SSSC	C (D)	AM PM	9.0 (**87.2**) 3.3 (**38.1**)	A (**F**) A (**E**)	**92.5 (>120.0*)** **41.0 (>120.0*)**	**F (F)** **E (F)**	**Yes** **Yes**
7	Gigling Road & Parker Flatts Cut Off Road	SSSC	C (D)	AM PM	3.6 (**72.4**) 5.4 (**41.1**)	A (**F**) A (**E**)	24.7 (**>120.0***) **40.1 (>120.0*)**	C (**F**) **E (F)**	No **Yes**
8	Normandy Road & General Jim Moore Boulevard	Signal	C	AM PM	**>180.0*** 29.7	**F** C	**>180.0*** **88.3**	**F** **F**	--
9	Coe Avenue & General Jim Moore Boulevard	AWSC	D	AM PM	**>120.0*** **>120.0***	**F** **F**	**>120.0*** **>120.0***	**F** **F**	**Yes** **Yes**
10	Colonel Durham Street & Seventh Avenue	SSSC	C (D)	AM PM	11.5 (12.3) 10.3 (12.1)	B (B) B (B)	13.9 (16.5) 14.8 (18.7)	B (B) B (B)	No No
11	Gigling Road & Seventh Avenue	SSSC	C (D)	AM PM	0.4 (14.0) 0.4 (9.8)	A (B) A (A)	1.7 (16.1) 1.8 (11.0)	A (B) A (B)	No No

Notes: **Bold text** indicates intersection operates at unacceptable level of service. **Bold and highlighted text** indicates a deficiency as defined in the *Significand Criteria & Analysis Methods* section of this document.
*Average delay for LOS F is a measurement of an unstable condition; therefore, unsignalized locations with delay greater than 120 seconds of average delay are reported as >120 and for signalized locations with delay greater than 180 seconds of average delay are reported as >180. The calculated delay may be found in **Appendix E**.
** No deficiency at this intersection because average intersection delay decreases between Cumulative and Cumulative with Plan Conditions. During the PM peak hour, intersection delay at Intersection #2 decreases from 249.7 seconds to 227.7 seconds between No Plan and With Plan conditions.
1. Signal = signalized intersection; AWSC = all-way stop-controlled intersection; SSSC = side-street stop-controlled intersection.
2. The LOS threshold is the least acceptable level of service. For side-street stop-controlled intersections in the City of Seaside, the whole intersection LOS threshold is provided with the worst approach LOS threshold in parenthesis.
3. AM = morning peak hour, PM = evening peak hour.
4. Whole intersection weighted average control delay expressed in seconds per vehicle calculated using methods described in the 2010 *Highway Capacity Manual* for signalized intersections and all-way stop-controlled intersections. For side-street stop-controlled intersections, the whole intersection weighted average control delay is reported with the control delay for the worst movement reported in parenthesis.
5. LOS = Level of Service. LOS calculations conducted using the Synchro 9.0 analysis software packages, which apply the methods described in the 2010 *Highway Capacity Manual*.

6. Peak hour traffic signal warrant analysis (as described in the California Manual of Uniform Traffic Control Devices) was conducted for all non-signalized intersections to determine transportation deficiencies. Yes = signal warrant is met; No = signal warrant is not met.
Source: Fehr & Peers, 2019.

Cumulative with Plan Improvements

Based on the deficiency criteria listed at the beginning of this chapter, the Plan causes transportation deficiencies at the following six intersections:

- Intersection #3: Lightfighter Drive/General Jim Moore Boulevard (AM and PM peak hours)
- Intersection #5: Gigling Road/General Jim Moore Boulevard (AM and PM peak hours)
- Intersection #6: Gigling Road/Malmedy Road (AM and PM peak hours)
- Intersection #7: Gigling Road/Parker Flats Cut Off Road (PM peak hour)
- Intersection #8: Normandy Road/General Jim Moore Boulevard (AM and PM peak hours)
- Intersection #9: Coe Avenue/General Jim Moore Boulevard (AM and PM peak hours)

Where physical capacity improvements or other operational improvements are potentially feasible, they have been identified and are described below along with the post-improvement level of service. The draft improvements described below are for the City of Seaside to consider as physical improvements to be consistent with the *2004 General Plan*. Under the forthcoming *Seaside 2040* General Plan none or only a portion of these improvements may be needed.

These deficiencies are described below. **Table 16** summarizes all this information for the six deficient intersections. **Appendix G** contains the improvement level of service calculations.

Table 16: Cumulative with Plan Intersection Improvement Levels of Service

ID	Intersection	Control Type[1]	LOS Threshold[2]	Peak Hour[3]	Cumulative with Plan		Cumulative with Plan with Improvement	
					Delay[4]	LOS[5]	Delay[4]	LOS[5]
3	Lightfighter Drive & General Jim Moore Boulevard	Signal	C	AM PM	**>180.0*** **>180.0***	**F** **F**	31.5 **37.9**	C **D**
5	Gigling Road & General Jim Moore Boulevard	Signal	C	AM PM	**159.6** **105.5**	**F** **F**	21.1 15.9	B B
6	Gigling Road & Malmedy Road	SSSC	C (D)	AM PM	**>120.0*** **>120.0***	**F** **F**	8.1 7.3	A A
7	Gigling Road & Parker Flatts Cut Off Road	SSSC	C (D)	AM PM	**>120.0*** **>120.0***	**F** **F**	8.0 7.3	A A

Table 16: Cumulative with Plan Intersection Improvement Levels of Service

ID	Intersection	Control Type[1]	LOS Threshold[2]	Peak Hour[3]	Cumulative with Plan		Cumulative with Plan with Improvement	
					Delay[4]	LOS[5]	Delay[4]	LOS[5]
8	Normandy Road & General Jim Moore Boulevard	Signal	C	AM PM	**>180.0*** **88.3**	**F** **F**	**60.9** 13.6	**E** B
9	Coe Avenue & General Jim Moore Boulevard	AWSC	D	AM PM	**>120.0*** **>120.0***	**F** **F**	**61.7**** **59.7****	**E**** **E****

Notes: **Bold text** indicates intersection operates at unacceptable level of service. **Bold and highlighted text** indicates a deficiency.
*Average delay for LOS F is a measurement of an unstable condition; therefore, unsignalized locations with delay greater than 120 seconds of average delay are reported as >120 and for signalized locations with delay greater than 180 seconds of average delay are reported as >180. The calculated delay may be found in **Appendix E**.
The proposed improvement for this intersection includes signalization. As outlined in this chapter,** the level of service threshold for signalized intersections in the City of Seaside is LOS C. Thus, this intersection still operates unacceptably based on the local jurisdiction's level of service threshold.
1. Signal = signalized intersection; AWSC = all-way stop-controlled intersection; SSSC = side-street stop-controlled intersection.
2. Intersection jurisdiction describes the right-of-way owner. LOS Threshold is the threshold between acceptable and unacceptable level of service.
3. AM = morning peak hour; PM = evening peak hour.
4. Whole intersection weighted average control delay expressed in seconds per vehicle calculated using methods described in the 2010 *Highway Capacity Manual* for signalized intersections and all-way stop-controlled intersections. For side-street stop-controlled intersections, the whole intersection weighted average control delay is reported with the control delay for the worst movement reported in parenthesis.
5. LOS = Level of Service. LOS calculations conducted using the Synchro 9.0 analysis software packages, which apply the methods described in the 2010 *Highway Capacity Manual*.
Source: Fehr & Peers, 2019.

Intersection #3: Lightfighter Drive / General Jim Moore Boulevard

The addition of Plan traffic under Cumulative with Plan Conditions would cause a transportation deficiency based on the vehicular LOS criteria for signalized intersection during the AM and PM peak hours. Under Existing Conditions, it operates at a LOS B during the AM peak hour and LOS C during the PM peak hour. Intersection operations would degrade to LOS F during both peak hours under Cumulative Conditions, and intersection operations would further degrade to LOS F under Cumulative with Plan Conditions during both peak hours. Plan generated traffic would increase the intersection delay by more than one second between Cumulative Conditions and Cumulative with Plan Conditions.

The following physical improvements would reduce the severity of this potential deficiency:

- Reconfigure the intersection as follows as identified in *The Dunes at Monterey Bay EIR* (2005):
  - Northbound: add a third left-turn lane and second through-lane
  - Southbound: add a designated right-turn lane with overlap phase
  - Eastbound: add a second left-turn lane

- Westbound: add a second left-turn lane and second through-lane
- Optimize the cycle length.

The proposed intersection geometry would require additional right-of-way from all corners of the intersection. Signal timing modifications would not require additional right-of-way. With this improvement, the level of service and delay would improve under AM and PM peak hours, as shown in **Table 16** and would alleviate the Plan deficiency.

Increasing vehicle capacity by widening streets generally has a detrimental effect on bicyclists and pedestrians because adding lanes increases the distance bicyclists and pedestrians must cross to navigate the intersection, increasing their exposure to vehicles. Additionally, intersections with three left-turn lanes and/or two right-turn lanes with an overlap phase increase the potential for conflicts between vehicles and pedestrians/bicyclists.

A new roundabout is also being considered for this intersection. Effects of installing a roundabout at this intersection are discussed in **Chapter 9.**

Intersection #5: Gigling Road / General Jim Moore Boulevard

The addition of Plan traffic under Cumulative with Plan Conditions would cause a transportation deficiency based on the vehicular LOS criteria for signalized intersection during the AM and PM peak hours. Under Existing Conditions, it operates at a LOS C during the AM peak hour and LOS B during the PM peak hour. Intersection operations would degrade to LOS F during the AM peak hour and LOS E during the PM peak hour under Cumulative Conditions, and intersection operations would further degrade to LOS F during both peak hours under Cumulative with Plan Conditions. Plan generated traffic would increase the intersection delay by more than one second between Cumulative Conditions and Cumulative with Plan Conditions.

The following physical improvements would reduce the severity of this potential deficiency:

- Reconfigure the intersection as follows as identified in *The Dunes at Monterey Bay EIR* (2005):
  - Northbound: add a second left-turn lane and third through-lane
  - Southbound: add a second left-turn lane and third through-lane
  - Eastbound: add a designated right-turn lane and install overlap phase
  - Westbound: add a second left-turn lane and second through-lane
- Optimize the cycle length.

The proposed intersection geometry would require additional right-of-way from all corners of the intersection. Signal timing modifications would not require additional right-of-way. With this improvement, the level of service and delay would improve under AM and PM peak hours, as shown in **Table 16** and would alleviate the Plan deficiency.

Increasing vehicle capacity by widening streets generally has a detrimental effect on bicyclists and pedestrians because adding lanes increases the distance bicyclists and pedestrians must cross to navigate the intersection, increasing their exposure to vehicles. Additionally, intersections with three left-turn lanes and/or two right-turn lanes with an overlap phase increase the potential for conflicts between vehicles and pedestrians/bicyclists.

A new roundabout is also being considered for this intersection. Effects of installing a roundabout at this intersection are discussed in **Chapter 9.**

Intersection #6: Gigling Road / Malmedy Road

The addition of Plan traffic under Cumulative with Plan Conditions would cause a transportation deficiency based on the vehicular LOS criteria for signalized intersection during the AM and PM peak hours. Under Existing Conditions, it operates at a LOS A during both peak hours. Intersection operations would remain at LOS A during both peak hours under Cumulative Conditions, and intersection operations would degrade to LOS F during both peak hours under Cumulative with Plan Conditions. Additionally, the peak hour signal warrant is met for both peak hours under Cumulative with Plan Conditions.

The following physical improvements would reduce the severity of this potential deficiency:

- Signalize the intersection.

Signalization would not require additional right-of-way acquisition. With this improvement, the level of service and delay would improve under AM and PM peak hours, as shown **Table 16** and would improve intersection operations to acceptable operations. With this improvement, the Plan deficiency would be alleviated.

Intersection #7: Gigling Road / Parker Flats Cut Off Road

The addition of Plan traffic under Cumulative with Plan Conditions would cause a transportation deficiency based on the vehicular LOS criteria for signalized intersection during the PM peak hours. Under Existing Conditions, it operates at a LOS A during both peak hours. Intersection operations would remain at LOS A during both peak hours under Cumulative Conditions, and intersection operations would degrade to LOS F during both peak hours under Cumulative with Plan Conditions. Additionally, the peak hour signal warrant is met for the PM peak hour under Cumulative with Plan Conditions.

The following physical improvements would reduce the severity of this potential deficiency:

- Signalize the intersection.

Signalization would not require additional right-of-way acquisition. With this improvement, the level of service and delay would improve under AM and PM peak hours, as shown **Table 16** and would improve intersection operations to acceptable operations. With this improvement, the Plan deficiency would be alleviated.

Intersection #8: Normandy Road / General Jim Moore Boulevard

The addition of Plan traffic under Cumulative with Plan Conditions would cause a transportation deficiency based on the vehicular LOS criteria for signalized intersection during the AM peak hour. Under Existing Conditions, it operates at a LOS C during the AM peak hour and LOS A during the PM peak hour. Intersection operations would degrade to LOS F during the AM peak hour and LOS C during the PM peak hour under Cumulative Conditions, and intersection operations would further degrade to LOS F during both peak hours under Cumulative with Plan Conditions. Plan generated traffic would increase the intersection delay by more than one second between Cumulative Conditions and Cumulative with Plan Conditions.

The following physical improvements would reduce the severity of this potential deficiency:

- Add a third northbound and southbound through-lane as identified in *The Dunes at Monterey Bay EIR* (2005), and
- Optimize the cycle length.

The proposed intersection geometry would require additional right-of-way from all corners of the intersection. Signal timing modifications would not require additional right-of-way. With this improvement, the level of service and delay would improve under AM and PM peak hours, as shown in **Table 16** and would improve intersection operations to acceptable operations. With this improvement, the Plan deficiency would be alleviated.

Increasing vehicle capacity by widening streets generally has a detrimental effect on bicyclists and pedestrians because adding lanes increases the distance bicyclists and pedestrians must cross to navigate the intersection, increasing their exposure to vehicles. Additionally, intersections with three left-turn lanes and/or two right-turn lanes with an overlap phase increase the potential for conflicts between vehicles and pedestrians/bicyclists.

Intersection #9: Coe Avenue / General Jim Moore Boulevard

The addition of Plan traffic under Cumulative with Plan Conditions would cause a transportation deficiency based on the vehicular LOS criteria for signalized intersection during the AM and PM peak hours. Under Existing Conditions, it operates at a LOS F during the AM peak hour and LOS C during the PM peak hour. Intersection operations would degrade to LOS F during both peak hours under Cumulative Conditions, and intersection operations would further degrade to LOS F under Cumulative with Plan Conditions during both

peak hours. Plan generated traffic would increase the intersection delay by more than one second between Cumulative Conditions and Cumulative with Plan Conditions. Additionally, the peak hour signal warrant is met for both peak hours under Cumulative with Plan Conditions.

The following physical improvements would reduce the severity of this potential deficiency:

- Signalize the intersection, and
- Restripe the existing eastbound left-turn lane and right-turn lane to a left-turn lane and shared through/right-turn lane as identified in *The Dunes at Monterey Bay EIR* (2005).

The proposed intersection geometry would not require additional right-of-way at this intersection. Signal timing modifications would not require additional right-of-way. With this improvement, the level of service and delay would improve under AM and PM peak hours, as shown in **Table 16** and would alleviate the Plan deficiency.

Secondary Effects of Intersection Improvements

The draft improvements to widen intersections described above would cause secondary effects such as the removal of trees, relocation of utilities, lengthening of crosswalks, and/or of signal plans that would increase the crossing distance/time for pedestrians and bicyclists. Furthermore, where dual right-turn lanes are proposed, they would result in a double threat condition for pedestrians and bicyclists. The double threat for pedestrians and bicyclist may be reduced by implementing a no right-turn on red for movements that have two right-turn lanes. However, despite the implementation of the no right-turn on red, there continues to be a secondary effect to pedestrians and bicyclists caused by the increased crossing distance on all legs of the intersection.

TAMC's *Active Transportation Plan* (2014) identifies planned bicycle facilities throughout the study area. These facilities need to be considered when designing and constructing each improvement to reduce any secondary effects to bicyclists. In addition, existing facilities that are to remain as identified in the *Active Transportation Plan* should be maintained to reduce any secondary effects. The *Active Transportation Plan* recommends the following facilities:

- Class II bike lanes on Colonel Durham Street and Malmedy Road,
- Class III bike routes on Seventh Avenue and Divarty Street, and
- Class IV protected bike lanes along Gigling Road and Lightfighter Drive.

8. Freeway Operations

This chapter is provided for informational purposes and describes the potential operational deficiencies on the freeway mainline and ramps with and without the Plan.

Freeway Mainline Operations

This section summarizes the freeway analysis for State Route 1 between Lightfighter Drive and Del Monte Boulevard and State Route 1 between Del Monte Boulevard and Canyon Del Rey Boulevard. Existing freeway segment volumes were recorded during a typical mid-weekday along the studied freeway segments.

Freeway segments within Monterey County were evaluated using the density methods described in the *2010 HCM*. Density is expressed in passenger cars per mile per lane. The *2010 HCM* provides ranges of densities for freeway segment levels of service are shown in **Table 17**. The Monterey County and Caltrans District 5 standard for the freeway segments is on the cusp of LOS C/D.

Table 17: Freeway Segment Level of Service Definitions

Level of Service	Density (passenger cars per mile per lane)
A	≤ 11
B	11.1 to 18.0
C	18.1 to 26.0
D	26.1 to 35.0
E	35.1 to 45.0
F	> 45.0

Source: *Highway Capacity Manual*, Transportation Research Board, 2010.

Freeway mainline operations analysis evaluates the effects of the Plan on the freeway system. The level of operations of freeway mainline segments directly affect ramp operations and weaving patterns on the freeway system. Freeway mainline analysis is presented in this study to evaluate the effects of the Plan on the freeway system.

Operational deficiencies on freeway segments in Monterey County were determined to occur when the addition of Plan traffic causes:

- Peak hour freeway segment operations to deteriorate from an acceptable level (LOS C/D threshold or better) under the without Plan Conditions to an unacceptable level (LOS D or worse) under with Plan Conditions; or

- There is an increase in traffic of more than two percent of the capacity on a segment that operates unacceptably (LOS D or worse) under without Plan Conditions.

Existing with Plan Conditions

Freeway segment levels of service were calculated using the analysis methods outlined above for freeway mainline segments.

Under Existing Conditions, southbound segments are generally more congested during the morning peak hour. In addition, congestion is experienced along State Route 1 between Del Monte Boulevard and Canyon Del Rey Boulevard in northbound direction during evening peak hour. Existing freeway segments operations are summarized in **Table 18**. Detailed calculation sheets are presented in **Appendix H**.

Table 18: Existing with Plan Freeway Level of Service

	Segment	Dir.[1]	Capacity	Peak Hour[2]	Existing Conditions		Existing with Plan Conditions			
					Density[3]	LOS[4]	Density[3]	Plan Trips	Plan Percent of Capacity	LOS[4]
1	State Route 1 between Lightfighter Drive and Del Monte Boulevard	NB	7,050	AM PM	15.2 25.2	B C	15.4 25.8	39 88	**0.5%** **1.2%**	B C
		SB	7,050	AM PM	**30.5** 16.9	**D** B	**31.1** 17.3	70 69	1.0% 1.0%	**D** B
2	State Route 1 between Del Monte Boulevard and Canyon Del Rey Boulevard	NB	4,700	AM PM	20.1 **32.1**	C **D**	20.4 **33.3**	39 88	**0.8%** **1.8%**	C **D**
		SB	4,700	AM PM	**34.7** 21.2	**D** C	**35.7** 21.7	70 69	**1.5%** **1.5%**	**E** C

Notes: **Bold** text indicates freeway segment operates at unacceptable level of service.
1. NB = northbound; SB = southbound
2. AM = morning peak hour; PM = evening peak hour
3. Density is measured in passenger cars per mile per lane.
4. Level of service based on density.
Source: Fehr & Peers, 2019.

Cumulative with Plan Conditions

Freeway volumes for the Cumulative and Cumulative with Plan scenarios were developed as described in Chapter 1. Future operations of freeway mainline segments in Monterey County were evaluated using level of service and percent of Plan traffic added to each roadway segment.

Table 19 presents the summary for the Cumulative and Cumulative with Plan Conditions freeway operations. All segments operate below LOS C under without Plan and with Plan Conditions, except northbound State Route 1 between Lightfighter Drive and Del Monte Boulevard during the AM peak hour. **Appendix H** includes the freeway density calculations and levels of service.

Table 19: Cumulative Freeway Level of Service

	Segment	Dir.[1]	Capacity	Peak Hour[2]	Cumulative Conditions		Cumulative with Plan Conditions			
					Density[3]	LOS[4]	Density[3]	Plan Trips	Plan Percent of Capacity	LOS[4]
1	State Route 1 between Lightfighter Drive and Del Monte Boulevard	NB	7,050	AM	23.0	C	23.3	39	0.5%	C
				PM	**37.4**	**E**	**38.4**	**88**	**1.2%**	**E**
		SB	7,050	AM	**42.7**	**E**	**43.8**	**70**	**1.0%**	**E**
				PM	**26.6**	**D**	**27.1**	**69**	**1.0%**	**D**
2	State Route 1 between Del Monte Boulevard and Canyon Del Rey Boulevard	NB	4,700	AM	**36.5**	**E**	**37.1**	**39**	**0.8%**	**E**
				PM	**>45**	**F**	**>45**	**87**	**1.8%**	**F**
		SB	4,700	AM	**>45**	**F**	**>45**	**70**	**1.5%**	**F**
				PM	**44.1**	**E**	**>45**	**69**	**1.5%**	**F**

Notes: **Bold** text indicates freeway segment operates at unacceptable level of service.
1. NB = northbound; SB = southbound
2. AM = morning peak hour; PM = evening peak hour
3. Density is measured in passenger cars per mile per lane.
4. Level of service based on density.
Source: Fehr & Peers, 2019.

Freeway Ramp Queuing

With additional Plan traffic there is the potential for increased ramp queuing during the peak hours. This analysis summarizes the additional traffic and estimates the change in vehicle queue length compared to the existing available vehicle storage on each study ramp. Because all off-ramps studied terminate at an intersection, off-ramp queues were evaluated using ramp-terminal intersection queue estimates from the intersection LOS calculations (using Synchro software package).

Existing with Plan Conditions

This section summarizes the queues calculated using the Poisson distribution method at the off-ramps with signalized terminal intersections. **Table 20** compares the queue lengths of the signalized turning movements that serve trips travelling toward the Plan with the available storage. Data is used for either left-

turning or right-turning movements/storage lengths, depending on which turning movement serves the Plan site. Queue lengths were calculated using an average vehicle length of 25 feet.

As shown in **Table 20**, none of the three off-ramps studies are anticipated to have queues that exceed capacity under Existing and Existing with Plan Conditions. Detailed calculation sheets are presented in **Appendix I**.

Table 20: Existing Freeway Off-Ramp Queuing Evaluation

Off-Ramp	Storage Capacity (ft)	Peak Hour	Existing without Plan		Existing with Plan	
			Ramp Volume	Queue (ft)	Ramp Volume	Queue (ft)
SR 1 Southbound Off-Ramps						
Imjin Parkway	1,140	AM PM	414 261	550 325	414 261	550 325
Lightfighter Drive	2,800	AM PM	431 167	250 125	482 283	300 200
SR 1 Northbound Off-Ramps						
Lightfighter Drive	1,200	AM PM	460 384	250 125	499 472	300 200

Notes:
1. Vehicle storage capacity is defined as the length of the longest mixed-flow lane available for vehicle queuing. Length is measured from gore point to gore point or where any queue spillback has the potential to block other movements.
2. AM = morning peak hour; PM = evening peak hour.

Source: Fehr & Peers, 2019.

Cumulative with Plan Conditions

This section summarizes the queues calculated using the Poisson distribution method at the off-ramps with signalized terminal intersections. **Table 21** compares the queue lengths of the signalized turning movements that serve trips travelling toward the Plan with the available storage. Data is used for either left-turning or right-turning movements/storage lengths, depending on which turning movement serves the Plan site. Queue lengths were calculated using an average vehicle length of 25 feet.

As shown in **Table 21**, one of the three off-ramps studies are anticipated to have queues that exceed the available storage length. With and without the Plan, queue exceeds pocket storage at the SR 1 / Imjin Parkway southbound off-ramp during the AM and PM peak hours. Detailed calculation sheets are presented in **Appendix I**.

Table 21: Cumulative Freeway Off-Ramp Queuing Evaluation

Off-Ramp	Storage Capacity (ft)	Peak Hour	Cumulative without Plan		Cumulative with Plan	
			Ramp Volume	Queue (ft)	Ramp Volume	Queue (ft)
SR 1 Southbound Off-Ramps						
Imjin Parkway	1,140	AM PM	1,301 1,305	**2,650*** **2,650***	1,301 1,306	**2,650*** **2,650***
Lightfighter Drive	2,800	AM PM	686 547	1,000* 850*	737 663	1,100* 1,050*
SR 1 Northbound Off-Ramps						
Lightfighter Drive	1,200	AM PM	1,031 1,044	1,000* 850*	1,070 1,132	1,100* 1,050*

Notes:
*95th percentile volume exceeds capacity; queue may be longer.
1. du=dwelling units; rm=rooms; ksf=1,000 square feet
Source: Fehr & Peers, 2019.

9. Site Access and Circulation

This chapter is provided for informational purposes and describes additional operational improvements that are recommended for the intersections adjacent to the Plan site. In addition, this chapter presents the recommended pedestrian treatment at the mid-block crosswalk on General Jim Moore Boulevard and describes the Plan's goals for parking.

Plan Intersection Improvements

In addition to the improvements described in Chapter 7, this section describes additional operational improvements that are recommended for intersections within and on the boundary of the Plan. The following intersections may need additional improvements beyond what is described above:

- Lightfighter Drive / First Avenue
- Lightfighter Drive / Second Avenue
- Colonel Durham Street / Seventh Avenue

Lightfighter Drive / First Avenue

The intersection of Lightfighter Drive and First Avenue intersection was found to operate at an acceptable level of service. This intersection is located just outside the Plan boundary and, therefore, no modifications or enhancements are provided for this intersection. However, to enhance the multimodal facilities as guided by the City's and the Plan's complete streets policies, the following operational improvement options should be considered:

- Option 1: Intersection Modifications
  - Reduce the width of the eastbound approach by removing the additional pavement on the southeast corner of the intersection.
  - Repave and restripe the northbound approach and maintain the current geometry (one left-turn lane and one right-turn lane).
  - Install protected bicycle lanes on both sides of Lightfighter Drive east of the intersection (*TAMC's Active Transportation Plan*, 2018). In addition, provide a bicycle route on First Avenue the connects to the protected bicycle lanes.
- Option 2: Roundabout
  - Install a partial two-lane roundabout where two lanes are provided along Lightfighter Drive.
  - Ensure that the bicycle and pedestrian facilities are designed in accordance with the latest version of the National Cooperative Highway Research Program (NCHRP) Report 672 – *Roundabouts: An Informational Guide*.

Lightfighter Drive / Second Avenue

The Plan proposes to modify the eastbound lanes along Lightfighter Drive to include two 11-foot vehicle lanes, one 8-foot bicycle lane, and a 9-foot sidewalk. This includes the removal of the excess roadway pavement in the southwest corner of the intersection. In addition, Second Avenue is proposed as one travel lane in each direction with curbside parking and 20-foot sidewalks. In addition to the proposed improvements, the following additional improvement options are identified to enhance the multimodal intersection geometry:

- Option 1: Intersection Improvements
  - Replace the existing northbound shared lane with one left-turn lane and one through/right-turn lane.
  - Install protected bicycle lanes on both sides of Lightfighter Drive east of the intersection and install a multi-use path along Second Avenue north and south of Lightfighter Drive (*TAMC's Active Transportation Plan*, 2018).
- Option 2: Roundabout
  - Install a two-lane roundabout.
  - Ensure that the bicycle and pedestrian facilities are designed in accordance with the latest version of the National Cooperative Highway Research Program (NCHRP) Report 672 – *Roundabouts: An Informational Guide*.

The Plan is proposing to modify the eastbound side of Lightfighter Drive, the side that fronts the Plan area. Due to other environmental restrictions, this side of the roadway will have an 8-foot bicycle lane in place of a protected bicycle lane. Second Avenue is proposed as a local street that would allow bicyclists to travel within the vehicle lane. This is different than what is planned in the *Active Transportation Plan*. South of Lightfighter Drive, Second Avenue will be a two-lane local street with a planned bicycle route.

Colonel Durham Street / Seventh Avenue

The intersection Colonel Durham Street / Seventh Avenue is currently an all-way stop-controlled intersection with one travel lane in each direction. The Plan proposes to maintain one lane in each direction on Colonel Durham Street and Seventh Avenue to adhere to the City's and the Plan's complete streets policies. Given the surrounding land use, it is recommended that this intersection remain an all-way stop-controlled intersection. However, monitoring may be needed to determine if a roundabout or signal is warranted.

New Roundabouts

Roundabouts have been proposed at two intersections as part of the Plan. The two intersections are:

- Intersection #3: Lightfighter Drive / General Jim Moore Boulevard
- Intersection #5: Gigling Road / General Jim Moore Boulevard

As part of this transportation analysis, the two roundabouts were reviewed from an operational and multimodal perspective to develop a balanced and multimodal roundabout that caters to all modes. The following are our recommendations for the two roundabout configurations.

Lightfighter Drive / General Jim Moore Boulevard

A two-lane roundabout is proposed as part of the Plan. The geometry listed below has been identified as the balanced, multimodal two-lane roundabout alternative:

- Northbound: one left-turn lane and one shared left-turn/through/right-turn lane,
- Southbound: one shared through/left-turn lane and one shared through/right-turn lane,
- Eastbound: one shared through/left-turn/right turn lane and one right-turn lane, and
- Westbound: one shared through/left-turn lane and one shared through/right-turn lane.

An important design consideration for multi-lane roundabouts is the bicycle and pedestrian crossings across two approach/departure lanes. Specifically, multi-lane roundabouts without controlled pedestrian and bicycling crossings have an inherent "double threat" to pedestrians and bicyclists. For example, a visually impaired pedestrian needs adequate guidance (design features and/or control devices) to know when to enter the street as vehicles and bicyclist yield to the pedestrian. Therefore, each double lane approach/departure should include sufficient design features (staged crossing one lane at a time, bypass lanes) and control devices (signalization, yield control, etc.) to accommodate all users, especially visually impaired pedestrians and elderly users.

With the above intersection configuration, the overall intersection delay decreases when compared to the current intersection configuration between No Plan and With Plan Conditions. If approximately 300 vehicles of traffic in northbound left-turn and eastbound right-turn movements were to shift from General Jim Moore Boulevard to State Route 1, the intersection has the potential to operate at an improved vehicular level of service but would likely result in additional deficiencies along State Route 1.

Using this LOS C standard would require a three-lane roundabout, which would have a negative effect on pedestrian and bicycle access and comfort and may reduce development potential near the intersection.

Rather than expressing a vehicle performance standard, the Plan performance standard is the street cross-sections that balances all modes of travel including a two-lane roundabout at this intersection of Lightfighter Drive and General Jim Moore Boulevard. Detailed calculation sheets may be found in **Appendix K**.

Gigling Road / General Jim Moore Boulevard

A two-lane roundabout is proposed as part of the Plan. The geometry listed below has been identified as the balanced, multimodal two-lane roundabout alternative:

- Northbound: one shared through/left-turn lane and one shared through/right-turn lane,
- Southbound: one shared through/left-turn lane and one shared through/right-turn lane,
- Eastbound: one shared left-turn/through/right-turn lane, and
- Westbound: one left-turn lane and one shared through/right-turn lane.

An important design consideration for multi-lane roundabouts is the bicycle and pedestrian crossings across two approach/departure lanes. Specifically, multi-lane roundabouts have an inherent "double threat" to pedestrians and bicyclists. For example, a visually impaired pedestrian needs adequate guidance (design features and/or control devices) to know when to enter the street as vehicles and bicyclist yield to the pedestrian. Therefore, each double lane approach/departure should include sufficient design features (staged crossing one lane at a time, bypass lanes) and control devices (signalization, yield control, etc.) to accommodate all users especially visually impaired pedestrians and elderly users.

With the above intersection configuration, the intersection delay decreases during the AM peak hour but increases during the PM peak hour between No Plan and With Plan Conditions. If approximately 500 vehicles of traffic in the northbound-through and southbound-through movements were to shift from General Jim Moore Boulevard to State Route 1, the intersection has the potential to operate at an improved vehicular level of service but would likely result in additional deficiencies along State Route 1.

Using this LOS C standard would require a three-lane roundabout, which would have a negative effect on pedestrian and bicycle access and comfort and may reduce development potential near the intersection.

Rather, than expressing a vehicle performance standard, the Plan performance standard is the street cross-sections that balances all modes of travel including a two-lane roundabout at this intersection of Gigling Road and General Jim Moore Boulevard. Detailed calculation sheets may be found in **Appendix K**.

Pedestrian Crossing at General Jim Moore Boulevard

The Plan proposes a pedestrian crossing across General Jim Moore Boulevard at new Street C right-in, right-out intersection. A mid-block pedestrian crossing at this location would provide a direct connection and enhance walkability within the Plan between Lightfighter Drive and Gigling Road. However, given that General Jim Moore Boulevard is two lanes in each direction and the projected volumes are estimated to be around 3,000 vehicles in the peak hour, additional enhancements should be made to assist pedestrians crossing at this location.

To determine the appropriate enhancement at this location, the Fehr & Peers Xwalk+ tool was used. This tool is based on research from the National Cooperative Highway Research Program, Federal Highway Administration and interviews with various cities throughout the country and provides guidance about the type of treatments appropriate on various streets and under various conditions. The tool uses simple inputs from a field survey, such as number of lanes, posted speed, and average daily traffic, to provide a candidate pedestrian treatment at mid-block and unsignalized locations.

Based on the evaluation of the surrounding area, the proposed site plan, and results from the Xwalk+ tool, it is recommended that a High Intensity Activated crossWalK (HAWK) pedestrian crossing beacon be installed at this location. A HAWK beacon is a pedestrian-activated option requires that traffic stop when the beacon is activated by a pedestrian attempting to cross, and does not require a full signal. Results of the Xwalk+ tool may be found in **Appendix J** along with an image of a HAWK signal.

Parking Supply

The *2004 General Plan* and the draft *Seaside 2040* General Plan provide parking goals and policies. Goal C-4 of the *2004 General Plan* is to "ensure adequate parking is provided throughout Seaside." The *2004 General Plan* also discusses the benefits and opportunities that occur with to mixed-use development; one of which being that businesses and residential projects have the opportunity to share parking in addition to increasing the number of trips made by active modes, such as walking or biking. This is consistent with the goals and policies identified in the Plan.

Because the draft *Seaside 2040* proposes many new bicycle and pedestrian improvements, along with a general prioritization of non-vehicular travel, the City of Seaside's current parking rates may result in an oversupply of parking for future developments. According to the draft *Seaside 2040*, one of the key transportation goals is:

- M-8: Well-managed commercial parking that supports Seaside's businesses and limits impacts on adjacent residential neighborhoods.

The Plan proposes parking policies that are consistent with the mixed-use development discussions in the *2004 General Plan* and the draft *Seaside 2040* goal to reduce the potential for an oversupply of parking within the Plan. The residential portion of the Campus Town Specific Plan is adequately parked per the parking requirements outlined in the City of Seaside Zoning Code, Section 17.48.030 Parking Space Requirements. And the proposed parking policy for the commercial portion of the Plan is:

- M-8: The Plan utilizes the latest research on parking allowing market forces to determine the appropriate quantity and methods of parking management for commercial uses.

Specific parking supplies have not been identified for the commercial uses in the Plan area. Each commercial development that occurs within the Plan area will be required to provide their proposed parking supply for review by City staff, who will ensure the proposed development is adequately parked. Therefore, the Campus Town Specific Plan adheres to both the *2004 General Plan* and the draft *Seaside 2040* General Plan parking policies.

10. Construction Traffic

Construction for the Plan is anticipated to occur in two phases:

- Phase 1: Demolition and Grading, Drainage and Utilities, Paving, and Building Construction/Architectural Coatings
  - Estimated April 2021 through October 2025
- Phase 2: Demolition and Grading, Drainage and Utilities, Paving, and Building Construction/Architectural Coatings
  - Estimated October 2022 through 2034

This section of the report qualitatively addresses construction-related impacts, specifically as they relate to expected traffic and parking. General recommendations on construction-related mitigations are provided. The truck routes providing access to and from the Plan site are discussed below.

SR 1 is identified as part of the regional truck network. The freeway is intended to move goods efficiently within the cities of Marina and Seaside. Additionally, in the mobility chapter of draft *Seaside 2040*, the following roadway segments near the Plan are identified as likely truck routes:

- Lightfighter Drive between Highway 1 and General Jim Moore Boulevard
- General Jim Moore Boulevard from within City limits
- Gigling Road from General Jim Moore Boulevard to east City limit

Rincon Consultants, the environmental consultant for the Plan studies, completed a construction traffic estimate for construction activity using CalEEMod. Daily peak construction traffic would be during the overlapping Phase II Demolition, Phase II Grading, Phase I Building Construction, and Phase I Architectural Coating phases (from October 2022 to October 2025). During this time, the daily construction traffic is estimated to be 2,845 trips and no Plan trips are estimated to occur. This is approximately five times less than the number of daily trips generated by the Proposed Project after it is fully occupied. The daily trips generated by the Proposed Project were calculated by multiplying the sum of the AM and PM peak hour trip generation by five (this factor was determined based on counts collected throughout the AMBAG region). In addition, in the situation where road closures are necessary, there are ample detour routes that are a short distance away and are not anticipated to substantially increase the miles traveled on the roadway network.

Given the availability of short detours and smaller trip generation during construction, all the potential traffic operation impacts during construction are covered by the Plan and discussed in this TA.

Prior to the issuance of building permits, the applicant and construction contractor shall meet with City staff to determine traffic management strategies to reduce traffic congestion and the effects of parking demand by construction workers during construction of this Plan. Consistent with the City's standard conditions of approval, applicants shall develop a construction management plan in accordance with the latest version of the California Manual on Uniform Traffic Control Devices (CA MUTCD) for review and approval by the City staff. At the time this report was written, the 2014 CA MUTCD Revision 3 was the latest version of the manual. However, given the length of construction, the latest version at the time the traffic management plans are completed should be used. In addition to the requirements set forth in the CA MUTCD, the construction management plan should include at least the following items and requirements:

- Identify proposed truck routes to be used.
- Specify construction hours, including limits on the number of truck trips during the AM and PM peak traffic periods (7:00 – 9:00 AM and 4:00 – 6:00 PM), if conditions demonstrate the need.
- Include a parking management plan for ensuring that construction worker parking results in minimal disruption to surrounding uses.
- Include a public information and signage plan to inform student, faculty and staff of the planned construction activities, roadway changes/closures, and parking changes.
- Store construction materials only in designated areas that minimize impacts to nearby roadways.
- Limit the number of lane closures during peak hours to the extent possible. Inform the Campus at least two weeks before any partial road closure.
- Use California Department of Transportation (Caltrans) certified flag persons for any temporary lane closures to minimize impacts to traffic flow, and to ensure safe access into and out of the project sites.
- Install traffic control devices as specified in the California Department of Transportation Manual of Traffic Controls for Construction and Maintenance Work Zones.
- To minimize disruption of emergency vehicle access, affected jurisdictions (Campus Police, City Police, County Sheriff, and City Fire Department) will be consulted to identify detours for emergency vehicles, which will then be posted by the construction contractor.
- Coordinate with local transit agencies for temporary relocation of routes or bus stops in works zones, as necessary.
- Coordinate with other projects under construction near the project site, so an integrated approach to construction-related traffic is developed and implemented.

Appendix A:
Traffic Counts

Traffic Data Service

San Jose, CA
(408) 622-4787
tdsbay@cs.com

File Name : 22AM FINAL
Site Code : 00000022
Start Date : 4/27/2017
Page No : 1

Groups Printed- Lights - Buses - Trucks

	1ST AVE Southbound					LIGHTFIGHTER DR Westbound					1ST AVE Northbound					LIGHTFIGHTER DR Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	2	0	0	0	2	0	126	1	0	127	0	0	53	0	53	12	107	0	0	119	301
07:15 AM	4	1	0	0	5	0	160	7	0	167	0	0	44	0	44	22	160	0	0	182	398
07:30 AM	5	0	1	0	6	0	270	3	0	273	1	0	43	0	44	31	199	0	0	230	553
07:45 AM	5	2	3	0	10	0	182	1	0	183	10	0	35	0	45	44	233	0	0	277	515
Total	16	3	4	0	23	0	738	12	0	750	11	0	175	0	186	109	699	0	0	808	1767
08:00 AM	4	1	10	0	15	0	142	9	0	151	5	0	36	0	41	29	156	0	0	185	392
08:15 AM	4	0	0	0	4	0	99	8	0	107	7	0	28	0	35	40	146	0	0	186	332
08:30 AM	0	0	0	0	0	0	70	2	0	72	0	0	21	0	21	54	137	1	0	192	285
08:45 AM	3	0	0	0	3	0	72	3	0	75	1	0	20	0	21	37	149	1	0	187	286
Total	11	1	10	0	22	0	383	22	0	405	13	0	105	0	118	160	588	2	0	750	1295
Grand Total	27	4	14	0	45	0	1121	34	0	1155	24	0	280	0	304	269	1287	2	0	1558	3062
Apprch %	60	8.9	31.1	0		0	97.1	2.9	0		7.9	0	92.1	0		17.3	82.6	0.1	0		
Total %	0.9	0.1	0.5	0	1.5	0	36.6	1.1	0	37.7	0.8	0	9.1	0	9.9	8.8	42	0.1	0	50.9	
Lights	26	3	14	0	43	0	1093	34	0	1127	23	0	276	0	299	257	1256	2	0	1515	2984
% Lights	96.3	75	100	0	95.6	0	97.5	100	0	97.6	95.8	0	98.6	0	98.4	95.5	97.6	100	0	97.2	97.5
Buses	0	1	0	0	1	0	10	0	0	10	0	0	2	0	2	8	12	0	0	20	33
% Buses	0	25	0	0	2.2	0	0.9	0	0	0.9	0	0	0.7	0	0.7	3	0.9	0	0	1.3	1.1
Trucks	1	0	0	0	1	0	18	0	0	18	1	0	2	0	3	4	19	0	0	23	45
% Trucks	3.7	0	0	0	2.2	0	1.6	0	0	1.6	4.2	0	0.7	0	1	1.5	1.5	0	0	1.5	1.5

	1ST AVE Southbound				LIGHTFIGHTER DR Westbound				1ST AVE Northbound				LIGHTFIGHTER DR Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	4	1	0	5	0	160	7	167	0	0	**44**	44	22	160	0	182	398
07:30 AM	**5**	0	1	6	0	**270**	3	**273**	1	0	43	44	31	199	0	230	**553**
07:45 AM	5	**2**	3	10	0	182	1	183	**10**	0	35	**45**	**44**	**233**	0	**277**	515
08:00 AM	4	1	**10**	**15**	0	142	**9**	151	5	0	36	41	29	156	0	185	392
Total Volume	18	4	14	36	0	754	20	774	16	0	158	174	126	748	0	874	1858
% App. Total	50	11.1	38.9		0	97.4	2.6		9.2	0	90.8		14.4	85.6	0		
PHF	.900	.500	.350	.600	.000	.698	.556	.709	.400	.000	.898	.967	.716	.803	.000	.789	.840

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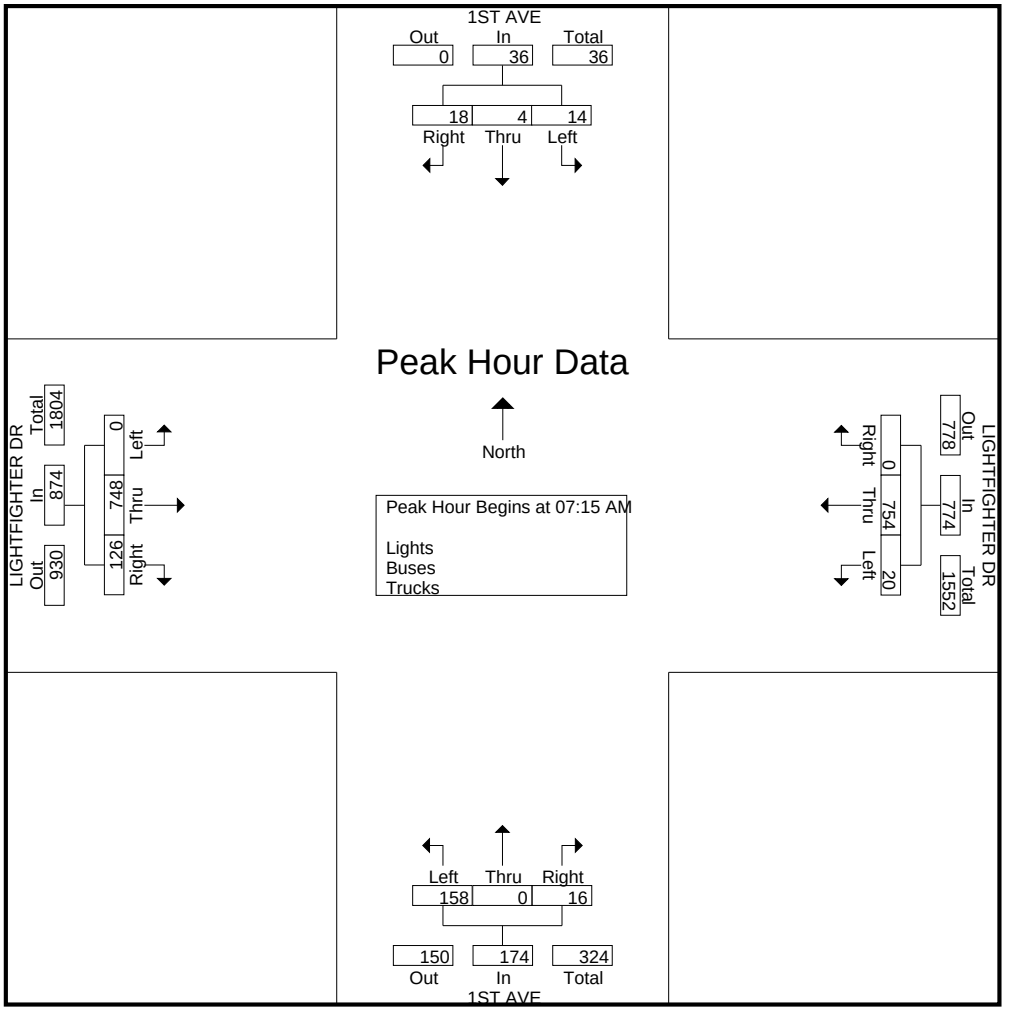

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Groups Printed- Bikes

	1ST AVE Southbound					LIGHTFIGHTER DR Westbound					1ST AVE Northbound					LIGHTFIGHTER DR Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Apprch %	0	0	0	0		0	100	0	0		0	0	0	0		0	0	0	0		
Total %	0	0	0	0	0	0	100	0	0	100	0	0	0	0	0	0	0	0	0	0	

	1ST AVE Southbound				LIGHTFIGHTER DR Westbound				1ST AVE Northbound				LIGHTFIGHTER DR Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	**1**	0	**1**	0	0	0	0	0	0	0	0	**1**
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
% App. Total	0	0	0		0	100	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000	.250

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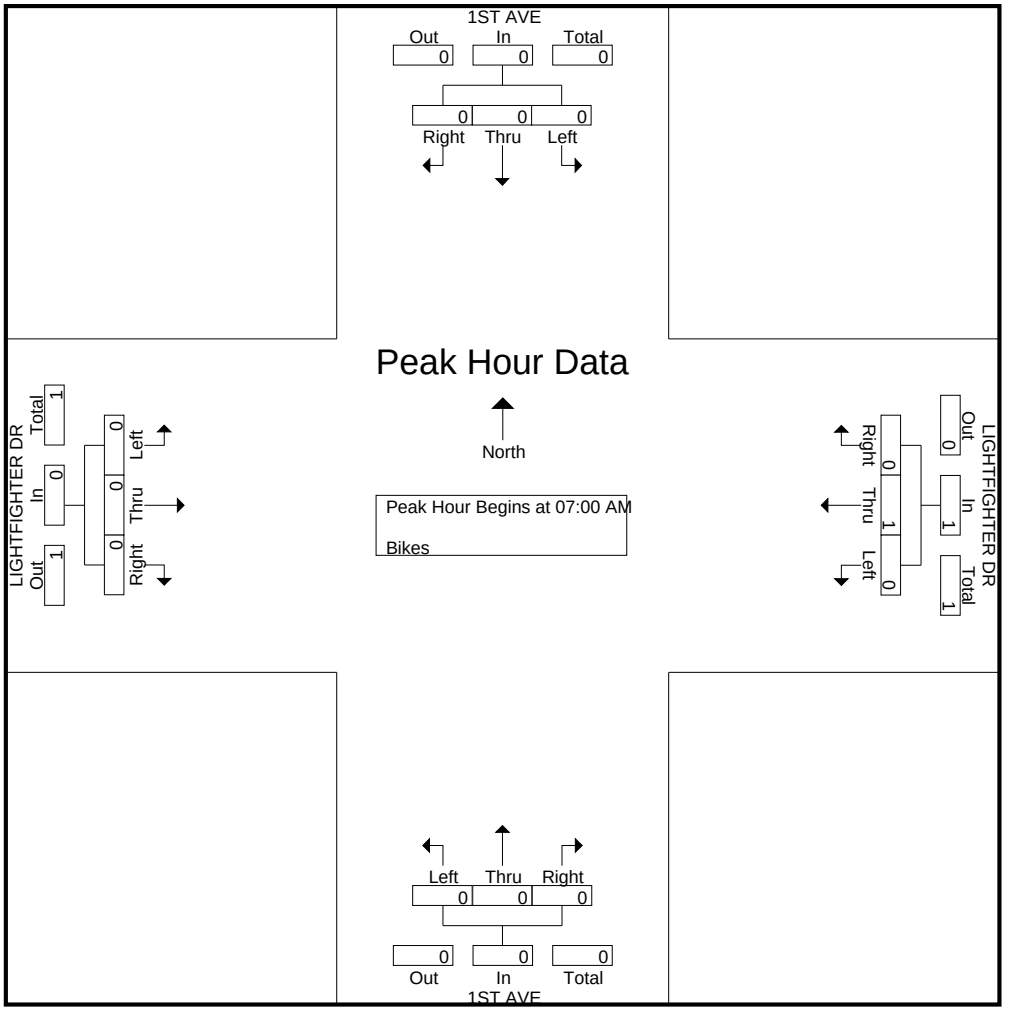

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File Name : 22PM FINAL
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Groups Printed- Lights - Buses - Trucks

	1ST AVE Southbound					LIGHTFIGHTER DR Westbound					1ST AVE Northbound					LIGHTFIGHTER DR Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	6	0	0	0	6	0	204	5	0	209	6	0	55	0	61	33	86	0	0	119	395
04:15 PM	4	0	0	0	4	0	159	4	0	163	6	0	44	0	50	27	107	0	0	134	351
04:30 PM	4	0	0	0	4	0	222	1	0	223	4	0	53	0	57	32	103	0	0	135	419
04:45 PM	4	0	1	0	5	0	261	8	0	269	4	0	52	0	56	33	107	0	0	140	470
Total	18	0	1	0	19	0	846	18	0	864	20	0	204	0	224	125	403	0	0	528	1635
05:00 PM	12	0	0	0	12	0	241	3	0	244	4	0	55	0	59	16	132	0	0	148	463
05:15 PM	0	0	0	0	0	0	247	2	0	249	10	0	35	0	45	22	111	0	0	133	427
05:30 PM	8	0	0	0	8	0	208	4	0	212	4	0	41	0	45	21	122	0	0	143	408
05:45 PM	4	0	0	0	4	1	189	2	0	192	5	0	29	0	34	25	128	0	0	153	383
Total	24	0	0	0	24	1	885	11	0	897	23	0	160	0	183	84	493	0	0	577	1681
Grand Total	42	0	1	0	43	1	1731	29	0	1761	43	0	364	0	407	209	896	0	0	1105	3316
Apprch %	97.7	0	2.3	0		0.1	98.3	1.6	0		10.6	0	89.4	0		18.9	81.1	0	0		
Total %	1.3	0	0	0	1.3	0	52.2	0.9	0	53.1	1.3	0	11	0	12.3	6.3	27	0	0	33.3	
Lights	41	0	1	0	42	0	1718	27	0	1745	43	0	358	0	401	205	881	0	0	1086	3274
% Lights	97.6	0	100	0	97.7	0	99.2	93.1	0	99.1	100	0	98.4	0	98.5	98.1	98.3	0	0	98.3	98.7
Buses	0	0	0	0	0	0	5	2	0	7	0	0	4	0	4	4	10	0	0	14	25
% Buses	0	0	0	0	0	0	0.3	6.9	0	0.4	0	0	1.1	0	1	1.9	1.1	0	0	1.3	0.8
Trucks	1	0	0	0	1	1	8	0	0	9	0	0	2	0	2	0	5	0	0	5	17
% Trucks	2.4	0	0	0	2.3	100	0.5	0	0	0.5	0	0	0.5	0	0.5	0	0.6	0	0	0.5	0.5

	1ST AVE Southbound				LIGHTFIGHTER DR Westbound				1ST AVE Northbound				LIGHTFIGHTER DR Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	4	0	0	4	0	222	1	223	4	0	53	57	32	103	0	135	419
04:45 PM	4	0	**1**	5	0	**261**	**8**	**269**	4	0	52	56	**33**	107	0	140	**470**
05:00 PM	**12**	0	0	**12**	0	241	3	244	4	0	**55**	**59**	16	**132**	0	**148**	463
05:15 PM	0	0	0	0	0	247	2	249	**10**	0	35	45	22	111	0	133	427
Total Volume	20	0	1	21	0	971	14	985	22	0	195	217	103	453	0	556	1779
% App. Total	95.2	0	4.8		0	98.6	1.4		10.1	0	89.9		18.5	81.5	0		
PHF	.417	.000	.250	.438	.000	.930	.438	.915	.550	.000	.886	.919	.780	.858	.000	.939	.946

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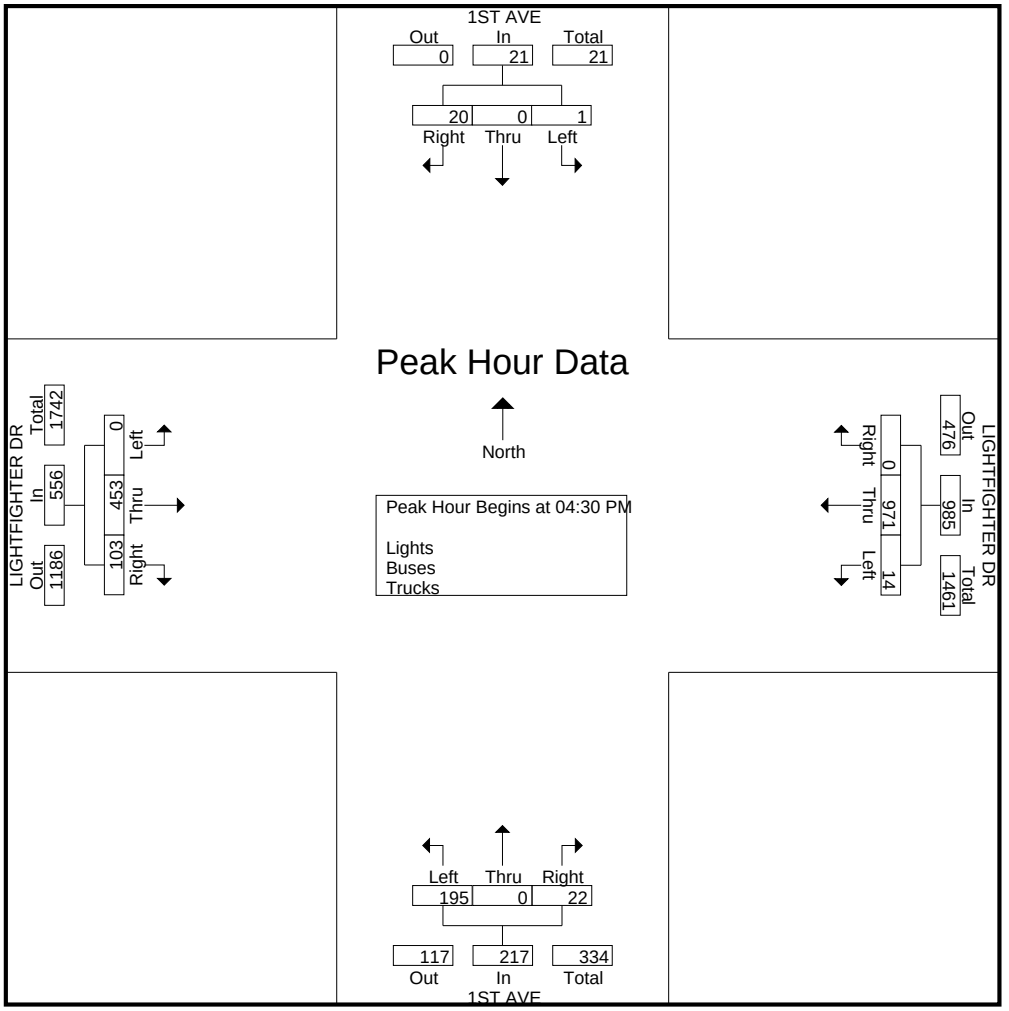

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Groups Printed- Bikes

	1ST AVE Southbound					LIGHTFIGHTER DR Westbound					1ST AVE Northbound					LIGHTFIGHTER DR Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		
Total %																					

	1ST AVE Southbound				LIGHTFIGHTER DR Westbound				1ST AVE Northbound				LIGHTFIGHTER DR Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

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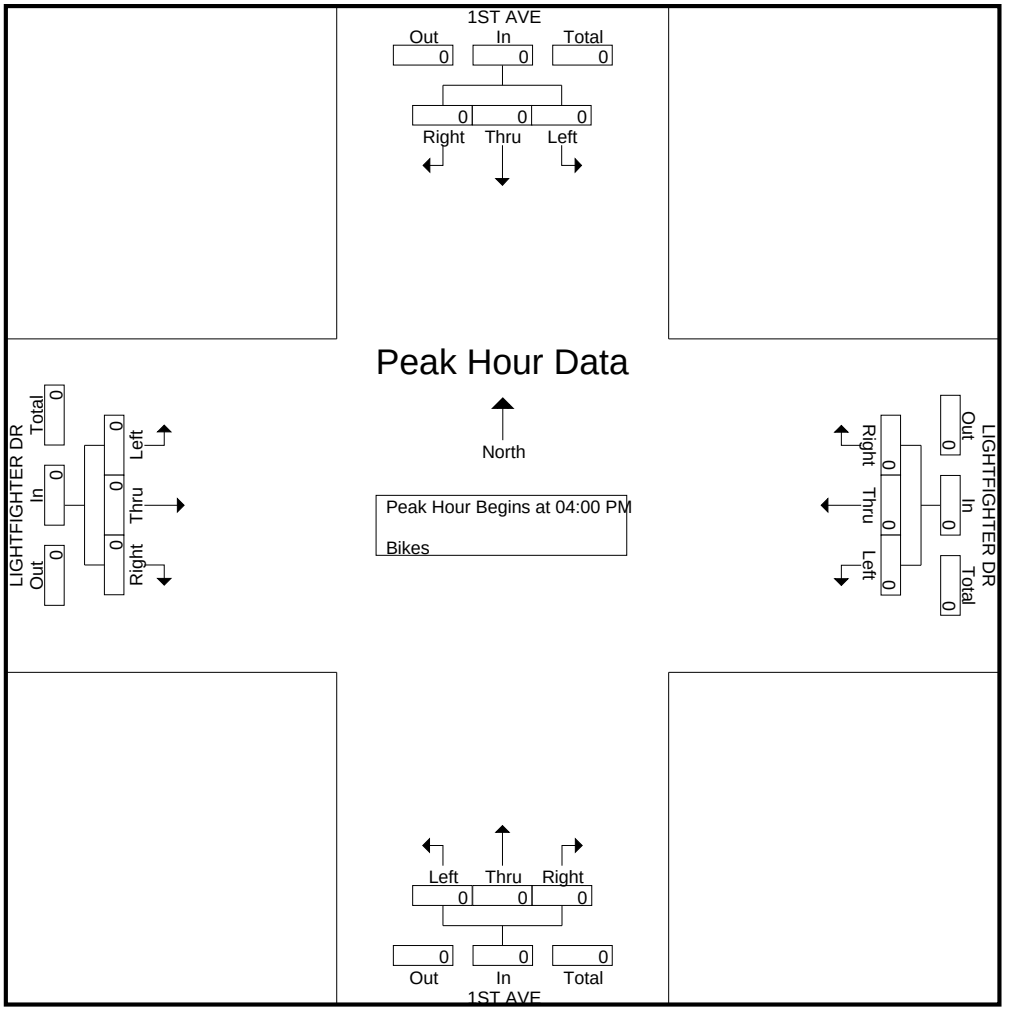

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File Name : 23AM FINAL
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Groups Printed- Lights - Buses - Trucks

	2ND AVE Southbound					LIGHTFIGHTER DR Westbound					2ND AVE Northbound					LIGHTFIGHTER DR Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	32	1	19	0	52	5	103	0	0	108	0	1	0	0	1	0	96	6	0	102	263
07:15 AM	79	1	70	0	150	7	102	0	0	109	1	0	0	0	1	0	155	8	0	163	423
07:30 AM	121	1	64	0	186	14	135	3	0	152	0	0	0	0	0	1	174	14	0	189	527
07:45 AM	87	0	70	0	157	28	94	1	0	123	0	0	0	0	0	1	215	27	0	243	523
Total	319	3	223	0	545	54	434	4	0	492	1	1	0	0	2	2	640	55	0	697	1736
08:00 AM	56	2	68	0	126	19	93	1	0	113	0	1	2	0	3	0	152	29	0	181	423
08:15 AM	38	1	59	3	101	7	61	0	3	71	0	1	0	10	11	0	129	23	8	160	343
08:30 AM	21	0	32	0	53	8	50	0	1	59	2	0	1	0	3	0	121	13	0	134	249
08:45 AM	21	2	29	0	52	5	51	2	1	59	2	0	0	0	2	0	126	23	0	149	262
Total	136	5	188	3	332	39	255	3	5	302	4	2	3	10	19	0	528	88	8	624	1277
Grand Total	455	8	411	3	877	93	689	7	5	794	5	3	3	10	21	2	1168	143	8	1321	3013
Apprch %	51.9	0.9	46.9	0.3		11.7	86.8	0.9	0.6		23.8	14.3	14.3	47.6		0.2	88.4	10.8	0.6		
Total %	15.1	0.3	13.6	0.1	29.1	3.1	22.9	0.2	0.2	26.4	0.2	0.1	0.1	0.3	0.7	0.1	38.8	4.7	0.3	43.8	
Lights	450	8	403	3	864	88	665	7	3	763	4	3	3	10	20	2	1142	139	8	1291	2938
% Lights	98.9	100	98.1	100	98.5	94.6	96.5	100	60	96.1	80	100	100	100	95.2	100	97.8	97.2	100	97.7	97.5
Buses	2	0	4	0	6	2	8	0	0	10	0	0	0	0	0	0	11	1	0	12	28
% Buses	0.4	0	1	0	0.7	2.2	1.2	0	0	1.3	0	0	0	0	0	0	0.9	0.7	0	0.9	0.9
Trucks	3	0	4	0	7	3	16	0	2	21	1	0	0	0	1	0	15	3	0	18	47
% Trucks	0.7	0	1	0	0.8	3.2	2.3	0	40	2.6	20	0	0	0	4.8	0	1.3	2.1	0	1.4	1.6

	2ND AVE Southbound				LIGHTFIGHTER DR Westbound				2ND AVE Northbound				LIGHTFIGHTER DR Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	79	1	**70**	150	7	102	0	109	**1**	0	0	1	0	155	8	163	423
07:30 AM	**121**	1	64	**186**	14	**135**	**3**	**152**	0	0	0	0	**1**	174	14	189	**527**
07:45 AM	87	0	70	157	**28**	94	1	123	0	0	0	0	1	**215**	27	**243**	523
08:00 AM	56	**2**	68	126	19	93	1	113	0	**1**	**2**	**3**	0	152	**29**	181	423
Total Volume	343	4	272	619	68	424	5	497	1	1	2	4	2	696	78	776	1896
% App. Total	55.4	0.6	43.9		13.7	85.3	1		25	25	50		0.3	89.7	10.1		
PHF	.709	.500	.971	.832	.607	.785	.417	.817	.250	.250	.250	.333	.500	.809	.672	.798	.899

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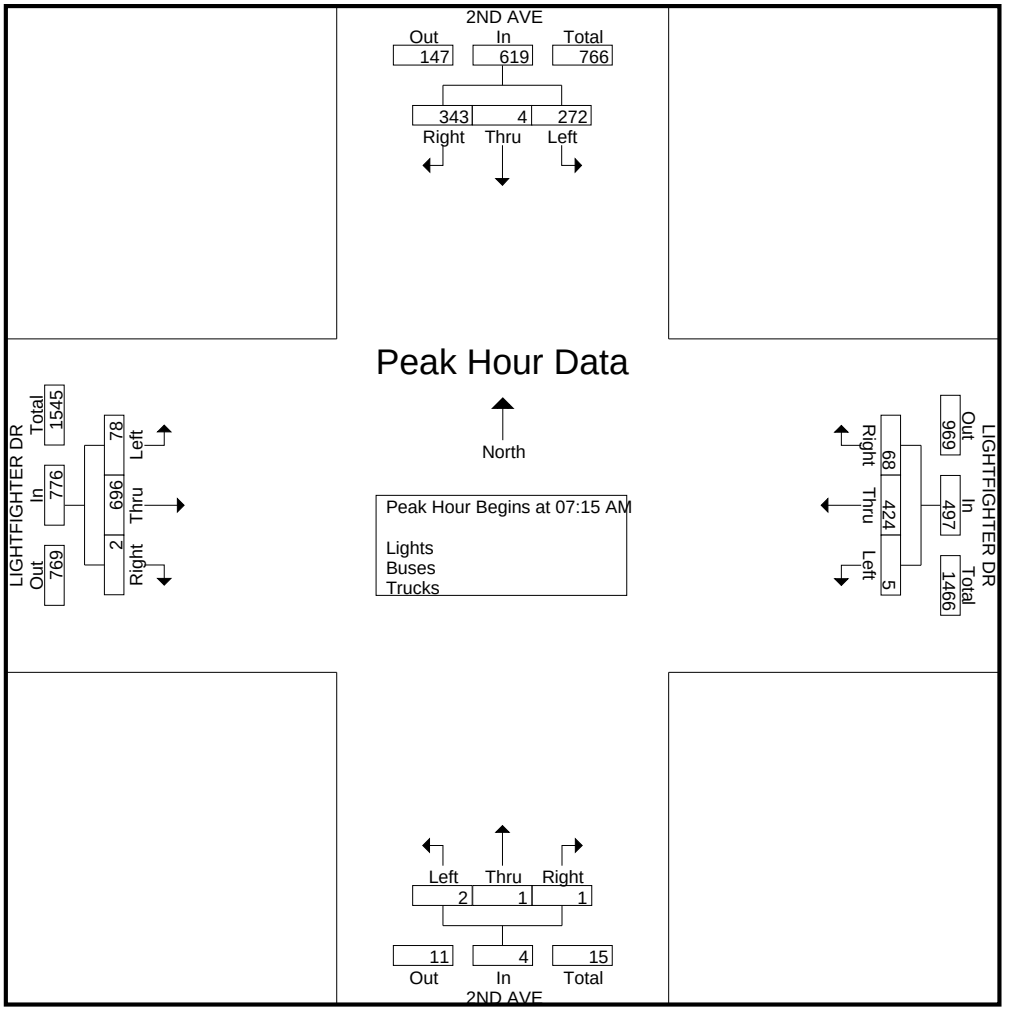

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Groups Printed- Bikes

	2ND AVE Southbound					LIGHTFIGHTER DR Westbound					2ND AVE Northbound					LIGHTFIGHTER DR Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		
Total %																					

	2ND AVE Southbound				LIGHTFIGHTER DR Westbound				2ND AVE Northbound				LIGHTFIGHTER DR Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

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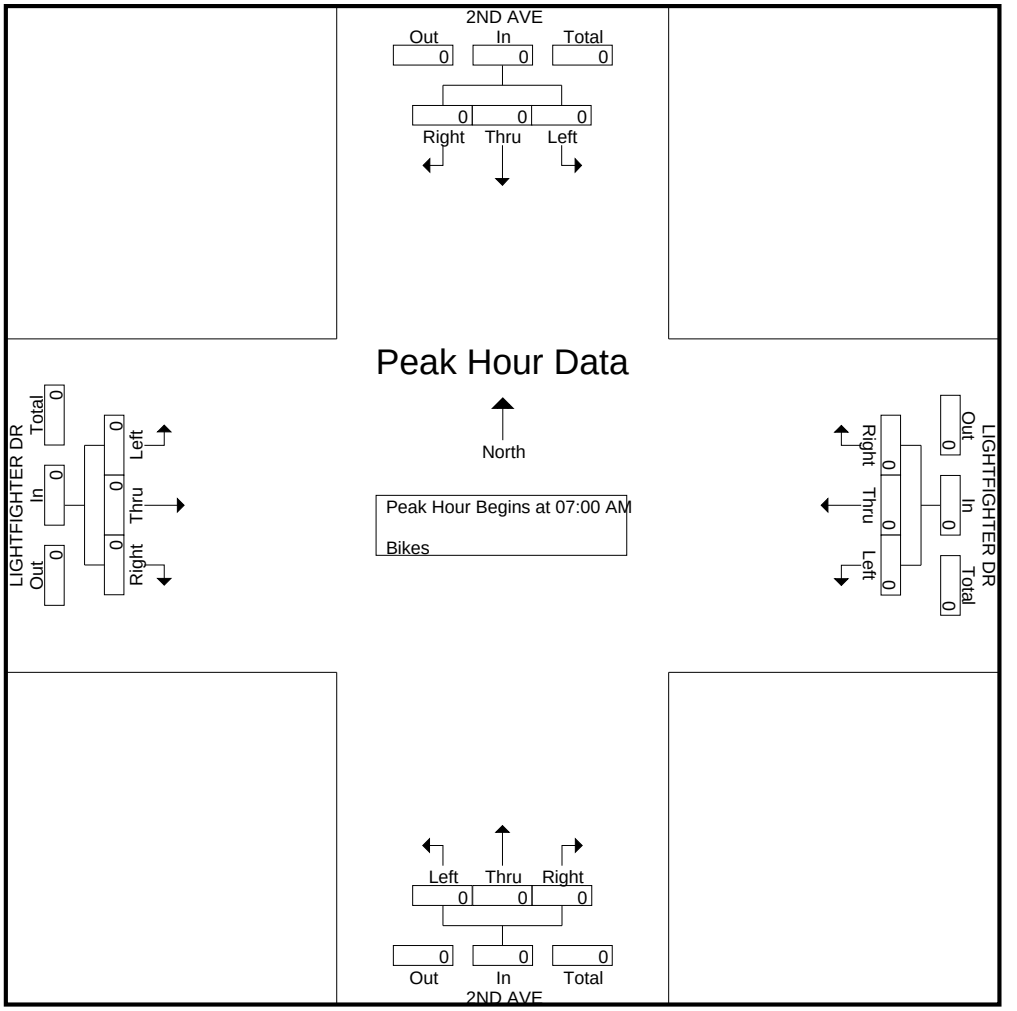

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Groups Printed- Lights - Buses - Trucks

	2ND AVE Southbound					LIGHTFIGHTER DR Westbound					2ND AVE Northbound					LIGHTFIGHTER DR Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	21	0	16	0	37	16	188	1	0	205	2	1	0	4	7	0	80	16	2	98	347
04:15 PM	16	0	25	0	41	17	147	0	0	164	2	0	4	0	6	1	79	33	0	113	324
04:30 PM	21	1	20	0	42	24	212	0	0	236	3	1	2	0	6	0	67	40	0	107	391
04:45 PM	21	3	27	0	51	30	238	1	0	269	3	0	1	1	5	1	79	30	2	112	437
Total	79	4	88	0	171	87	785	2	0	874	10	2	7	5	24	2	305	119	4	430	1499
05:00 PM	43	0	11	0	54	33	192	0	0	225	1	0	0	0	1	0	86	42	0	128	408
05:15 PM	28	1	20	0	49	39	226	1	0	266	1	0	2	1	4	0	90	33	2	125	444
05:30 PM	46	0	21	0	67	32	157	0	0	189	0	1	1	0	2	0	101	32	0	133	391
05:45 PM	38	0	27	0	65	31	148	0	1	180	0	1	3	0	4	0	96	34	1	131	380
Total	155	1	79	0	235	135	723	1	1	860	2	2	6	1	11	0	373	141	3	517	1623
Grand Total	234	5	167	0	406	222	1508	3	1	1734	12	4	13	6	35	2	678	260	7	947	3122
Apprch %	57.6	1.2	41.1	0		12.8	87	0.2	0.1		34.3	11.4	37.1	17.1		0.2	71.6	27.5	0.7		
Total %	7.5	0.2	5.3	0	13	7.1	48.3	0.1	0	55.5	0.4	0.1	0.4	0.2	1.1	0.1	21.7	8.3	0.2	30.3	
Lights	231	5	165	0	401	220	1496	3	0	1719	12	4	13	6	35	2	665	256	7	930	3085
% Lights	98.7	100	98.8	0	98.8	99.1	99.2	100	0	99.1	100	100	100	100	100	100	98.1	98.5	100	98.2	98.8
Buses	2	0	2	0	4	1	4	0	0	5	0	0	0	0	0	0	9	1	0	10	19
% Buses	0.9	0	1.2	0	1	0.5	0.3	0	0	0.3	0	0	0	0	0	0	1.3	0.4	0	1.1	0.6
Trucks	1	0	0	0	1	1	8	0	1	10	0	0	0	0	0	0	4	3	0	7	18
% Trucks	0.4	0	0	0	0.2	0.5	0.5	0	100	0.6	0	0	0	0	0	0	0.6	1.2	0	0.7	0.6

	2ND AVE Southbound				LIGHTFIGHTER DR Westbound				2ND AVE Northbound				LIGHTFIGHTER DR Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	21	1	20	42	24	212	0	236	**3**	**1**	**2**	**6**	0	67	40	107	391
04:45 PM	21	**3**	**27**	51	30	**238**	**1**	**269**	3	0	1	4	**1**	79	30	110	434
05:00 PM	**43**	0	11	**54**	33	192	0	225	1	0	0	1	0	86	**42**	**128**	408
05:15 PM	28	1	20	49	**39**	226	1	266	1	0	2	3	0	**90**	33	123	**441**
Total Volume	113	5	78	196	126	868	2	996	8	1	5	14	1	322	145	468	1674
% App. Total	57.7	2.6	39.8		12.7	87.1	0.2		57.1	7.1	35.7		0.2	68.8	31		
PHF	.657	.417	.722	.907	.808	.912	.500	.926	.667	.250	.625	.583	.250	.894	.863	.914	.949

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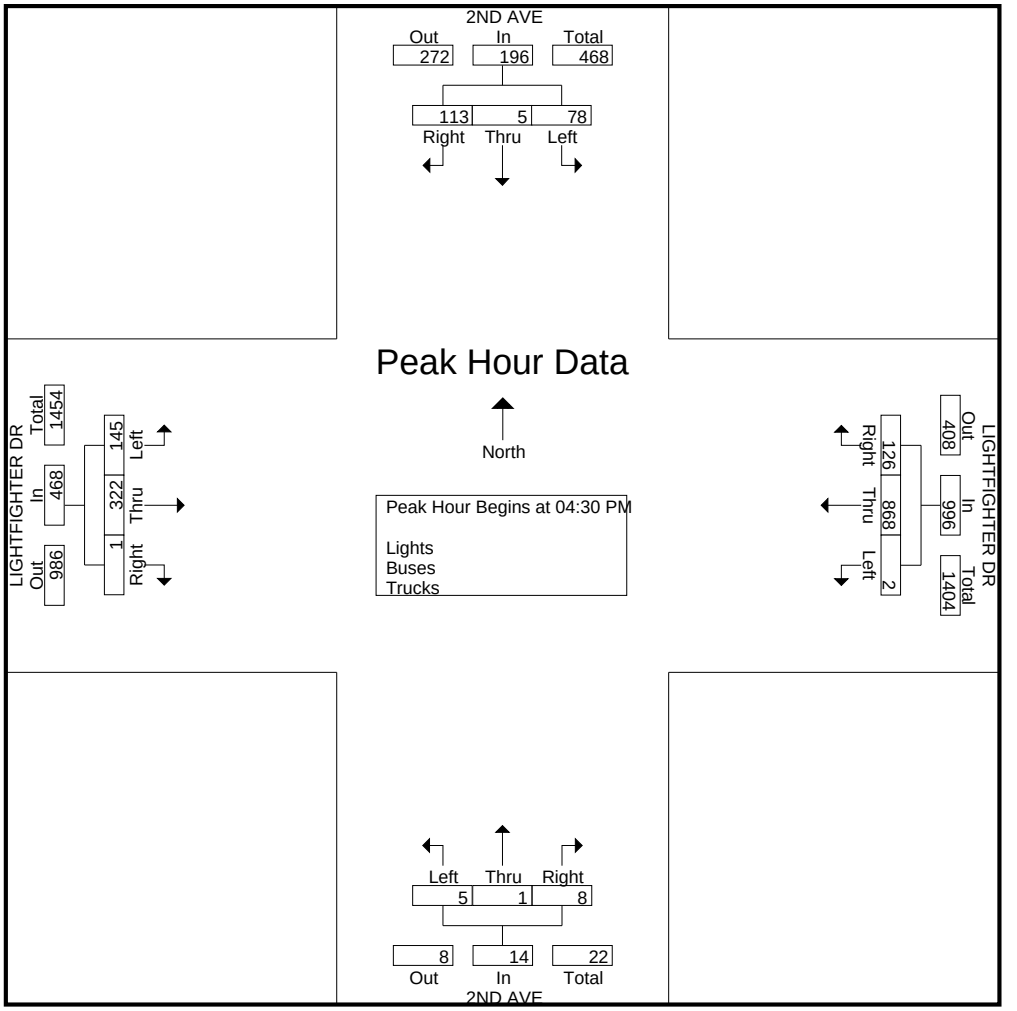

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Groups Printed- Bikes

	2ND AVE Southbound					LIGHTFIGHTER DR Westbound					2ND AVE Northbound					LIGHTFIGHTER DR Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Grand Total	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Apprch %	0	100	0	0		0	0	0	0		0	0	0	0		0	0	0	0		
Total %	0	100	0	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

	2ND AVE Southbound				LIGHTFIGHTER DR Westbound				2ND AVE Northbound				LIGHTFIGHTER DR Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	**1**	0	**1**	0	0	0	0	0	0	0	0	0	0	0	0	**1**
Total Volume	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
% App. Total	0	100	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.250	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250

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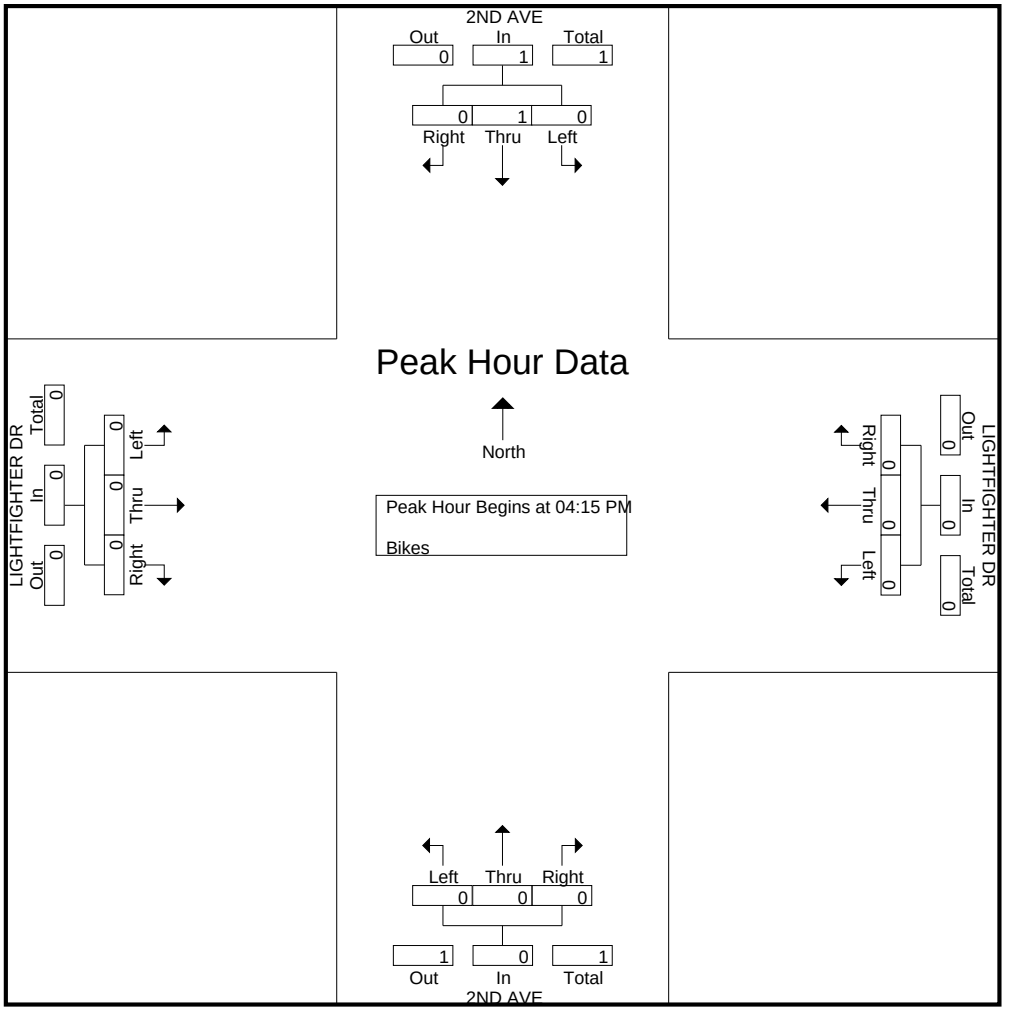

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File Name : 24AM FINAL
Site Code : 00000024
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Groups Printed- Lights - Buses - Trucks

	GENERAL JIM MOORE BLVD Southbound					LIGHTFIGHTER DR Westbound					GENERAL JIM MOORE BLVD Northbound					LIGHTFIGHTER DR Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	6	11	0	0	17	0	71	9	0	80	0	3	32	0	35	92	19	10	0	121	253
07:15 AM	15	43	2	0	60	1	59	5	0	65	0	14	42	0	56	189	27	9	0	225	406
07:30 AM	23	74	0	0	97	2	62	12	0	76	0	21	64	0	85	180	32	24	0	236	494
07:45 AM	11	33	0	2	46	1	39	4	2	46	2	27	67	0	96	188	36	52	1	277	465
Total	55	161	2	2	220	4	231	30	2	267	2	65	205	0	272	649	114	95	1	859	1618
08:00 AM	10	29	8	0	47	6	27	0	0	33	0	28	77	0	105	153	32	38	0	223	408
08:15 AM	5	26	1	0	32	2	21	2	0	25	1	28	42	0	71	128	29	32	0	189	317
08:30 AM	3	19	1	2	25	3	24	1	2	30	0	28	34	0	62	91	18	31	0	140	257
08:45 AM	16	15	2	3	36	5	14	5	1	25	1	26	28	0	55	92	27	39	0	158	274
Total	34	89	12	5	140	16	86	8	3	113	2	110	181	0	293	464	106	140	0	710	1256
Grand Total	89	250	14	7	360	20	317	38	5	380	4	175	386	0	565	1113	220	235	1	1569	2874
Apprch %	24.7	69.4	3.9	1.9		5.3	83.4	10	1.3		0.7	31	68.3	0		70.9	14	15	0.1		
Total %	3.1	8.7	0.5	0.2	12.5	0.7	11	1.3	0.2	13.2	0.1	6.1	13.4	0	19.7	38.7	7.7	8.2	0	54.6	
Lights	87	244	14	7	352	19	300	37	5	361	4	171	377	0	552	1086	213	233	1	1533	2798
% Lights	97.8	97.6	100	100	97.8	95	94.6	97.4	100	95	100	97.7	97.7	0	97.7	97.6	96.8	99.1	100	97.7	97.4
Buses	1	4	0	0	5	0	1	0	0	1	0	2	7	0	9	12	3	0	0	15	30
% Buses	1.1	1.6	0	0	1.4	0	0.3	0	0	0.3	0	1.1	1.8	0	1.6	1.1	1.4	0	0	1	1
Trucks	1	2	0	0	3	1	16	1	0	18	0	2	2	0	4	15	4	2	0	21	46
% Trucks	1.1	0.8	0	0	0.8	5	5	2.6	0	4.7	0	1.1	0.5	0	0.7	1.3	1.8	0.9	0	1.3	1.6

	GENERAL JIM MOORE BLVD Southbound				LIGHTFIGHTER DR Westbound				GENERAL JIM MOORE BLVD Northbound				LIGHTFIGHTER DR Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	15	43	2	60	1	59	5	65	0	14	42	56	**189**	27	9	225	406
07:30 AM	**23**	**74**	0	**97**	2	**62**	**12**	**76**	0	21	64	85	180	32	24	236	**494**
07:45 AM	11	33	0	44	1	39	4	44	**2**	27	67	96	188	**36**	**52**	**276**	460
08:00 AM	10	29	**8**	47	**6**	27	0	33	0	**28**	**77**	**105**	153	32	38	223	408
Total Volume	59	179	10	248	10	187	21	218	2	90	250	342	710	127	123	960	1768
% App. Total	23.8	72.2	4		4.6	85.8	9.6		0.6	26.3	73.1		74	13.2	12.8		
PHF	.641	.605	.313	.639	.417	.754	.438	.717	.250	.804	.812	.814	.939	.882	.591	.870	.895

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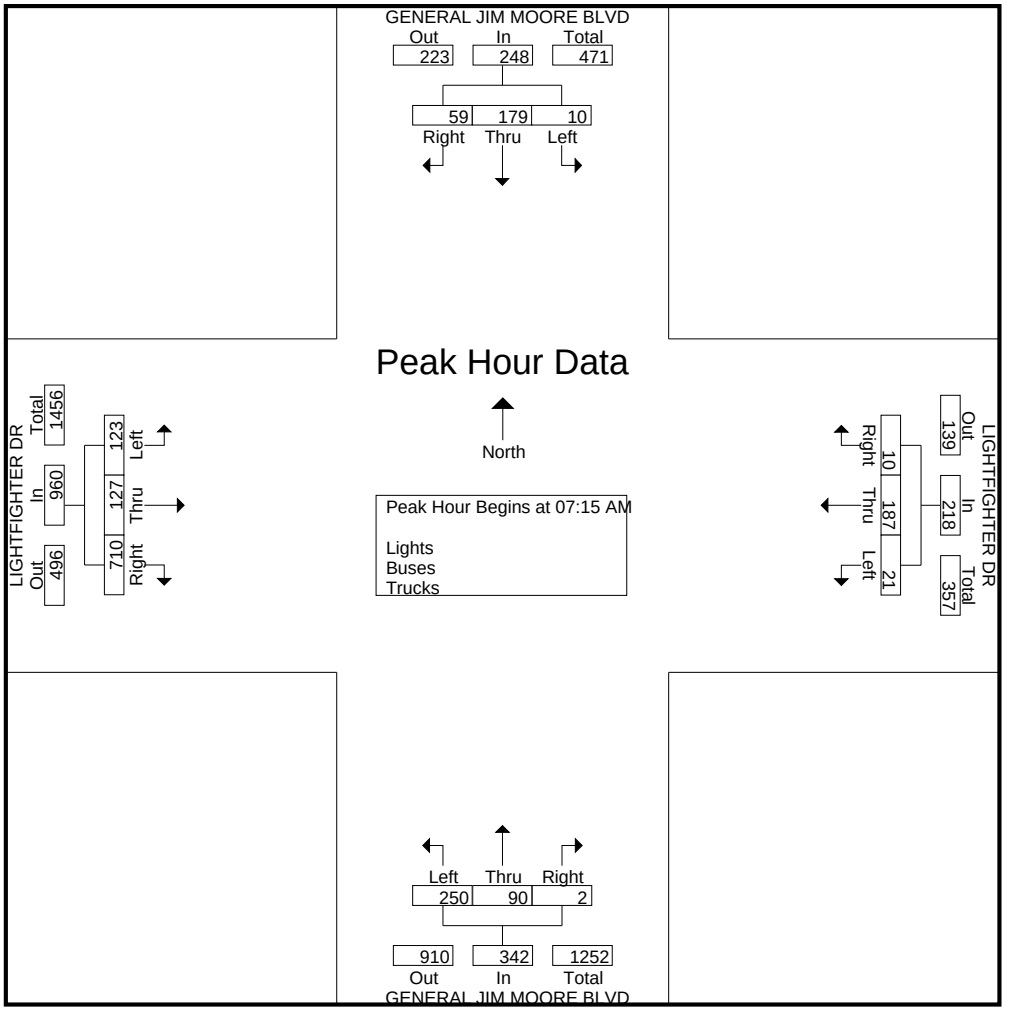

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File Name : 24AM FINAL
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Groups Printed- Bikes

	GENERAL JIM MOORE BLVD Southbound					LIGHTFIGHTER DR Westbound					GENERAL JIM MOORE BLVD Northbound					LIGHTFIGHTER DR Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2
Grand Total	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2
Apprch %	0	0	0	0		0	0	0	0		0	100	0	0		0	0	0	0		
Total %	0	0	0	0	0	0	0	0	0	0	0	100	0	0	100	0	0	0	0	0	

	GENERAL JIM MOORE BLVD Southbound				LIGHTFIGHTER DR Westbound				GENERAL JIM MOORE BLVD Northbound				LIGHTFIGHTER DR Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	**2**	0	**2**	0	0	0	0	**2**
Total Volume	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
% App. Total	0	0	0		0	0	0		0	100	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.000	.000	.250

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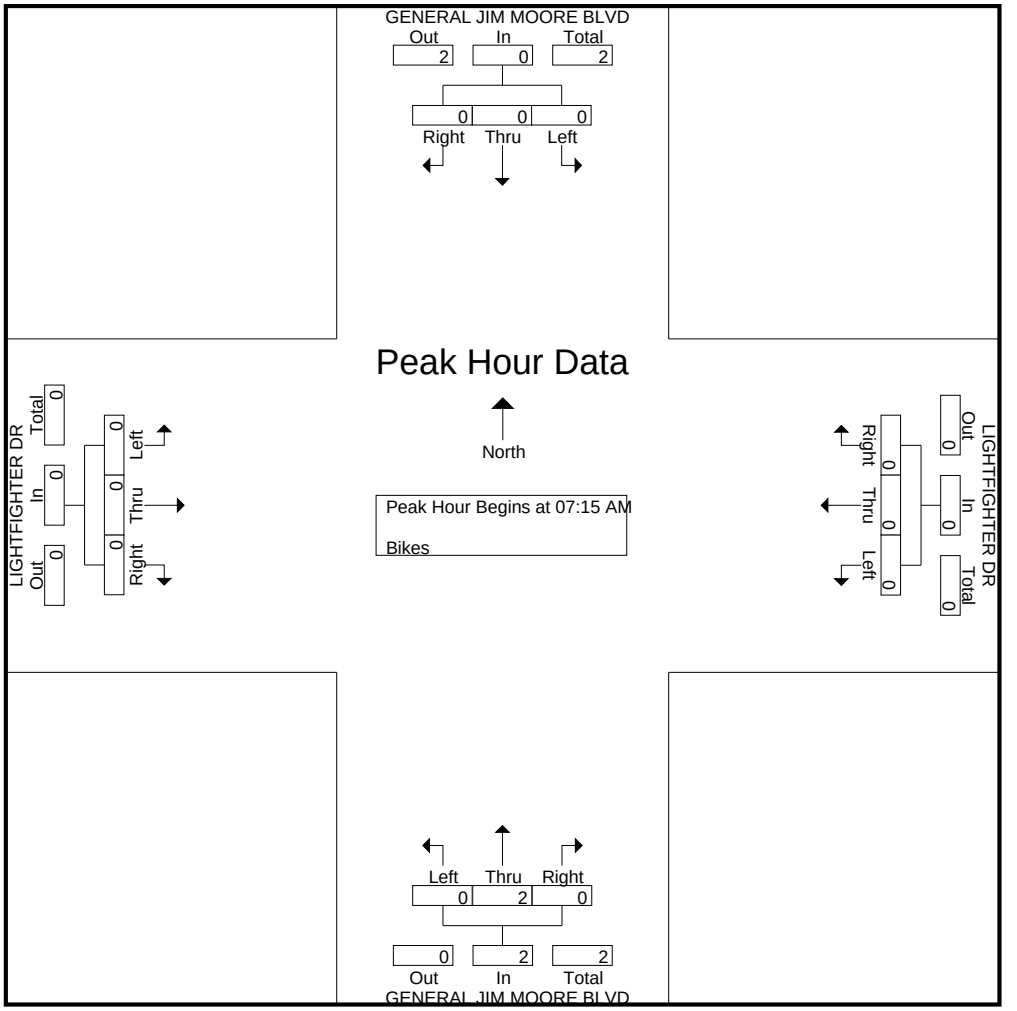

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Groups Printed- Lights - Buses - Trucks

	GENERAL JIM MOORE BLVD Southbound					LIGHTFIGHTER DR Westbound					GENERAL JIM MOORE BLVD Northbound					LIGHTFIGHTER DR Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	44	24	8	0	76	5	36	0	0	41	3	33	106	1	143	60	22	15	0	97	357
04:15 PM	23	16	4	0	43	0	28	0	0	28	2	29	113	0	144	66	33	11	0	110	325
04:30 PM	33	26	2	0	61	3	50	4	0	57	2	21	163	0	186	53	28	13	0	94	398
04:45 PM	30	17	2	0	49	0	61	3	0	64	2	27	175	0	204	55	26	14	0	95	412
Total	130	83	16	0	229	8	175	7	0	190	9	110	557	1	677	234	109	53	0	396	1492
05:00 PM	37	23	1	0	61	4	37	0	0	41	1	36	151	0	188	45	42	17	0	104	394
05:15 PM	37	20	2	0	59	0	65	1	0	66	2	24	160	0	186	47	42	22	0	111	422
05:30 PM	37	13	2	0	52	3	19	0	0	22	1	29	127	0	157	51	45	26	1	123	354
05:45 PM	40	22	3	0	65	3	30	2	0	35	1	27	108	0	136	64	29	23	2	118	354
Total	151	78	8	0	237	10	151	3	0	164	5	116	546	0	667	207	158	88	3	456	1524
Grand Total	281	161	24	0	466	18	326	10	0	354	14	226	1103	1	1344	441	267	141	3	852	3016
Apprch %	60.3	34.5	5.2	0		5.1	92.1	2.8	0		1	16.8	82.1	0.1		51.8	31.3	16.5	0.4		
Total %	9.3	5.3	0.8	0	15.5	0.6	10.8	0.3	0	11.7	0.5	7.5	36.6	0	44.6	14.6	8.9	4.7	0.1	28.2	
Lights	279	159	23	0	461	18	325	10	0	353	14	223	1097	1	1335	429	265	140	0	834	2983
% Lights	99.3	98.8	95.8	0	98.9	100	99.7	100	0	99.7	100	98.7	99.5	100	99.3	97.3	99.3	99.3	0	97.9	98.9
Buses	1	2	0	0	3	0	0	0	0	0	0	3	3	0	6	8	2	1	0	11	20
% Buses	0.4	1.2	0	0	0.6	0	0	0	0	0	0	1.3	0.3	0	0.4	1.8	0.7	0.7	0	1.3	0.7
Trucks	1	0	1	0	2	0	1	0	0	1	0	0	3	0	3	4	0	0	3	7	13
% Trucks	0.4	0	4.2	0	0.4	0	0.3	0	0	0.3	0	0	0.3	0	0.2	0.9	0	0	100	0.8	0.4

	GENERAL JIM MOORE BLVD Southbound				LIGHTFIGHTER DR Westbound				GENERAL JIM MOORE BLVD Northbound				LIGHTFIGHTER DR Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	33	**26**	**2**	**61**	3	50	**4**	57	**2**	21	163	186	53	28	13	94	398
04:45 PM	30	17	2	49	0	61	3	64	2	27	**175**	**204**	**55**	26	14	95	412
05:00 PM	**37**	23	1	61	**4**	37	0	41	1	**36**	151	188	45	**42**	17	104	394
05:15 PM	37	20	2	59	0	**65**	1	**66**	2	24	160	186	47	42	**22**	**111**	**422**
Total Volume	137	86	7	230	7	213	8	228	7	108	649	764	200	138	66	404	1626
% App. Total	59.6	37.4	3		3.1	93.4	3.5		0.9	14.1	84.9		49.5	34.2	16.3		
PHF	.926	.827	.875	.943	.438	.819	.500	.864	.875	.750	.927	.936	.909	.821	.750	.910	.963

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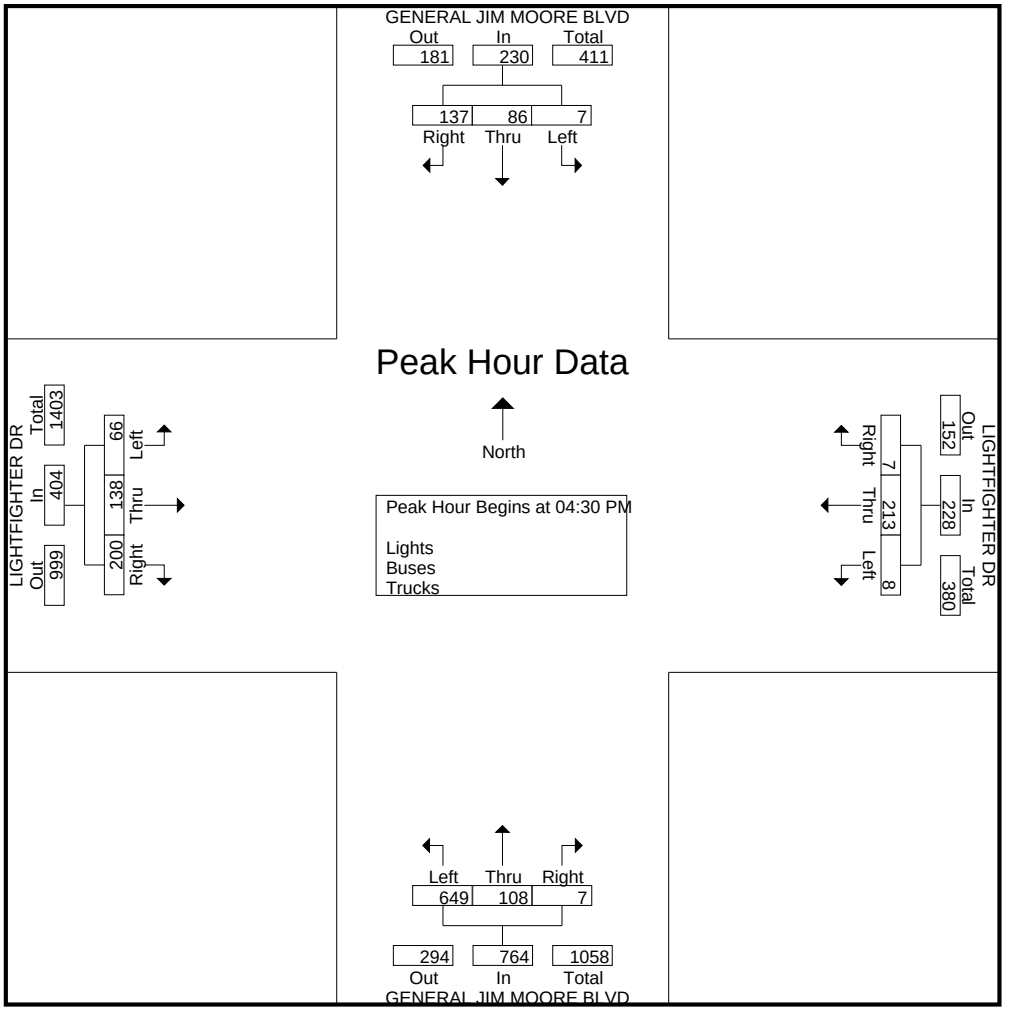

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Groups Printed- Bikes

	GENERAL JIM MOORE BLVD Southbound					LIGHTFIGHTER DR Westbound					GENERAL JIM MOORE BLVD Northbound					LIGHTFIGHTER DR Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	0	1	0	0	1	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	2
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
Total	0	1	0	0	1	0	0	0	0	0	0	1	1	0	2	1	0	0	0	1	4
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
05:45 PM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	1	0	0	0	1	0	1	0	0	1	0	0	0	0	0	2
Grand Total	0	1	0	0	1	1	0	0	0	1	0	2	1	0	3	1	0	0	0	1	6
Apprch %	0	100	0	0		100	0	0	0		0	66.7	33.3	0		100	0	0	0		
Total %	0	16.7	0	0	16.7	16.7	0	0	0	16.7	0	33.3	16.7	0	50	16.7	0	0	0	16.7	

	GENERAL JIM MOORE BLVD Southbound				LIGHTFIGHTER DR Westbound				GENERAL JIM MOORE BLVD Northbound				LIGHTFIGHTER DR Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	**1**	0	**1**	0	0	0	0	0	0	**1**	**1**	0	0	0	0	**2**
04:15 PM	0	0	0	0	0	0	0	0	0	**1**	0	1	0	0	0	0	1
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	**1**	0	0	**1**	1
Total Volume	0	1	0	1	0	0	0	0	0	1	1	2	1	0	0	1	4
% App. Total	0	100	0		0	0	0		0	50	50		100	0	0		
PHF	.000	.250	.000	.250	.000	.000	.000	.000	.000	.250	.250	.500	.250	.000	.000	.250	.500

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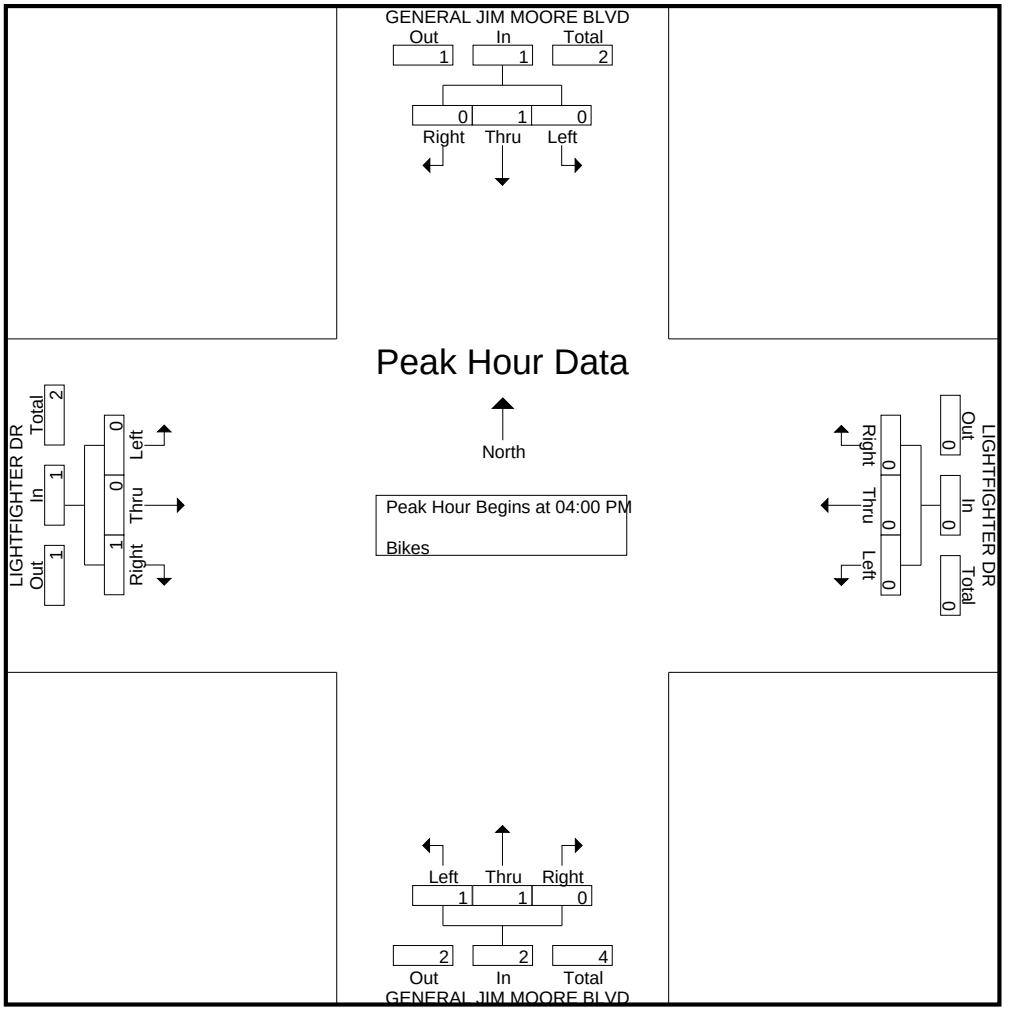

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File Name : 8AM FINAL
Site Code : 00000008
Start Date : 4/25/2018
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Groups Printed- Lights - Buses - Trucks

	LIGHTFIGHTER DR Southbound					COLONEL DURHAM ST Westbound					MALMEDY RD Northbound					DRIVEWAY Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	0	3	20	0	23	64	0	1	0	65	0	9	0	0	9	0	0	0	0	0	97
07:15 AM	0	5	28	0	33	74	0	2	0	76	0	19	0	0	19	0	0	0	0	0	128
07:30 AM	0	7	44	0	51	89	0	6	0	95	3	14	0	0	17	0	0	0	0	0	163
07:45 AM	0	14	46	0	60	33	0	3	0	36	0	16	0	0	16	0	0	0	0	0	112
Total	0	29	138	0	167	260	0	12	0	272	3	58	0	0	61	0	0	0	0	0	500
08:00 AM	1	15	29	0	45	34	0	4	0	38	1	12	0	0	13	1	0	0	0	1	97
08:15 AM	1	9	42	0	52	27	0	1	0	28	1	12	0	0	13	0	0	0	0	0	93
08:30 AM	1	12	34	0	47	29	0	0	0	29	0	2	0	0	2	0	0	1	0	1	79
08:45 AM	0	12	36	0	48	22	0	0	0	22	1	9	0	0	10	0	0	0	0	0	80
Total	3	48	141	0	192	112	0	5	0	117	3	35	0	0	38	1	0	1	0	2	349
Grand Total	3	77	279	0	359	372	0	17	0	389	6	93	0	0	99	1	0	1	0	2	849
Apprch %	0.8	21.4	77.7	0		95.6	0	4.4	0		6.1	93.9	0	0		50	0	50	0		
Total %	0.4	9.1	32.9	0	42.3	43.8	0	2	0	45.8	0.7	11	0	0	11.7	0.1	0	0.1	0	0.2	
Lights	1	76	270	0	347	362	0	15	0	377	5	89	0	0	94	1	0	0	0	1	819
% Lights	33.3	98.7	96.8	0	96.7	97.3	0	88.2	0	96.9	83.3	95.7	0	0	94.9	100	0	0	0	50	96.5
Buses	0	0	7	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
% Buses	0	0	2.5	0	1.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.8
Trucks	2	1	2	0	5	10	0	2	0	12	1	4	0	0	5	0	0	1	0	1	23
% Trucks	66.7	1.3	0.7	0	1.4	2.7	0	11.8	0	3.1	16.7	4.3	0	0	5.1	0	0	100	0	50	2.7

	LIGHTFIGHTER DR Southbound				COLONEL DURHAM ST Westbound				MALMEDY RD Northbound				DRIVEWAY Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	3	20	23	64	0	1	65	0	9	0	9	0	0	0	0	97
07:15 AM	0	5	28	33	74	0	2	76	0	**19**	0	**19**	0	0	0	0	128
07:30 AM	0	7	44	51	**89**	0	**6**	**95**	**3**	14	0	17	0	0	0	0	**163**
07:45 AM	0	**14**	**46**	**60**	33	0	3	36	0	16	0	16	0	0	0	0	112
Total Volume	0	29	138	167	260	0	12	272	3	58	0	61	0	0	0	0	500
% App. Total	0	17.4	82.6		95.6	0	4.4		4.9	95.1	0		0	0	0		
PHF	.000	.518	.750	.696	.730	.000	.500	.716	.250	.763	.000	.803	.000	.000	.000	.000	.767

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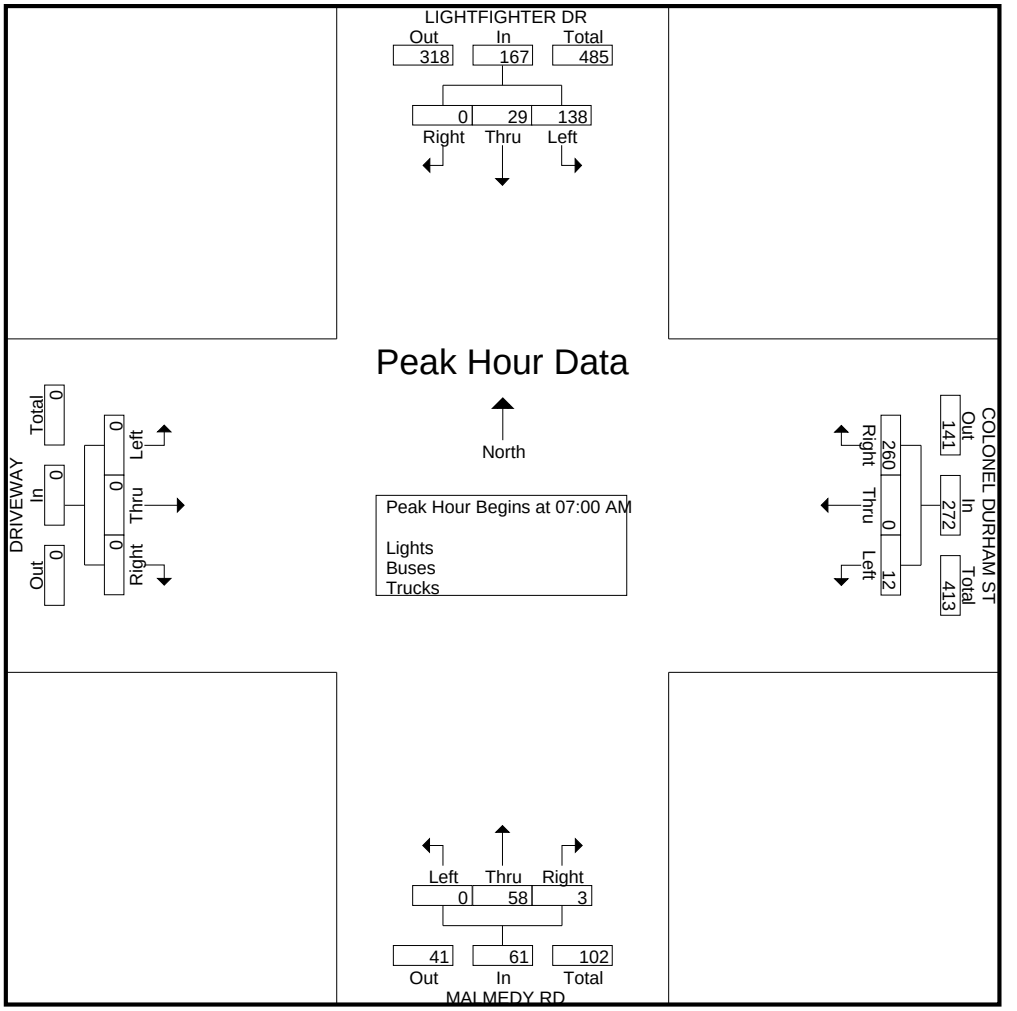

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Groups Printed- Bikes

	LIGHTFIGHTER DR Southbound					COLONEL DURHAM ST Westbound					MALMEDY RD Northbound					DRIVEWAY Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1
07:15 AM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	1	0	1	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	2
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Grand Total	0	0	2	0	2	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	3
Apprch %	0	0	100	0		0	0	0	0		100	0	0	0		0	0	0	0		
Total %	0	0	66.7	0	66.7	0	0	0	0	0	33.3	0	0	0	33.3	0	0	0	0	0	

	LIGHTFIGHTER DR Southbound				COLONEL DURHAM ST Westbound				MALMEDY RD Northbound				DRIVEWAY Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	0	0	0	**1**	0	0	**1**	0	0	0	0	**1**
07:15 AM	0	0	**1**	**1**	0	0	0	0	0	0	0	0	0	0	0	0	1
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	1	1	0	0	0	0	1	0	0	1	0	0	0	0	2
% App. Total	0	0	100		0	0	0		100	0	0		0	0	0		
PHF	.000	.000	.250	.250	.000	.000	.000	.000	.250	.000	.000	.250	.000	.000	.000	.000	.500

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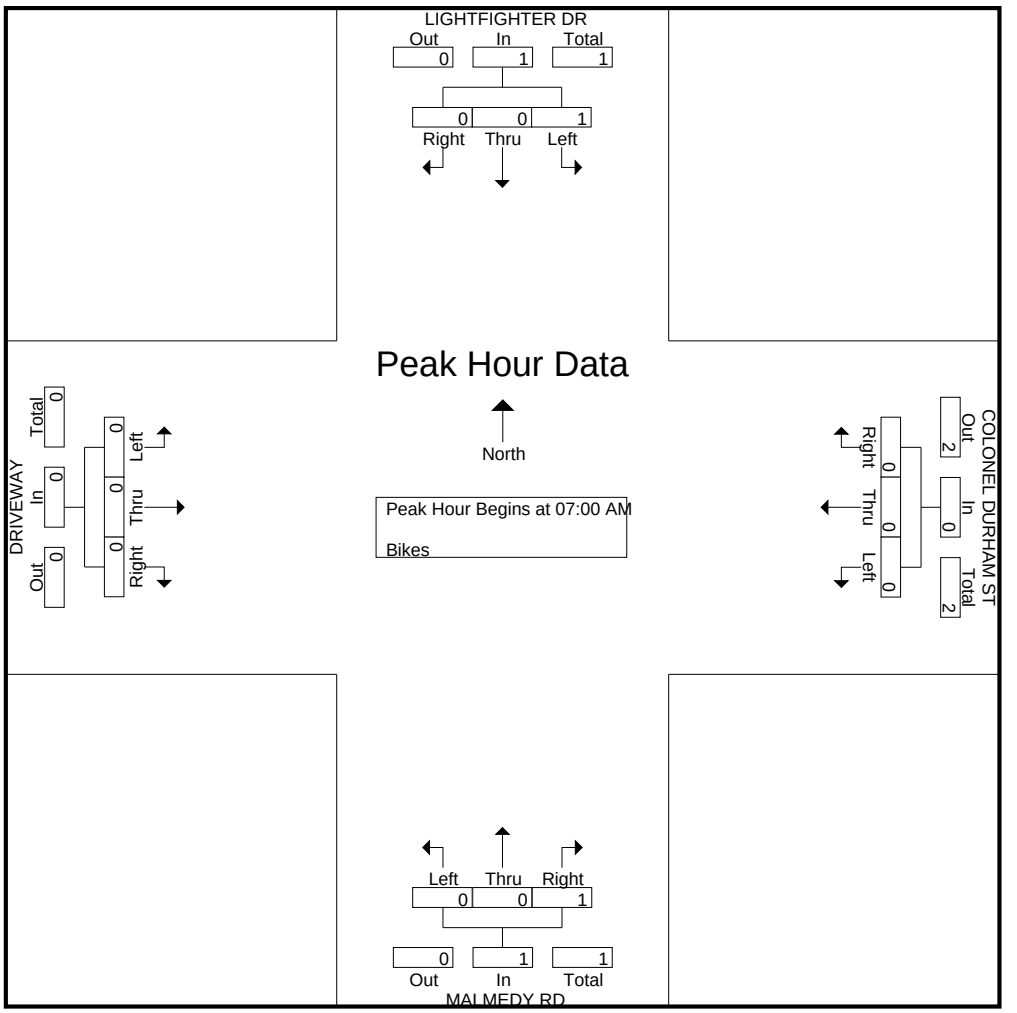

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File Name : 8PM FINAL
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Groups Printed- Lights - Buses - Trucks

	LIGHTFIGHTER DR Southbound					COLONEL DURHAM ST Westbound					MALMEDY RD Northbound					DRIVEWAY Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	0	12	32	0	44	46	0	0	0	46	0	10	0	0	10	0	0	0	0	0	100
04:15 PM	0	9	17	0	26	29	0	1	0	30	2	13	0	0	15	0	0	0	0	0	71
04:30 PM	0	8	29	0	37	35	0	0	0	35	1	13	0	0	14	0	0	0	0	0	86
04:45 PM	0	12	32	0	44	41	0	3	0	44	3	10	0	0	13	0	0	0	0	0	101
Total	0	41	110	0	151	151	0	4	0	155	6	46	0	0	52	0	0	0	0	0	358
05:00 PM	0	10	34	0	44	49	0	2	0	51	1	10	0	0	11	0	0	0	0	0	106
05:15 PM	0	7	20	0	27	42	0	1	0	43	0	12	0	0	12	0	0	0	0	0	82
05:30 PM	0	9	34	0	43	25	1	3	0	29	2	9	0	0	11	0	1	0	0	1	84
05:45 PM	0	5	32	0	37	26	0	2	0	28	0	9	0	0	9	0	0	0	0	0	74
Total	0	31	120	0	151	142	1	8	0	151	3	40	0	0	43	0	1	0	0	1	346
Grand Total	0	72	230	0	302	293	1	12	0	306	9	86	0	0	95	0	1	0	0	1	704
Apprch %	0	23.8	76.2	0		95.8	0.3	3.9	0		9.5	90.5	0	0		0	100	0	0		
Total %	0	10.2	32.7	0	42.9	41.6	0.1	1.7	0	43.5	1.3	12.2	0	0	13.5	0	0.1	0	0	0.1	
Lights	0	70	224	0	294	290	1	12	0	303	9	85	0	0	94	0	1	0	0	1	692
% Lights	0	97.2	97.4	0	97.4	99	100	100	0	99	100	98.8	0	0	98.9	0	100	0	0	100	98.3
Buses	0	1	1	0	2	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	4
% Buses	0	1.4	0.4	0	0.7	0.7	0	0	0	0.7	0	0	0	0	0	0	0	0	0	0	0.6
Trucks	0	1	5	0	6	1	0	0	0	1	0	1	0	0	1	0	0	0	0	0	8
% Trucks	0	1.4	2.2	0	2	0.3	0	0	0	0.3	0	1.2	0	0	1.1	0	0	0	0	0	1.1

	LIGHTFIGHTER DR Southbound				COLONEL DURHAM ST Westbound				MALMEDY RD Northbound				DRIVEWAY Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	8	29	37	35	0	0	35	1	**13**	0	**14**	0	0	0	0	86
04:45 PM	0	**12**	32	**44**	41	0	**3**	44	**3**	10	0	13	0	0	0	0	101
05:00 PM	0	10	**34**	44	**49**	0	2	**51**	1	10	0	11	0	0	0	0	**106**
05:15 PM	0	7	20	27	42	0	1	43	0	12	0	12	0	0	0	0	82
Total Volume	0	37	115	152	167	0	6	173	5	45	0	50	0	0	0	0	375
% App. Total	0	24.3	75.7		96.5	0	3.5		10	90	0		0	0	0		
PHF	.000	.771	.846	.864	.852	.000	.500	.848	.417	.865	.000	.893	.000	.000	.000	.000	.884

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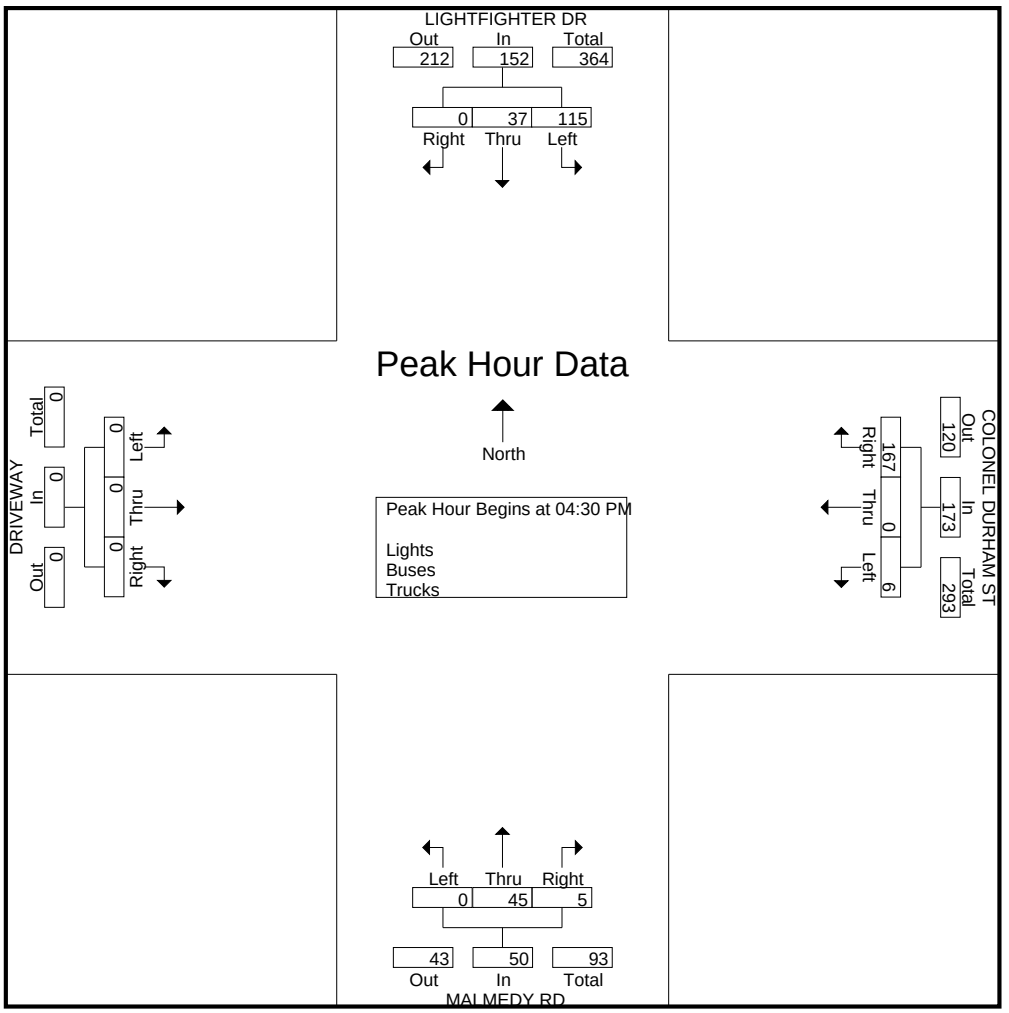

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Groups Printed- Bikes

	LIGHTFIGHTER DR Southbound					COLONEL DURHAM ST Westbound					MALMEDY RD Northbound					DRIVEWAY Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	2
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Grand Total	0	1	0	0	1	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	3
Apprch %	0	100	0	0		0	0	0	0		50	50	0	0		0	0	0	0		
Total %	0	33.3	0	0	33.3	0	0	0	0	0	33.3	33.3	0	0	66.7	0	0	0	0	0	

	LIGHTFIGHTER DR Southbound				COLONEL DURHAM ST Westbound				MALMEDY RD Northbound				DRIVEWAY Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	**1**	0	**1**	0	0	0	0	**1**
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	**1**	0	0	1	0	0	0	0	1
Total Volume	0	0	0	0	0	0	0	0	1	1	0	2	0	0	0	0	2
% App. Total	0	0	0		0	0	0		50	50	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.250	.250	.000	.500	.000	.000	.000	.000	.500

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File Name : 8PM FINAL
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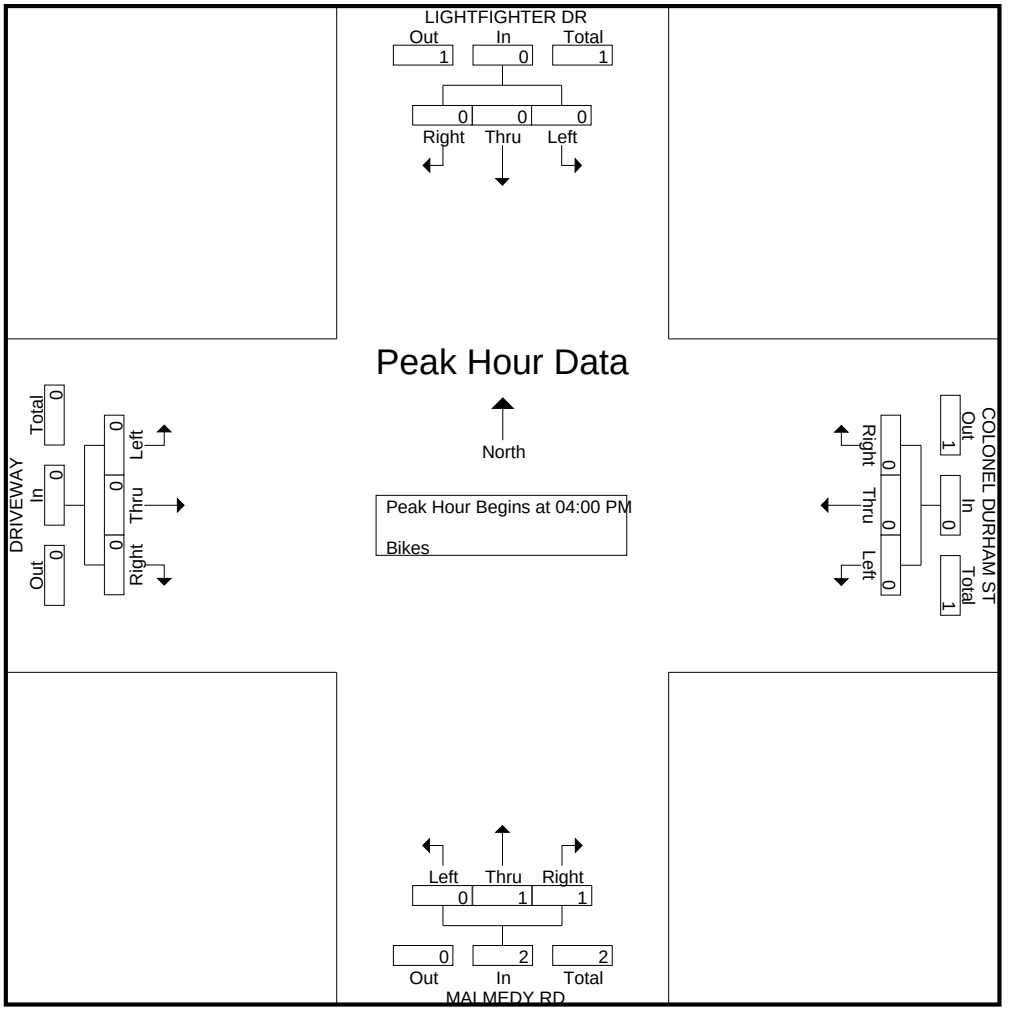

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File Name : 25AM FINAL
Site Code : 00000025
Start Date : 4/27/2017
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Groups Printed- Lights - Buses - Trucks

	GENERAL JIM MOORE BLVD Southbound					GIGLING RD Westbound					GENERAL JIM MOORE BLVD Northbound					GIGLING RD Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	4	65	28	0	97	8	1	57	0	66	14	21	1	1	37	2	4	5	0	11	211
07:15 AM	7	180	39	0	226	7	5	107	0	119	23	58	3	0	84	10	9	3	0	22	451
07:30 AM	12	217	41	0	270	9	9	107	0	125	45	92	10	0	147	29	29	2	0	60	602
07:45 AM	16	176	42	0	234	16	14	92	0	122	65	78	22	0	165	31	41	9	0	81	602
Total	39	638	150	0	827	40	29	363	0	432	147	249	36	1	433	72	83	19	0	174	1866
08:00 AM	11	144	40	0	195	14	3	55	0	72	45	89	12	1	147	5	15	8	0	28	442
08:15 AM	12	134	26	0	172	9	2	44	0	55	24	65	5	1	95	13	14	4	0	31	353
08:30 AM	6	96	28	0	130	17	4	46	0	67	12	46	8	0	66	23	22	4	0	49	312
08:45 AM	9	69	29	0	107	5	2	37	0	44	27	56	8	1	92	8	21	3	0	32	275
Total	38	443	123	0	604	45	11	182	0	238	108	256	33	3	400	49	72	19	0	140	1382
Grand Total	77	1081	273	0	1431	85	40	545	0	670	255	505	69	4	833	121	155	38	0	314	3248
Apprch %	5.4	75.5	19.1	0		12.7	6	81.3	0		30.6	60.6	8.3	0.5		38.5	49.4	12.1	0		
Total %	2.4	33.3	8.4	0	44.1	2.6	1.2	16.8	0	20.6	7.9	15.5	2.1	0.1	25.6	3.7	4.8	1.2	0	9.7	
Lights	73	1060	265	0	1398	79	39	539	0	657	250	504	67	4	825	117	147	34	0	298	3178
% Lights	94.8	98.1	97.1	0	97.7	92.9	97.5	98.9	0	98.1	98	99.8	97.1	100	99	96.7	94.8	89.5	0	94.9	97.8
Buses	2	6	8	0	16	2	1	3	0	6	2	0	0	0	2	3	7	4	0	14	38
% Buses	2.6	0.6	2.9	0	1.1	2.4	2.5	0.6	0	0.9	0.8	0	0	0	0.2	2.5	4.5	10.5	0	4.5	1.2
Trucks	2	15	0	0	17	4	0	3	0	7	3	1	2	0	6	1	1	0	0	2	32
% Trucks	2.6	1.4	0	0	1.2	4.7	0	0.6	0	1	1.2	0.2	2.9	0	0.7	0.8	0.6	0	0	0.6	1

	GENERAL JIM MOORE BLVD Southbound				GIGLING RD Westbound				GENERAL JIM MOORE BLVD Northbound				GIGLING RD Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	7	180	39	226	7	5	**107**	119	23	58	3	84	10	9	3	22	451
07:30 AM	12	**217**	41	**270**	9	9	107	**125**	45	**92**	10	147	29	29	2	60	**602**
07:45 AM	**16**	176	**42**	234	**16**	**14**	92	122	**65**	78	**22**	**165**	**31**	**41**	**9**	**81**	602
08:00 AM	11	144	40	195	14	3	55	72	45	89	12	146	5	15	8	28	441
Total Volume	46	717	162	925	46	31	361	438	178	317	47	542	75	94	22	191	2096
% App. Total	5	77.5	17.5		10.5	7.1	82.4		32.8	58.5	8.7		39.3	49.2	11.5		
PHF	.719	.826	.964	.856	.719	.554	.843	.876	.685	.861	.534	.821	.605	.573	.611	.590	.870

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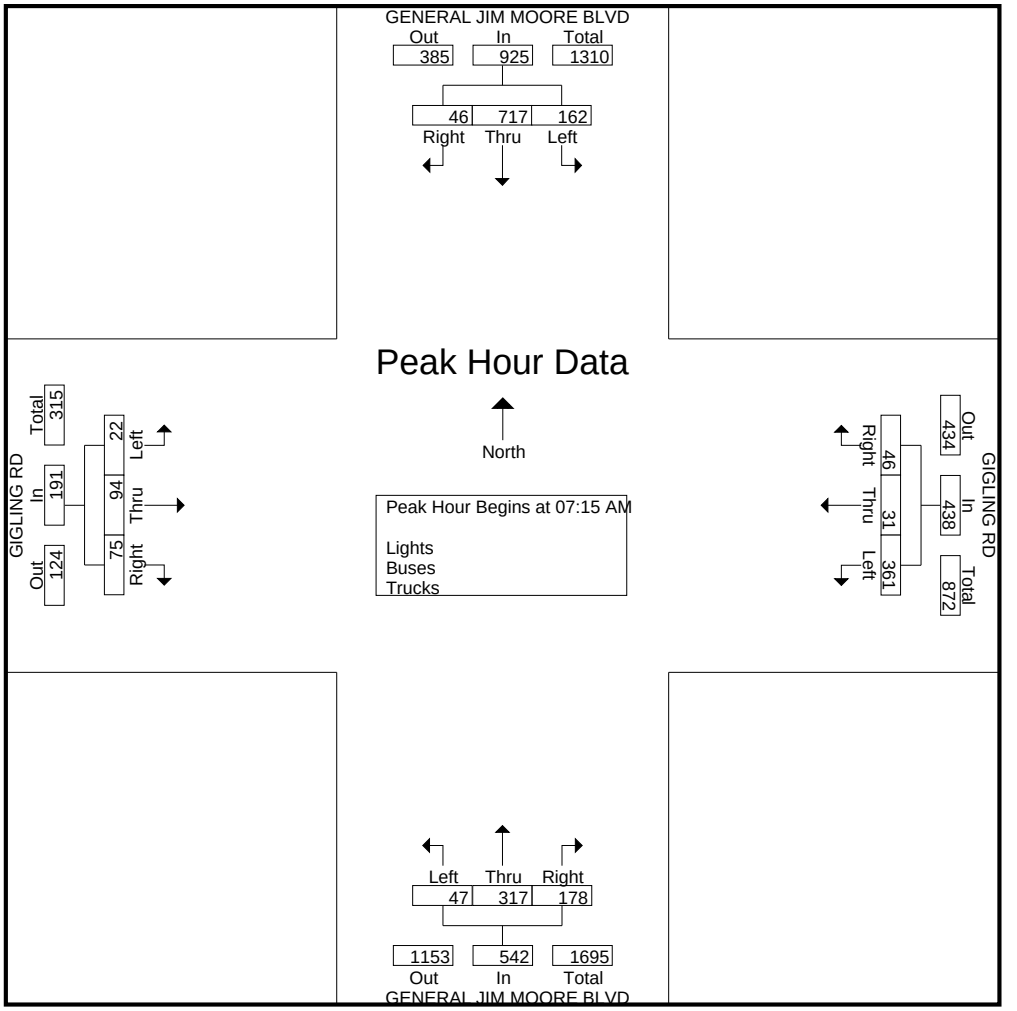

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File Name : 25AM FINAL
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Groups Printed- Bikes

	GENERAL JIM MOORE BLVD Southbound					GIGLING RD Westbound					GENERAL JIM MOORE BLVD Northbound					GIGLING RD Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
Total	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1	0	0	1	2
Grand Total	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	1	0	0	1	3
Apprch %	0	0	0	0		0	0	0	0		0	100	0	0		0	100	0	0		
Total %	0	0	0	0	0	0	0	0	0	0	0	66.7	0	0	66.7	0	33.3	0	0	33.3	

	GENERAL JIM MOORE BLVD Southbound				GIGLING RD Westbound				GENERAL JIM MOORE BLVD Northbound				GIGLING RD Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	**1**	0	**1**	0	0	0	0	**1**
08:00 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Total Volume	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
% App. Total	0	0	0		0	0	0		0	100	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.500	.000	.500	.000	.000	.000	.000	.500

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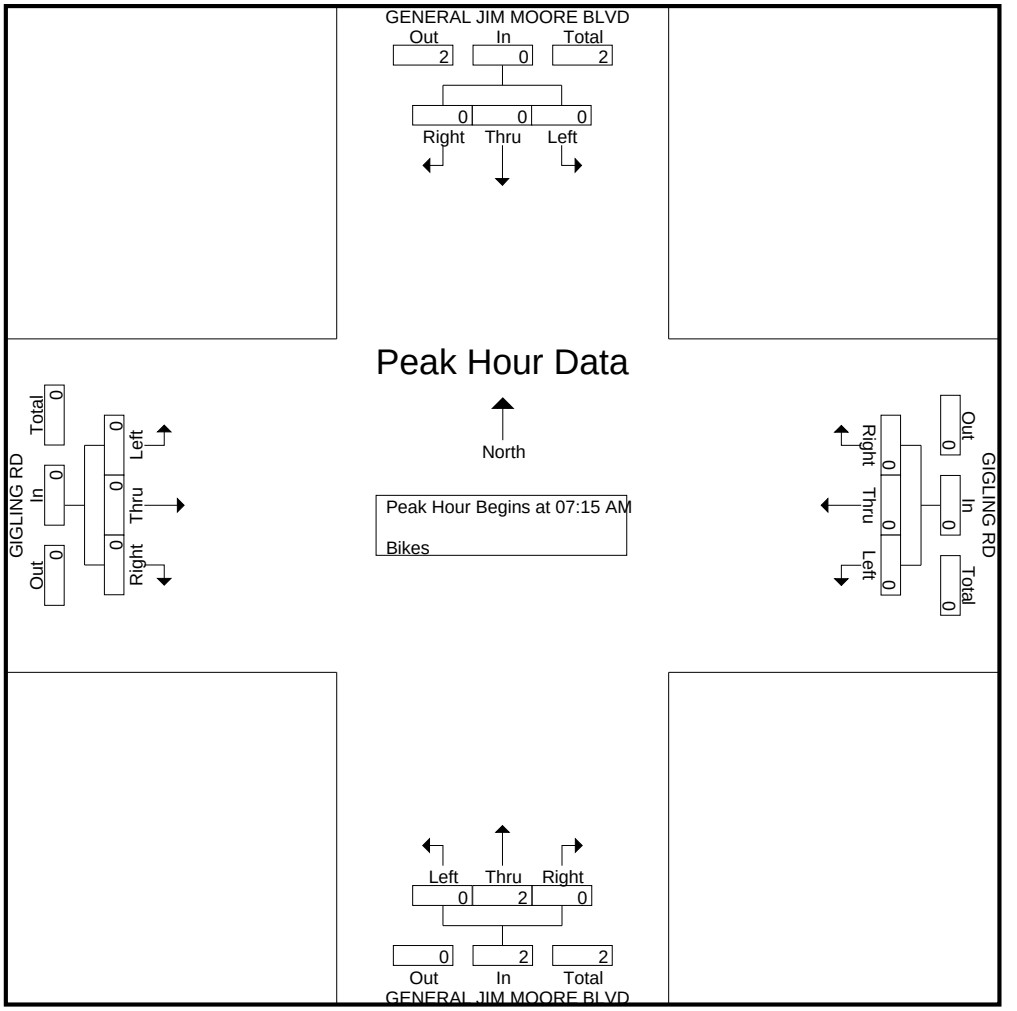

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File Name : 25PM FINAL
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Groups Printed- Lights - Buses - Trucks

	GENERAL JIM MOORE BLVD Southbound					GIGLING RD Westbound					GENERAL JIM MOORE BLVD Northbound					GIGLING RD Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	10	53	18	0	81	43	18	26	0	87	44	88	16	0	148	10	8	5	0	23	339
04:15 PM	16	61	19	2	98	38	14	39	0	91	64	97	12	0	173	10	5	7	1	23	385
04:30 PM	13	61	13	0	87	68	8	41	1	118	56	138	10	0	204	3	3	3	0	9	418
04:45 PM	17	62	21	0	100	67	16	55	0	138	79	133	18	0	230	11	7	6	1	25	493
Total	56	237	71	2	366	216	56	161	1	434	243	456	56	0	755	34	23	21	2	80	1635
05:00 PM	9	53	15	0	77	48	6	37	0	91	84	143	13	2	242	7	2	2	1	12	422
05:15 PM	7	58	18	0	83	35	12	34	0	81	89	140	16	0	245	6	0	7	0	13	422
05:30 PM	10	52	23	0	85	31	3	17	0	51	75	120	7	0	202	7	3	5	0	15	353
05:45 PM	13	58	17	0	88	28	1	19	0	48	57	109	10	0	176	5	1	6	0	12	324
Total	39	221	73	0	333	142	22	107	0	271	305	512	46	2	865	25	6	20	1	52	1521
Grand Total	95	458	144	2	699	358	78	268	1	705	548	968	102	2	1620	59	29	41	3	132	3156
Apprch %	13.6	65.5	20.6	0.3		50.8	11.1	38	0.1		33.8	59.8	6.3	0.1		44.7	22	31.1	2.3		
Total %	3	14.5	4.6	0.1	22.1	11.3	2.5	8.5	0	22.3	17.4	30.7	3.2	0.1	51.3	1.9	0.9	1.3	0.1	4.2	
Lights	93	453	137	2	685	353	76	267	1	697	532	966	102	2	1602	58	27	38	3	126	3110
% Lights	97.9	98.9	95.1	100	98	98.6	97.4	99.6	100	98.9	97.1	99.8	100	100	98.9	98.3	93.1	92.7	100	95.5	98.5
Buses	2	3	5	0	10	4	2	1	0	7	6	0	0	0	6	1	2	2	0	5	28
% Buses	2.1	0.7	3.5	0	1.4	1.1	2.6	0.4	0	1	1.1	0	0	0	0.4	1.7	6.9	4.9	0	3.8	0.9
Trucks	0	2	2	0	4	1	0	0	0	1	10	2	0	0	12	0	0	1	0	1	18
% Trucks	0	0.4	1.4	0	0.6	0.3	0	0	0	0.1	1.8	0.2	0	0	0.7	0	0	2.4	0	0.8	0.6

	GENERAL JIM MOORE BLVD Southbound				GIGLING RD Westbound				GENERAL JIM MOORE BLVD Northbound				GIGLING RD Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	13	61	13	87	**68**	8	41	117	56	138	10	204	3	3	3	9	417
04:45 PM	**17**	**62**	**21**	**100**	67	**16**	**55**	**138**	79	133	**18**	230	**11**	**7**	6	**24**	**492**
05:00 PM	9	53	15	77	48	6	37	91	84	**143**	13	240	7	2	2	11	419
05:15 PM	7	58	18	83	35	12	34	81	**89**	140	16	**245**	6	0	**7**	13	422
Total Volume	46	234	67	347	218	42	167	427	308	554	57	919	27	12	18	57	1750
% App. Total	13.3	67.4	19.3		51.1	9.8	39.1		33.5	60.3	6.2		47.4	21.1	31.6		
PHF	.676	.944	.798	.868	.801	.656	.759	.774	.865	.969	.792	.938	.614	.429	.643	.594	.889

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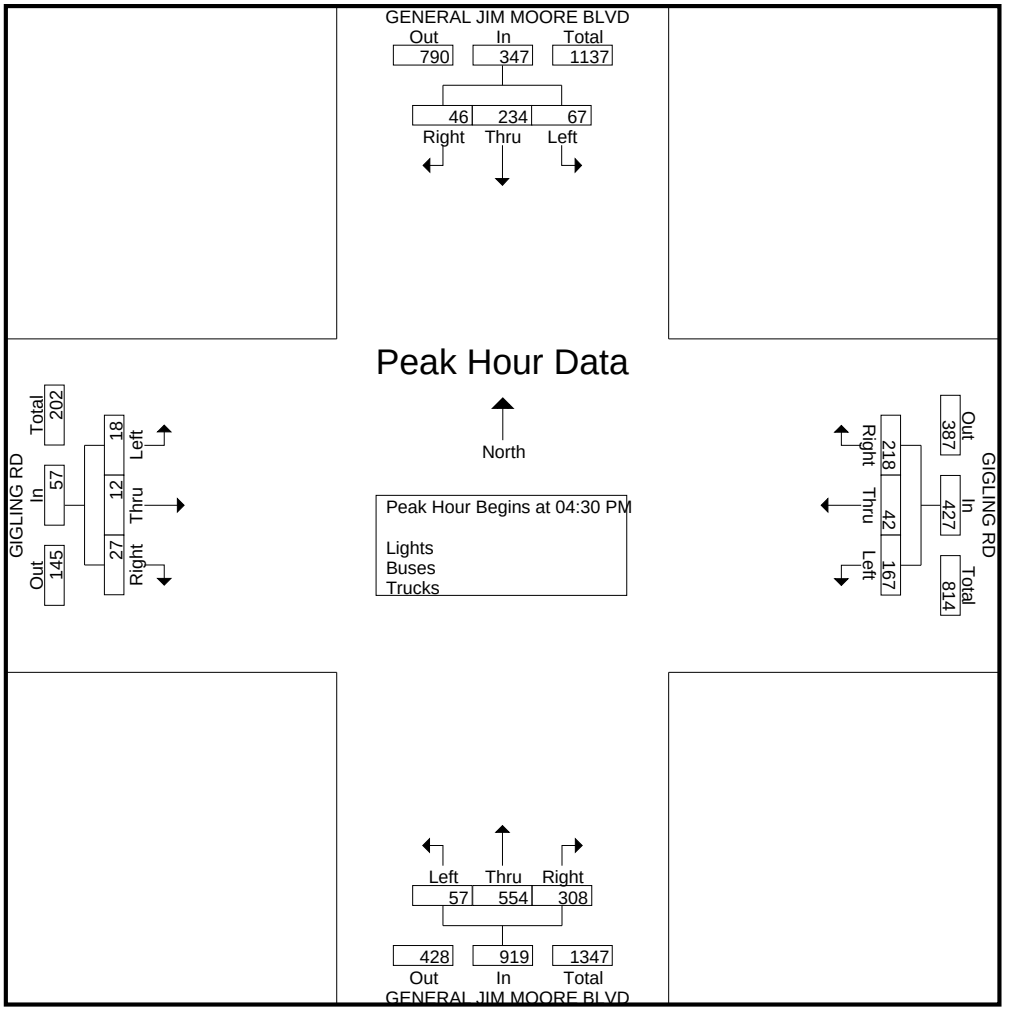

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File Name : 25PM FINAL
Site Code : 00000025
Start Date : 4/27/2017
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Groups Printed- Bikes

	GENERAL JIM MOORE BLVD Southbound					GIGLING RD Westbound					GENERAL JIM MOORE BLVD Northbound					GIGLING RD Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
04:15 PM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	1	0	1	2
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	1	0	1	0	2	0	0	0	0	0	0	0	1	0	1	3
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
Grand Total	0	0	0	0	0	1	0	1	0	2	0	0	0	0	0	0	1	1	0	2	4
Apprch %	0	0	0	0		50	0	50	0		0	0	0	0		0	50	50	0		
Total %	0	0	0	0	0	25	0	25	0	50	0	0	0	0	0	0	25	25	0	50	

	GENERAL JIM MOORE BLVD Southbound				GIGLING RD Westbound				GENERAL JIM MOORE BLVD Northbound				GIGLING RD Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	0	0	0	**1**	0	0	**1**	0	0	0	0	0	0	0	0	1
04:15 PM	0	0	0	0	0	0	**1**	1	0	0	0	0	0	0	**1**	**1**	**2**
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	1	0	1	2	0	0	0	0	0	0	1	1	3
% App. Total	0	0	0		50	0	50		0	0	0		0	0	100		
PHF	.000	.000	.000	.000	.250	.000	.250	.500	.000	.000	.000	.000	.000	.000	.250	.250	.375

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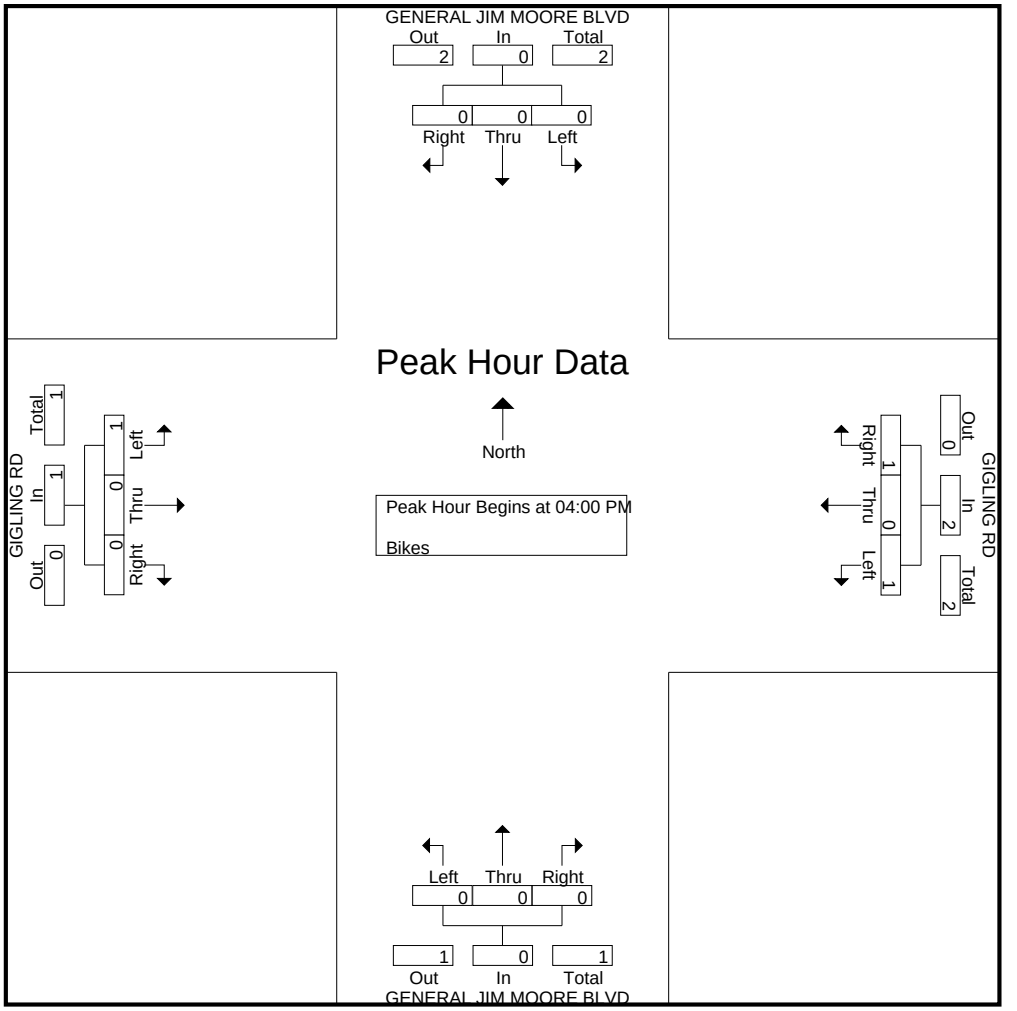

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File Name : 13AM FINAL
Site Code : 00000013
Start Date : 4/25/2018
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Groups Printed- Lights - Buses - Trucks

	MALMEDY RD Southbound					GIGLING RD Westbound					MALMEDY RD Northbound					GIGLING RD Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	1	1	1	0	3	0	69	0	0	69	2	10	1	0	13	1	43	0	0	44	129
07:15 AM	3	1	2	0	6	4	111	1	0	116	0	15	6	0	21	2	54	0	0	56	199
07:30 AM	3	0	5	0	8	6	125	1	0	132	2	11	5	0	18	6	92	2	0	100	258
07:45 AM	3	2	13	1	19	4	87	10	0	101	3	10	8	0	21	5	114	0	0	119	260
Total	10	4	21	1	36	14	392	12	0	418	7	46	20	0	73	14	303	2	0	319	846
08:00 AM	4	6	10	0	20	1	59	1	0	61	2	9	11	0	22	3	93	1	0	97	200
08:15 AM	2	5	7	0	14	4	78	4	0	86	1	9	2	0	12	1	73	1	0	75	187
08:30 AM	2	3	9	0	14	0	61	1	0	62	1	1	1	0	3	2	59	0	0	61	140
08:45 AM	2	3	6	0	11	2	30	0	0	32	3	4	4	0	11	2	45	2	0	49	103
Total	10	17	32	0	59	7	228	6	0	241	7	23	18	0	48	8	270	4	0	282	630
Grand Total	20	21	53	1	95	21	620	18	0	659	14	69	38	0	121	22	573	6	0	601	1476
Apprch %	21.1	22.1	55.8	1.1		3.2	94.1	2.7	0		11.6	57	31.4	0		3.7	95.3	1	0		
Total %	1.4	1.4	3.6	0.1	6.4	1.4	42	1.2	0	44.6	0.9	4.7	2.6	0	8.2	1.5	38.8	0.4	0	40.7	
Lights	20	21	50	1	92	18	600	18	0	636	13	69	37	0	119	20	555	5	0	580	1427
% Lights	100	100	94.3	100	96.8	85.7	96.8	100	0	96.5	92.9	100	97.4	0	98.3	90.9	96.9	83.3	0	96.5	96.7
Buses	0	0	0	0	0	0	10	0	0	10	0	0	1	0	1	2	11	0	0	13	24
% Buses	0	0	0	0	0	0	1.6	0	0	1.5	0	0	2.6	0	0.8	9.1	1.9	0	0	2.2	1.6
Trucks	0	0	3	0	3	3	10	0	0	13	1	0	0	0	1	0	7	1	0	8	25
% Trucks	0	0	5.7	0	3.2	14.3	1.6	0	0	2	7.1	0	0	0	0.8	0	1.2	16.7	0	1.3	1.7

	MALMEDY RD Southbound				GIGLING RD Westbound				MALMEDY RD Northbound				GIGLING RD Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	3	1	2	6	4	111	1	116	0	**15**	6	21	2	54	0	56	199
07:30 AM	3	0	5	8	**6**	**125**	1	**132**	2	11	5	18	**6**	92	**2**	100	258
07:45 AM	3	2	**13**	18	4	87	**10**	101	**3**	10	8	21	5	**114**	0	**119**	**259**
08:00 AM	**4**	**6**	10	**20**	1	59	1	61	2	9	**11**	**22**	3	93	1	97	200
Total Volume	13	9	30	52	15	382	13	410	7	45	30	82	16	353	3	372	916
% App. Total	25	17.3	57.7		3.7	93.2	3.2		8.5	54.9	36.6		4.3	94.9	0.8		
PHF	.813	.375	.577	.650	.625	.764	.325	.777	.583	.750	.682	.932	.667	.774	.375	.782	.884

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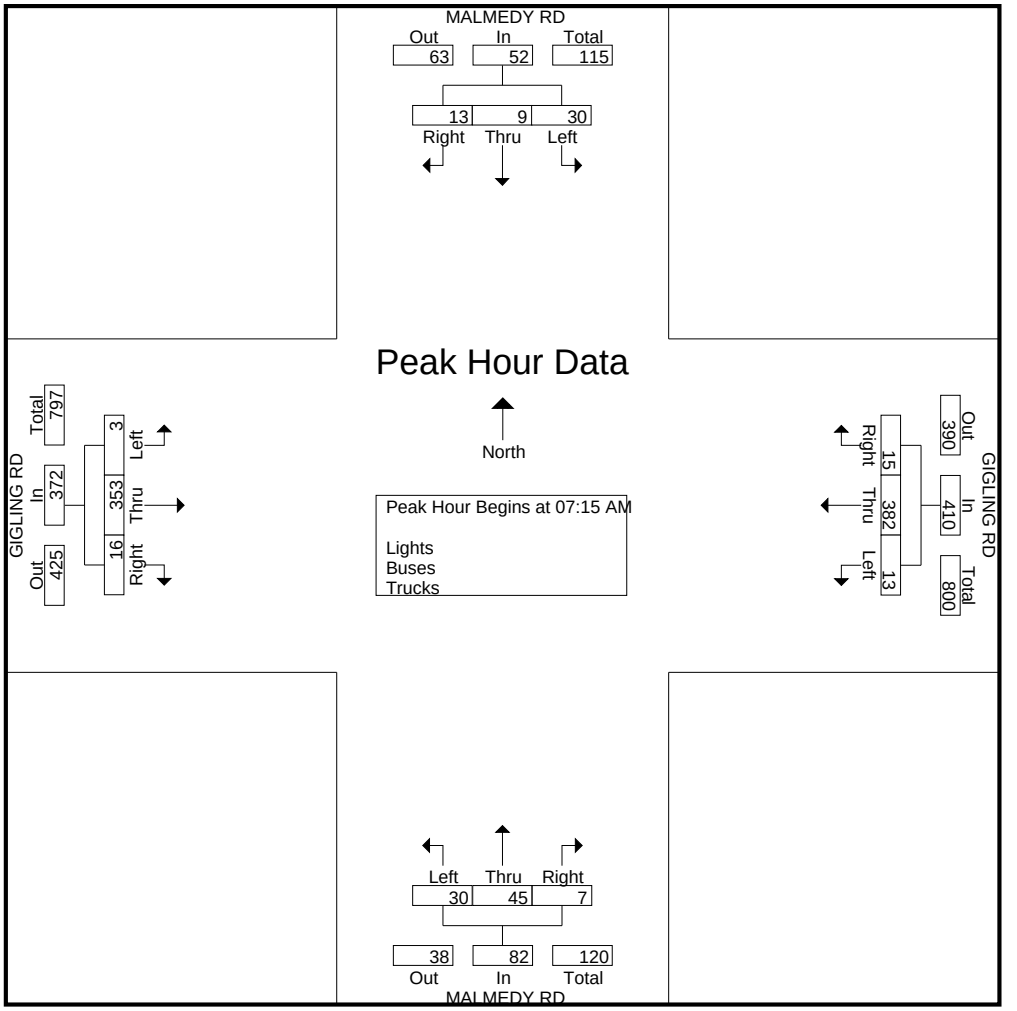

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File Name : 13AM FINAL
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Groups Printed- Bikes

	MALMEDY RD Southbound					GIGLING RD Westbound					MALMEDY RD Northbound					GIGLING RD Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Apprch %	0	0	0	0		0	0	0	0		0	0	0	0		0	0	100	0		
Total %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	100	

	MALMEDY RD Southbound				GIGLING RD Westbound				MALMEDY RD Northbound				GIGLING RD Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**	**1**	**1**
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
% App. Total	0	0	0		0	0	0		0	0	0		0	0	100		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.250	.250

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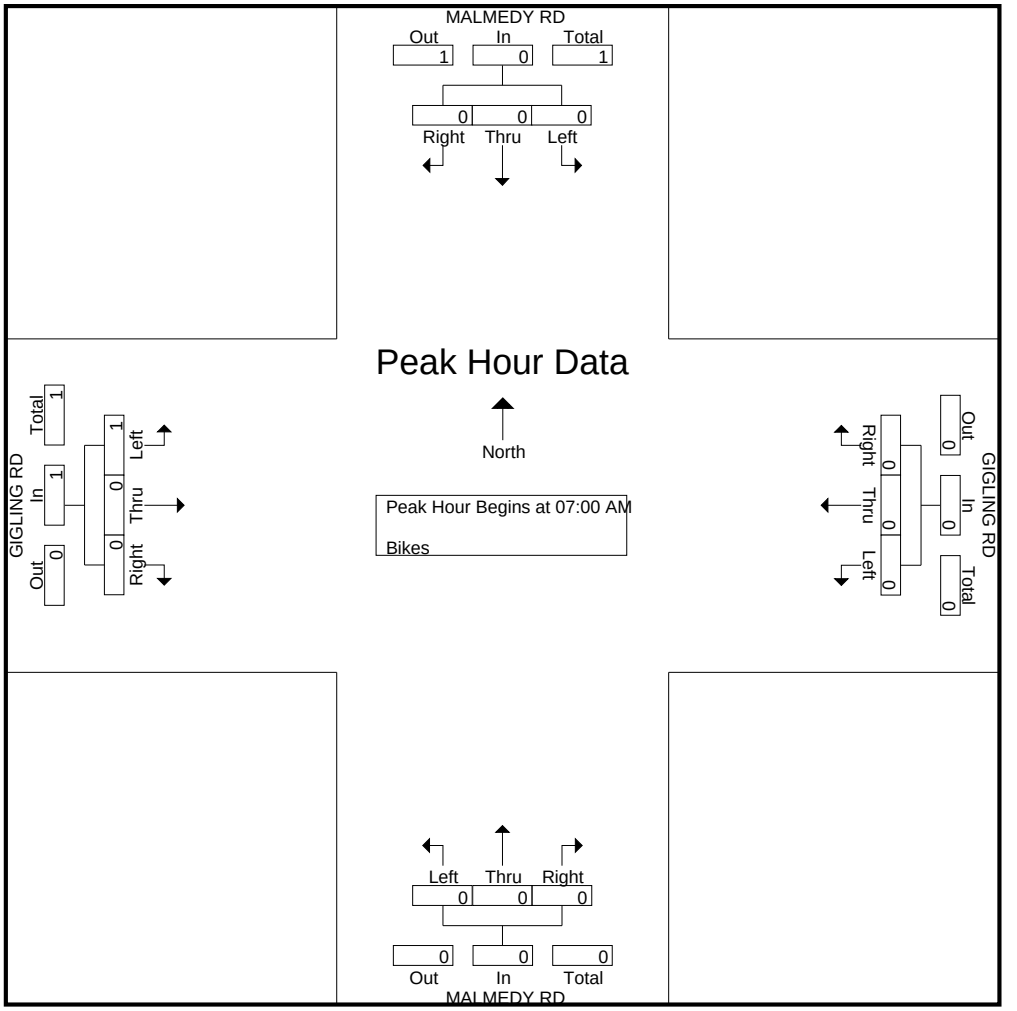

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File Name : 13PM FINAL
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Groups Printed- Lights - Buses - Trucks

	MALMEDY RD Southbound					GIGLING RD Westbound					MALMEDY RD Northbound					GIGLING RD Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	1	6	5	0	12	4	89	2	0	95	0	5	2	0	7	6	52	0	0	58	172
04:15 PM	1	5	4	0	10	5	70	1	0	76	0	9	1	0	10	4	59	1	0	64	160
04:30 PM	0	4	3	0	7	6	81	0	0	87	3	8	3	1	15	3	57	0	0	60	169
04:45 PM	1	11	3	0	15	4	99	1	0	104	2	5	4	0	11	11	79	0	0	90	220
Total	3	26	15	0	44	19	339	4	0	362	5	27	10	1	43	24	247	1	0	272	721
05:00 PM	0	5	3	0	8	3	83	5	0	91	1	5	6	0	12	11	83	1	0	95	206
05:15 PM	2	7	1	1	11	3	74	4	0	81	0	9	0	0	9	6	99	0	0	105	206
05:30 PM	2	4	2	1	9	3	56	2	0	61	3	6	2	1	12	11	79	2	0	92	174
05:45 PM	0	4	2	0	6	2	49	2	0	53	1	7	1	0	9	8	62	0	0	70	138
Total	4	20	8	2	34	11	262	13	0	286	5	27	9	1	42	36	323	3	0	362	724
Grand Total	7	46	23	2	78	30	601	17	0	648	10	54	19	2	85	60	570	4	0	634	1445
Apprch %	9	59	29.5	2.6		4.6	92.7	2.6	0		11.8	63.5	22.4	2.4		9.5	89.9	0.6	0		
Total %	0.5	3.2	1.6	0.1	5.4	2.1	41.6	1.2	0	44.8	0.7	3.7	1.3	0.1	5.9	4.2	39.4	0.3	0	43.9	
Lights	7	45	22	2	76	30	591	17	0	638	10	53	19	2	84	59	552	4	0	615	1413
% Lights	100	97.8	95.7	100	97.4	100	98.3	100	0	98.5	100	98.1	100	100	98.8	98.3	96.8	100	0	97	97.8
Buses	0	0	1	0	1	0	6	0	0	6	0	0	0	0	0	1	11	0	0	12	19
% Buses	0	0	4.3	0	1.3	0	1	0	0	0.9	0	0	0	0	0	1.7	1.9	0	0	1.9	1.3
Trucks	0	1	0	0	1	0	4	0	0	4	0	1	0	0	1	0	7	0	0	7	13
% Trucks	0	2.2	0	0	1.3	0	0.7	0	0	0.6	0	1.9	0	0	1.2	0	1.2	0	0	1.1	0.9

	MALMEDY RD Southbound				GIGLING RD Westbound				MALMEDY RD Northbound				GIGLING RD Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	1	**11**	**3**	**15**	**4**	**99**	1	**104**	2	5	4	11	**11**	79	0	90	**220**
05:00 PM	0	5	3	8	3	83	**5**	91	1	5	**6**	**12**	11	83	1	95	206
05:15 PM	**2**	7	1	10	3	74	4	81	0	**9**	0	9	6	**99**	0	**105**	205
05:30 PM	2	4	2	8	3	56	2	61	**3**	6	2	11	11	79	**2**	92	172
Total Volume	5	27	9	41	13	312	12	337	6	25	12	43	39	340	3	382	803
% App. Total	12.2	65.9	22		3.9	92.6	3.6		14	58.1	27.9		10.2	89	0.8		
PHF	.625	.614	.750	.683	.813	.788	.600	.810	.500	.694	.500	.896	.886	.859	.375	.910	.913

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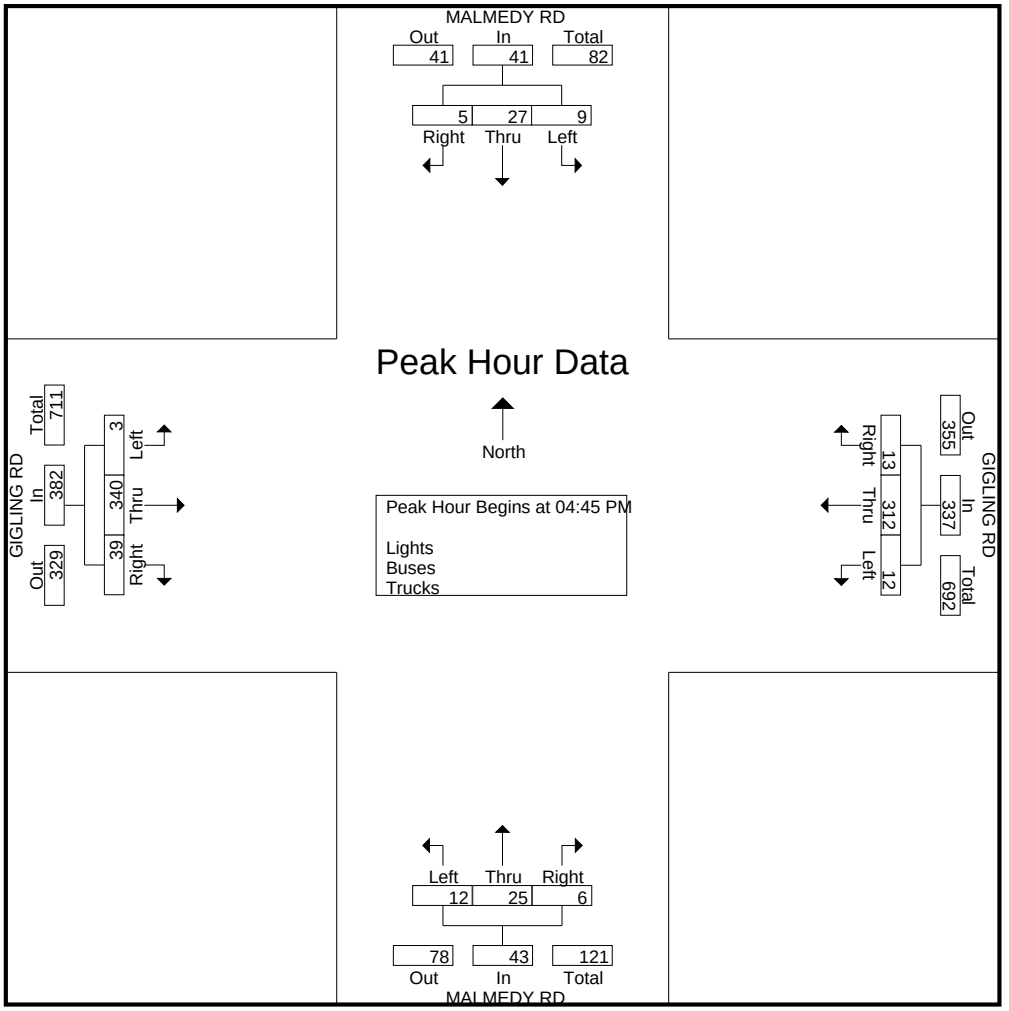

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Groups Printed- Bikes

	MALMEDY RD Southbound					GIGLING RD Westbound					MALMEDY RD Northbound					GIGLING RD Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Grand Total	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2
Apprch %	0	100	0	0		0	0	0	0		0	100	0	0		0	0	0	0		
Total %	0	50	0	0	50	0	0	0	0	0	0	50	0	0	50	0	0	0	0	0	

	MALMEDY RD Southbound				GIGLING RD Westbound				MALMEDY RD Northbound				GIGLING RD Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	**1**	0	**1**	0	0	0	0	**1**
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
% App. Total	0	0	0		0	0	0		0	100	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.000	.000	.250

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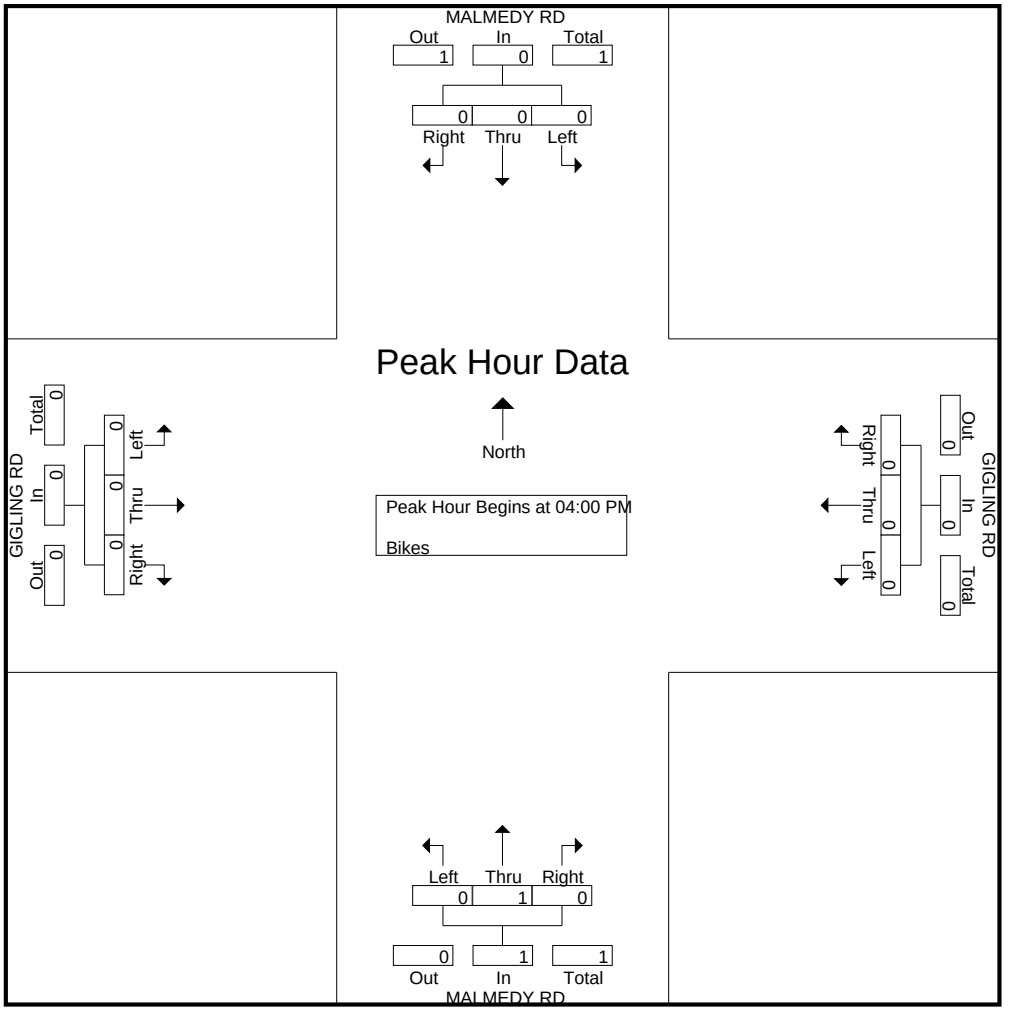

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File Name : 14AM FINAL
Site Code : 00000014
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Groups Printed- Lights - Buses - Trucks

	PARKER FLATS CUT OFF RD Southbound					GIGLING RD Westbound					PARKER FLATS CUT OFF RD Northbound					GIGLING RD Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	0	1	0	0	1	0	62	3	0	65	2	1	2	0	5	8	41	0	0	49	120
07:15 AM	0	2	1	0	3	0	112	9	0	121	6	2	4	0	12	10	45	0	0	55	191
07:30 AM	0	2	4	0	6	0	124	10	0	134	9	3	1	0	13	17	80	2	0	99	252
07:45 AM	0	5	1	0	6	0	84	17	0	101	9	3	6	0	18	40	97	0	0	137	262
Total	0	10	6	0	16	0	382	39	0	421	26	9	13	0	48	75	263	2	0	340	825
08:00 AM	0	2	1	0	3	0	61	5	0	66	7	1	6	0	14	24	63	3	0	90	173
08:15 AM	0	4	0	0	4	1	55	4	0	60	3	3	12	0	18	25	56	0	0	81	163
08:30 AM	0	4	0	0	4	0	45	4	0	49	2	0	6	1	9	17	47	1	0	65	127
08:45 AM	0	8	1	0	9	0	25	4	0	29	3	2	4	0	9	9	43	1	0	53	100
Total	0	18	2	0	20	1	186	17	0	204	15	6	28	1	50	75	209	5	0	289	563
Grand Total	0	28	8	0	36	1	568	56	0	625	41	15	41	1	98	150	472	7	0	629	1388
Apprch %	0	77.8	22.2	0		0.2	90.9	9	0		41.8	15.3	41.8	1		23.8	75	1.1	0		
Total %	0	2	0.6	0	2.6	0.1	40.9	4	0	45	3	1.1	3	0.1	7.1	10.8	34	0.5	0	45.3	
Lights	0	28	8	0	36	1	554	56	0	611	41	15	34	1	91	142	460	7	0	609	1347
% Lights	0	100	100	0	100	100	97.5	100	0	97.8	100	100	82.9	100	92.9	94.7	97.5	100	0	96.8	97
Buses	0	0	0	0	0	0	6	0	0	6	0	0	7	0	7	2	8	0	0	10	23
% Buses	0	0	0	0	0	0	1.1	0	0	1	0	0	17.1	0	7.1	1.3	1.7	0	0	1.6	1.7
Trucks	0	0	0	0	0	0	8	0	0	8	0	0	0	0	0	6	4	0	0	10	18
% Trucks	0	0	0	0	0	0	1.4	0	0	1.3	0	0	0	0	0	4	0.8	0	0	1.6	1.3

	PARKER FLATS CUT OFF RD Southbound				GIGLING RD Westbound				PARKER FLATS CUT OFF RD Northbound				GIGLING RD Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	2	1	3	0	112	9	121	6	2	4	12	10	45	0	55	191
07:30 AM	0	2	**4**	**6**	0	**124**	10	**134**	**9**	**3**	1	13	17	80	2	99	252
07:45 AM	0	**5**	1	6	0	84	**17**	101	9	3	**6**	**18**	**40**	**97**	0	**137**	**262**
08:00 AM	0	2	1	3	0	61	5	66	7	1	6	14	24	63	**3**	90	173
Total Volume	0	11	7	18	0	381	41	422	31	9	17	57	91	285	5	381	878
% App. Total	0	61.1	38.9		0	90.3	9.7		54.4	15.8	29.8		23.9	74.8	1.3		
PHF	.000	.550	.438	.750	.000	.768	.603	.787	.861	.750	.708	.792	.569	.735	.417	.695	.838

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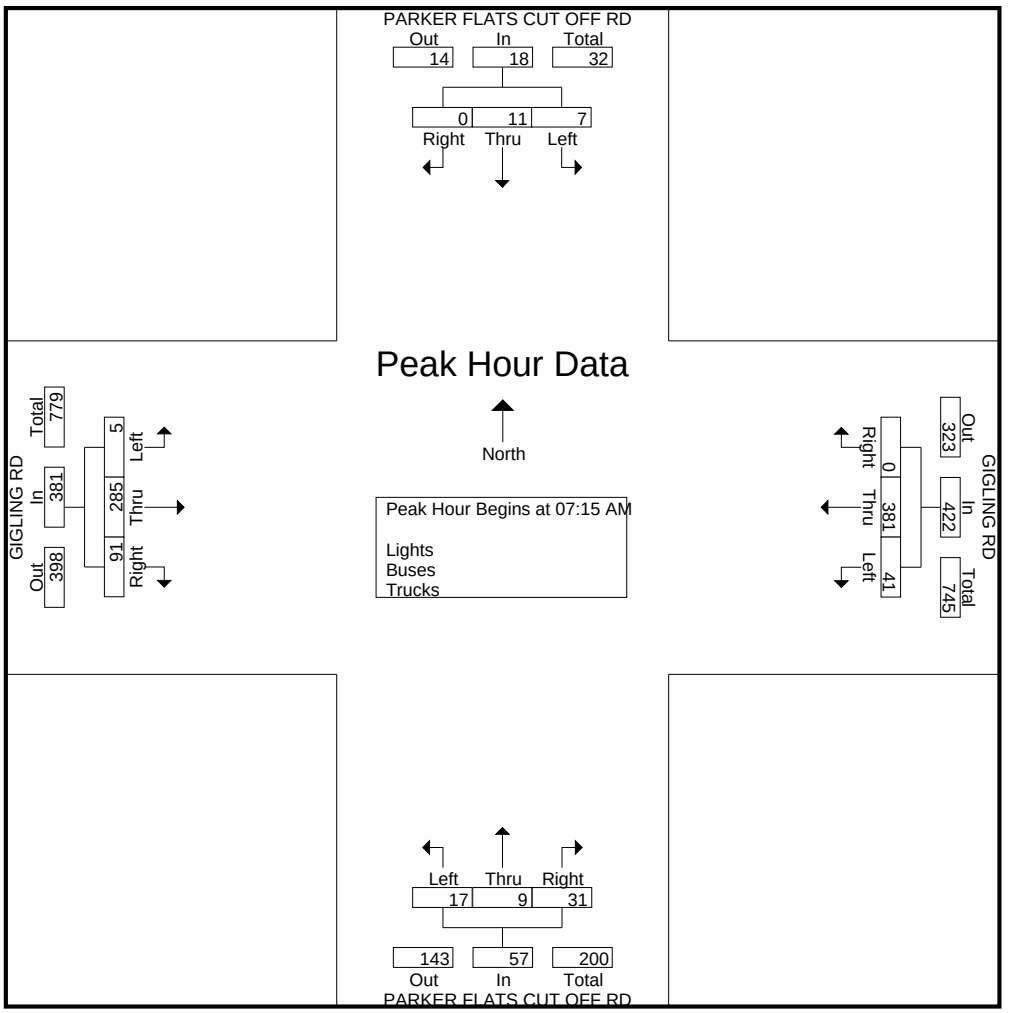

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Groups Printed- Bikes

	PARKER FLATS CUT OFF RD Southbound					GIGLING RD Westbound					PARKER FLATS CUT OFF RD Northbound					GIGLING RD Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
07:30 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
07:45 AM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2
Total	0	2	1	0	3	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	4
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	2	1	0	3	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	4
Apprch %	0	66.7	33.3	0		0	0	0	0		0	100	0	0		0	0	0	0		
Total %	0	50	25	0	75	0	0	0	0	0	0	25	0	0	25	0	0	0	0	0	

	PARKER FLATS CUT OFF RD Southbound				GIGLING RD Westbound				PARKER FLATS CUT OFF RD Northbound				GIGLING RD Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	**1**	**1**	0	0	0	0	0	0	0	0	0	0	0	0	1
07:30 AM	0	**1**	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
07:45 AM	0	1	0	1	0	0	0	0	0	**1**	0	**1**	0	0	0	0	**2**
Total Volume	0	2	1	3	0	0	0	0	0	1	0	1	0	0	0	0	4
% App. Total	0	66.7	33.3		0	0	0		0	100	0		0	0	0		
PHF	.000	.500	.250	.750	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.000	.000	.500

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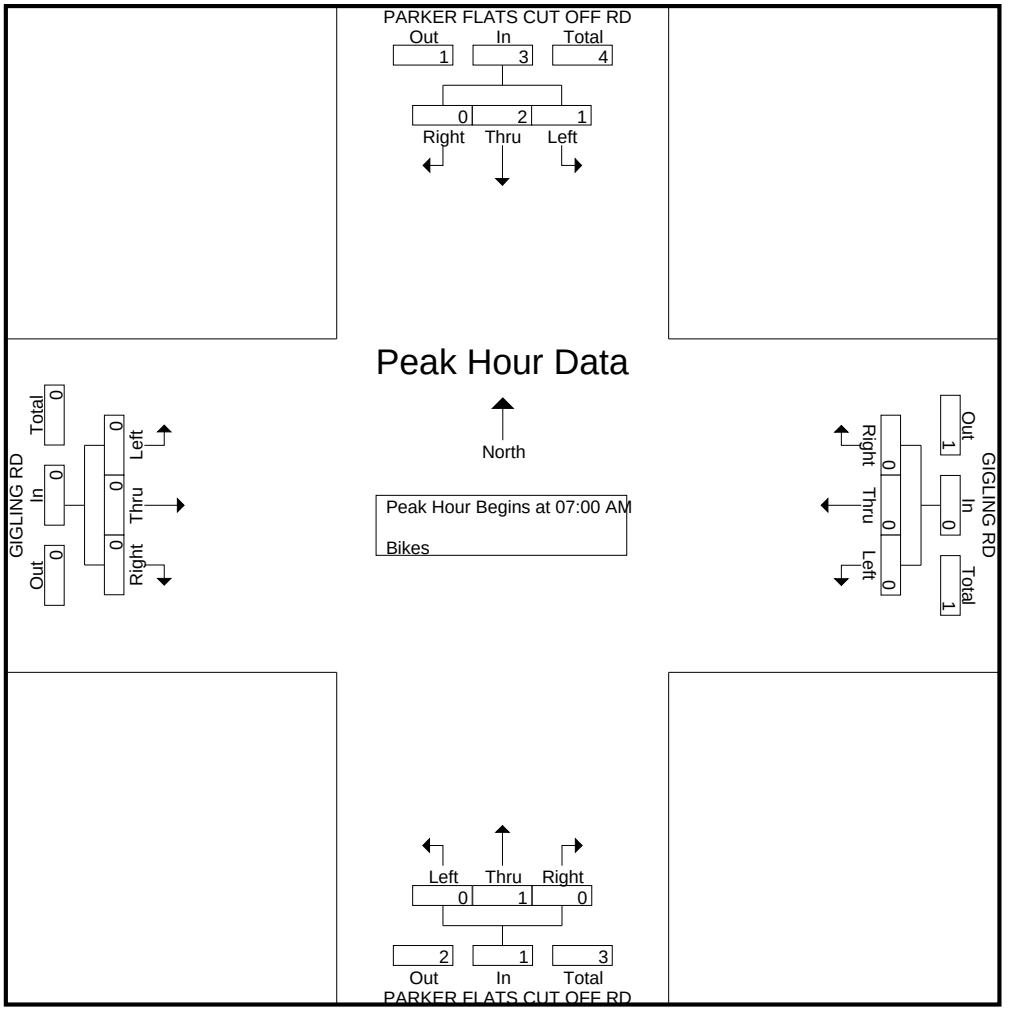

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Groups Printed- Lights - Buses - Trucks

	PARKER FLATS CUT OFF RD Southbound					GIGLING RD Westbound					PARKER FLATS CUT OFF RD Northbound					GIGLING RD Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	2	1	0	0	3	0	64	2	1	67	7	6	18	1	32	2	55	0	0	57	159
04:15 PM	0	1	0	0	1	0	48	3	0	51	6	9	18	0	33	3	53	1	0	57	142
04:30 PM	0	1	0	0	1	0	65	4	0	69	7	6	20	1	34	2	62	0	0	64	168
04:45 PM	0	0	0	0	0	1	81	5	0	87	6	5	25	0	36	2	81	1	0	84	207
Total	2	3	0	0	5	1	258	14	1	274	26	26	81	2	135	9	251	2	0	262	676
05:00 PM	0	0	0	0	0	1	80	2	2	85	5	7	6	0	18	2	77	0	0	79	182
05:15 PM	0	2	0	0	2	0	58	1	0	59	3	3	14	2	22	2	96	1	0	99	182
05:30 PM	1	2	0	0	3	0	50	3	0	53	3	7	7	0	17	2	82	1	0	85	158
05:45 PM	1	0	0	0	1	0	45	1	0	46	3	2	8	0	13	2	55	0	0	57	117
Total	2	4	0	0	6	1	233	7	2	243	14	19	35	2	70	8	310	2	0	320	639
Grand Total	4	7	0	0	11	2	491	21	3	517	40	45	116	4	205	17	561	4	0	582	1315
Apprch %	36.4	63.6	0	0		0.4	95	4.1	0.6		19.5	22	56.6	2		2.9	96.4	0.7	0		
Total %	0.3	0.5	0	0	0.8	0.2	37.3	1.6	0.2	39.3	3	3.4	8.8	0.3	15.6	1.3	42.7	0.3	0	44.3	
Lights	4	7	0	0	11	2	482	21	3	508	39	45	114	4	202	17	543	4	0	564	1285
% Lights	100	100	0	0	100	100	98.2	100	100	98.3	97.5	100	98.3	100	98.5	100	96.8	100	0	96.9	97.7
Buses	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	0	12	0	0	12	18
% Buses	0	0	0	0	0	0	1.2	0	0	1.2	0	0	0	0	0	0	2.1	0	0	2.1	1.4
Trucks	0	0	0	0	0	0	3	0	0	3	1	0	2	0	3	0	6	0	0	6	12
% Trucks	0	0	0	0	0	0	0.6	0	0	0.6	2.5	0	1.7	0	1.5	0	1.1	0	0	1	0.9

	PARKER FLATS CUT OFF RD Southbound				GIGLING RD Westbound				PARKER FLATS CUT OFF RD Northbound				GIGLING RD Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	1	0	1	0	65	4	69	**7**	6	20	33	**2**	62	0	64	167
04:45 PM	0	0	0	0	**1**	**81**	**5**	**87**	6	5	**25**	**36**	2	81	**1**	84	**207**
05:00 PM	0	0	0	0	1	80	2	83	5	**7**	6	18	2	77	0	79	180
05:15 PM	0	**2**	0	**2**	0	58	1	59	3	3	14	20	2	**96**	1	**99**	180
Total Volume	0	3	0	3	2	284	12	298	21	21	65	107	8	316	2	326	734
% App. Total	0	100	0		0.7	95.3	4		19.6	19.6	60.7		2.5	96.9	0.6		
PHF	.000	.375	.000	.375	.500	.877	.600	.856	.750	.750	.650	.743	1.00	.823	.500	.823	.886

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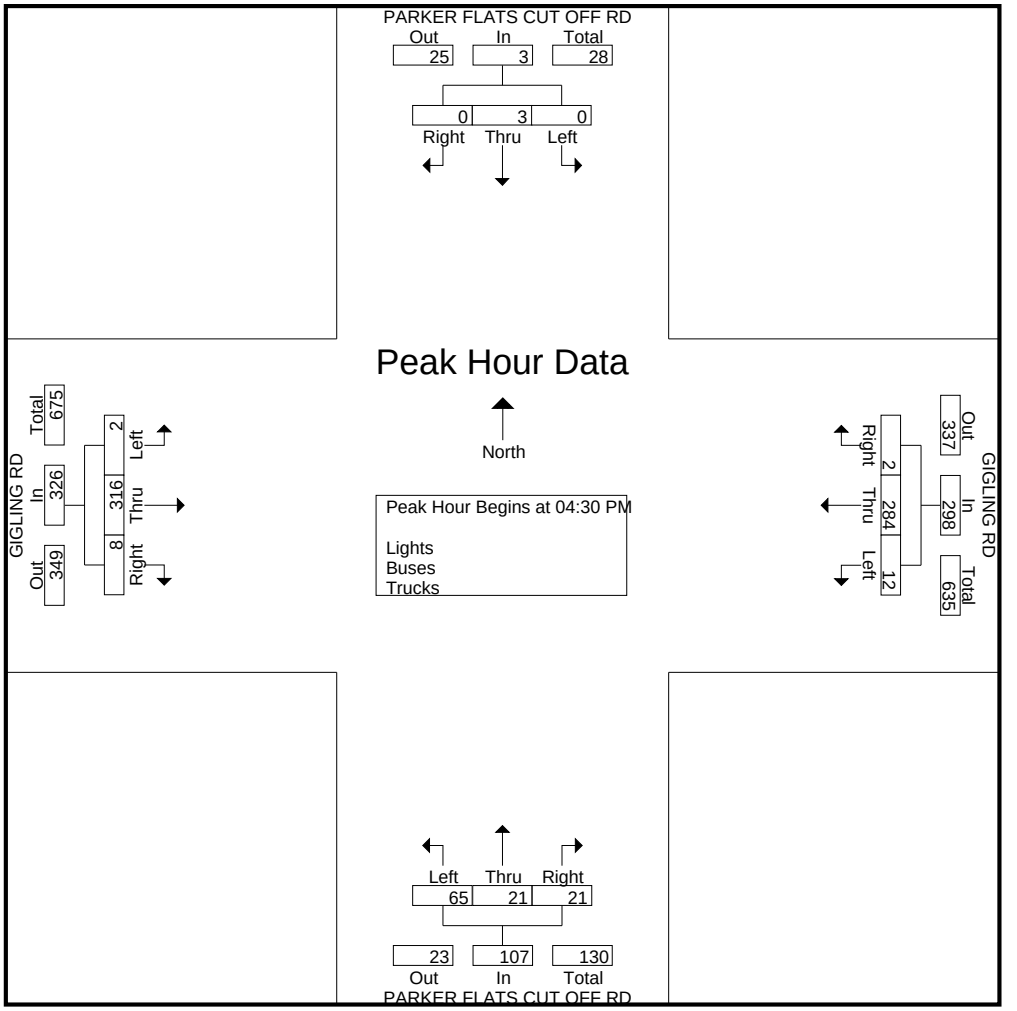

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Groups Printed- Bikes

	PARKER FLATS CUT OFF RD Southbound					GIGLING RD Westbound					PARKER FLATS CUT OFF RD Northbound					GIGLING RD Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Apprch %	0	100	0	0		0	0	0	0		0	0	0	0		0	0	0	0		
Total %	0	100	0	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

	PARKER FLATS CUT OFF RD Southbound				GIGLING RD Westbound				PARKER FLATS CUT OFF RD Northbound				GIGLING RD Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	**1**	0	**1**	0	0	0	0	0	0	0	0	0	0	0	0	**1**
Total Volume	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
% App. Total	0	100	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.250	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250

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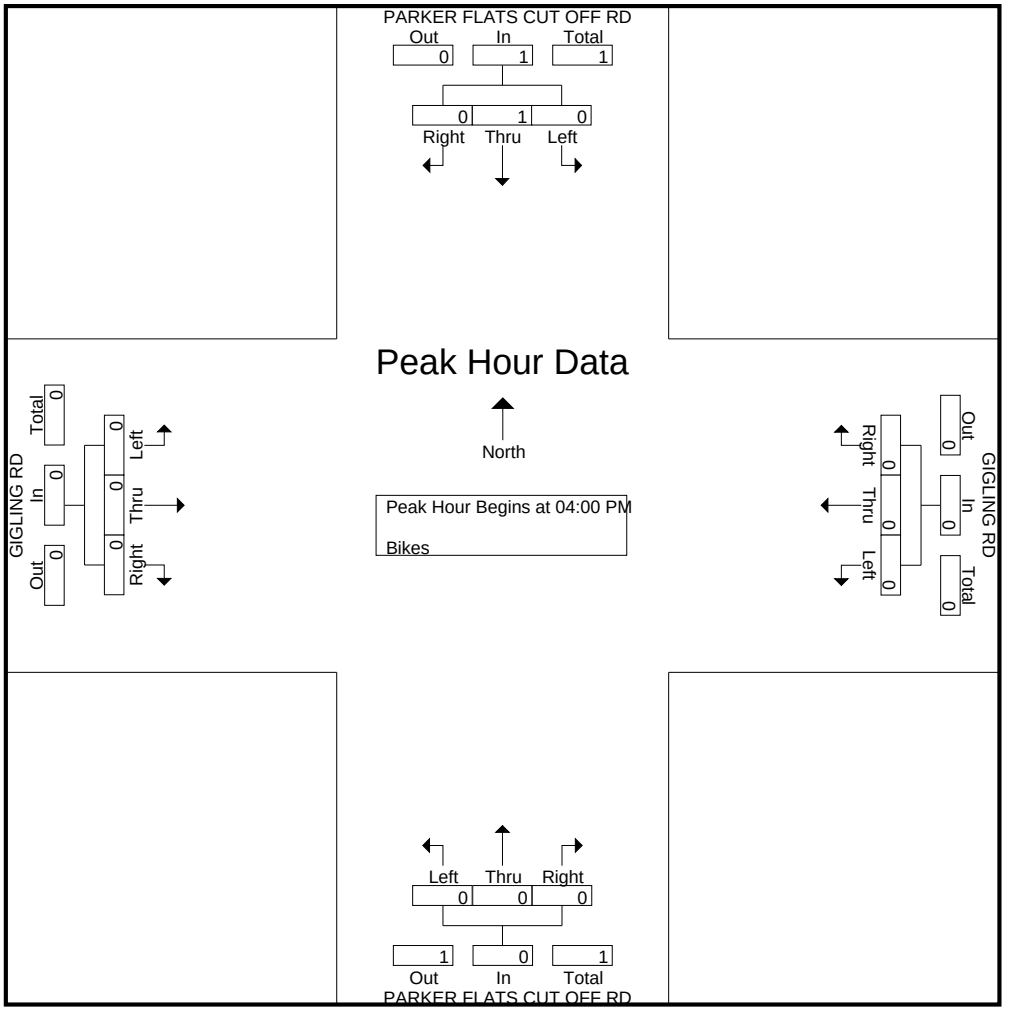

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File Name : 18AM FINAL
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Groups Printed- Lights - Buses - Trucks

	GENERAL JIM MOORE BLVD Southbound					NORMANDY RD Westbound					GENERAL JIM MOORE BLVD Northbound					NORMANDY RD Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	8	97	6	0	111	0	4	7	0	11	3	46	6	0	55	7	3	10	3	23	200
07:15 AM	23	191	10	3	227	2	7	20	1	30	17	50	13	0	80	20	8	14	2	44	381
07:30 AM	37	238	22	14	311	8	19	43	0	70	32	85	36	0	153	29	28	14	0	71	605
07:45 AM	66	186	35	13	300	11	28	42	1	82	49	103	61	0	213	30	35	13	5	83	678
Total	134	712	73	30	949	21	58	112	2	193	101	284	116	0	501	86	74	51	10	221	1864
08:00 AM	23	144	7	0	174	14	16	36	0	66	7	92	12	0	111	39	7	24	0	70	421
08:15 AM	9	172	8	1	190	2	3	10	0	15	9	53	9	0	71	7	4	6	2	19	295
08:30 AM	7	113	1	3	124	3	2	11	1	17	3	52	3	0	58	7	5	7	1	20	219
08:45 AM	11	82	3	2	98	5	3	8	2	18	2	51	7	2	62	6	1	7	2	16	194
Total	50	511	19	6	586	24	24	65	3	116	21	248	31	2	302	59	17	44	5	125	1129
Grand Total	184	1223	92	36	1535	45	82	177	5	309	122	532	147	2	803	145	91	95	15	346	2993
Apprch %	12	79.7	6	2.3		14.6	26.5	57.3	1.6		15.2	66.3	18.3	0.2		41.9	26.3	27.5	4.3		
Total %	6.1	40.9	3.1	1.2	51.3	1.5	2.7	5.9	0.2	10.3	4.1	17.8	4.9	0.1	26.8	4.8	3	3.2	0.5	11.6	
Lights	183	1191	92	36	1502	41	80	176	5	302	120	528	142	2	792	141	91	95	15	342	2938
% Lights	99.5	97.4	100	100	97.9	91.1	97.6	99.4	100	97.7	98.4	99.2	96.6	100	98.6	97.2	100	100	100	98.8	98.2
Buses	0	16	0	0	16	2	2	1	0	5	1	2	3	0	6	3	0	0	0	3	30
% Buses	0	1.3	0	0	1	4.4	2.4	0.6	0	1.6	0.8	0.4	2	0	0.7	2.1	0	0	0	0.9	1
Trucks	1	16	0	0	17	2	0	0	0	2	1	2	2	0	5	1	0	0	0	1	25
% Trucks	0.5	1.3	0	0	1.1	4.4	0	0	0	0.6	0.8	0.4	1.4	0	0.6	0.7	0	0	0	0.3	0.8

	GENERAL JIM MOORE BLVD Southbound				NORMANDY RD Westbound				GENERAL JIM MOORE BLVD Northbound				NORMANDY RD Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	23	191	10	224	2	7	20	29	17	50	13	80	20	8	14	42	375
07:30 AM	37	**238**	22	**297**	8	19	**43**	70	32	85	36	153	29	28	14	71	591
07:45 AM	**66**	186	**35**	287	11	**28**	42	**81**	**49**	**103**	**61**	**213**	30	**35**	13	**78**	**659**
08:00 AM	23	144	7	174	**14**	16	36	66	7	92	12	111	**39**	7	**24**	70	421
Total Volume	149	759	74	982	35	70	141	246	105	330	122	557	118	78	65	261	2046
% App. Total	15.2	77.3	7.5		14.2	28.5	57.3		18.9	59.2	21.9		45.2	29.9	24.9		
PHF	.564	.797	.529	.827	.625	.625	.820	.759	.536	.801	.500	.654	.756	.557	.677	.837	.776

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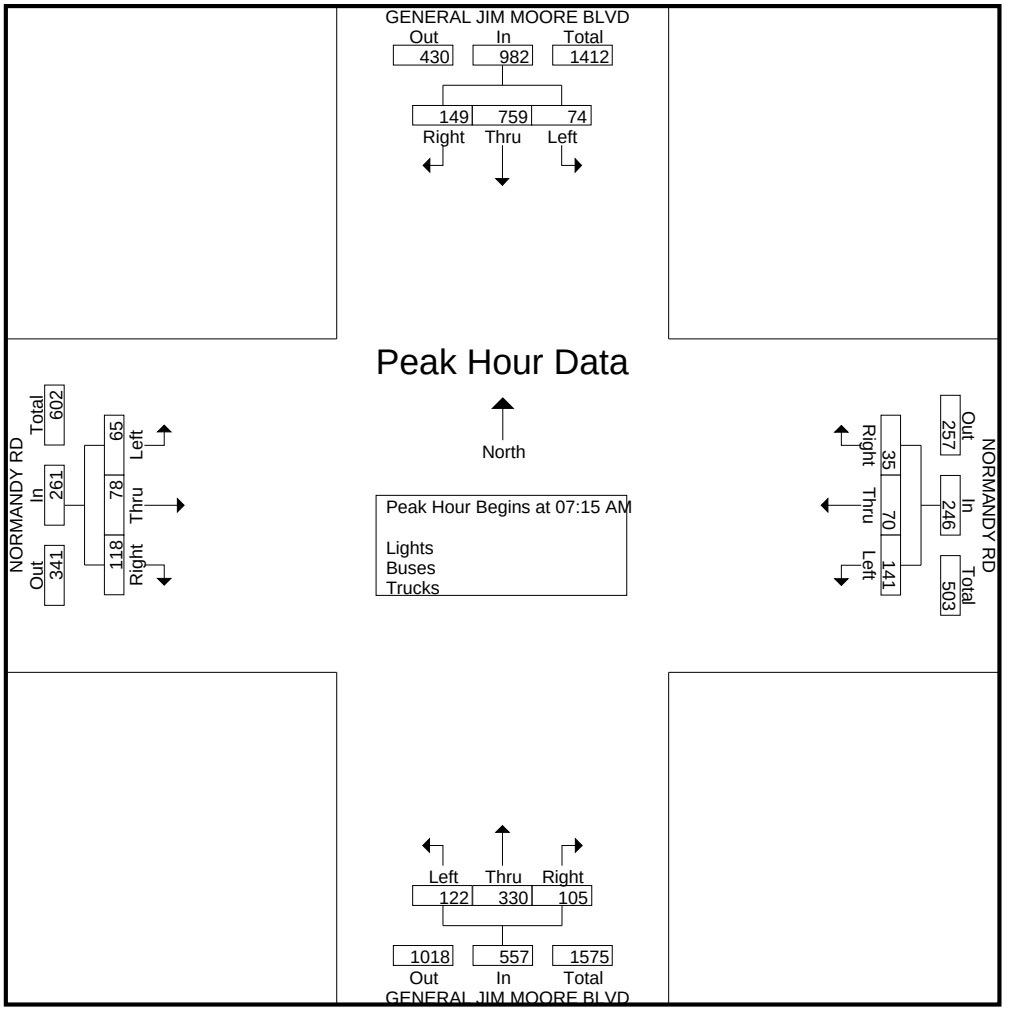

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Groups Printed- Bikes

	GENERAL JIM MOORE BLVD Southbound					NORMANDY RD Westbound					GENERAL JIM MOORE BLVD Northbound					NORMANDY RD Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	1	0	0	1	2
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	1	0	0	1	2
Grand Total	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	0	1	0	0	1	3
Apprch %	0	0	0	0		0	0	0	0		50	50	0	0		0	100	0	0		
Total %	0	0	0	0	0	0	0	0	0	0	33.3	33.3	0	0	66.7	0	33.3	0	0	33.3	

	GENERAL JIM MOORE BLVD Southbound				NORMANDY RD Westbound				GENERAL JIM MOORE BLVD Northbound				NORMANDY RD Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	**1**	0	0	**1**	0	**1**	0	**1**	**2**
Total Volume	0	0	0	0	0	0	0	0	1	0	0	1	0	1	0	1	2
% App. Total	0	0	0		0	0	0		100	0	0		0	100	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.250	.000	.000	.250	.000	.250	.000	.250	.250

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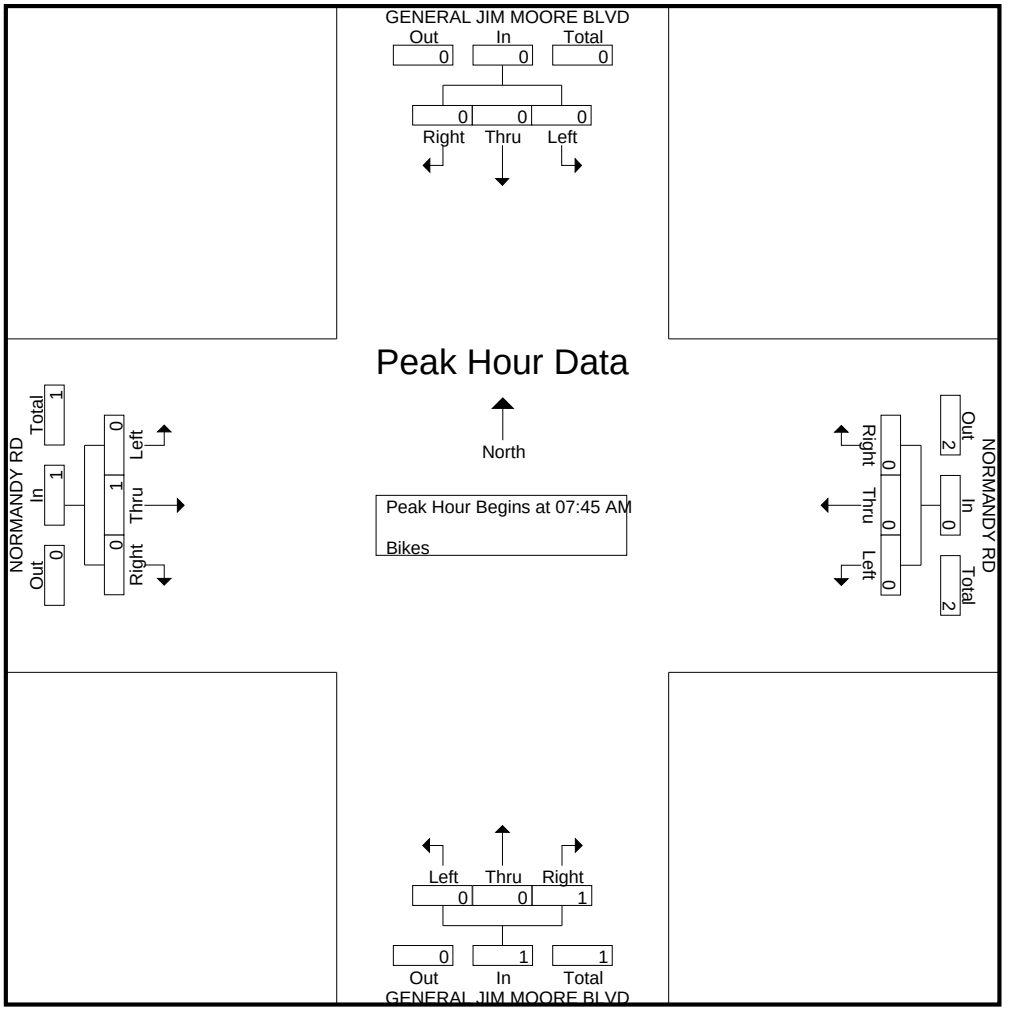

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Groups Printed- Lights - Buses - Trucks

	GENERAL JIM MOORE BLVD Southbound					NORMANDY RD Westbound					GENERAL JIM MOORE BLVD Northbound					NORMANDY RD Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	9	79	8	0	96	5	4	8	0	17	6	114	5	0	125	8	3	10	0	21	259
04:15 PM	9	63	5	2	79	3	9	12	0	24	9	118	12	0	139	7	9	7	0	23	265
04:30 PM	13	83	4	0	100	2	5	4	0	11	14	149	12	1	176	8	3	10	1	22	309
04:45 PM	8	102	9	0	119	2	1	13	0	16	14	171	13	0	198	8	7	5	1	21	354
Total	39	327	26	2	394	12	19	37	0	68	43	552	42	1	638	31	22	32	2	87	1187
05:00 PM	13	92	5	0	110	2	11	8	0	21	18	180	17	0	215	8	8	12	0	28	374
05:15 PM	11	87	8	0	106	1	5	15	0	21	19	206	11	0	236	11	7	15	0	33	396
05:30 PM	13	80	9	3	105	1	11	8	0	20	16	172	8	0	196	6	5	13	0	24	345
05:45 PM	12	65	11	4	92	1	8	6	0	15	16	145	12	0	173	12	8	10	0	30	310
Total	49	324	33	7	413	5	35	37	0	77	69	703	48	0	820	37	28	50	0	115	1425
Grand Total	88	651	59	9	807	17	54	74	0	145	112	1255	90	1	1458	68	50	82	2	202	2612
Apprch %	10.9	80.7	7.3	1.1		11.7	37.2	51	0		7.7	86.1	6.2	0.1		33.7	24.8	40.6	1		
Total %	3.4	24.9	2.3	0.3	30.9	0.7	2.1	2.8	0	5.6	4.3	48	3.4	0	55.8	2.6	1.9	3.1	0.1	7.7	
Lights	87	646	59	9	801	17	54	72	0	143	112	1242	88	1	1443	67	50	81	2	200	2587
% Lights	98.9	99.2	100	100	99.3	100	100	97.3	0	98.6	100	99	97.8	100	99	98.5	100	98.8	100	99	99
Buses	0	0	0	0	0	0	0	1	0	1	0	4	2	0	6	0	0	0	0	0	7
% Buses	0	0	0	0	0	0	0	1.4	0	0.7	0	0.3	2.2	0	0.4	0	0	0	0	0	0.3
Trucks	1	5	0	0	6	0	0	1	0	1	0	9	0	0	9	1	0	1	0	2	18
% Trucks	1.1	0.8	0	0	0.7	0	0	1.4	0	0.7	0	0.7	0	0	0.6	1.5	0	1.2	0	1	0.7

	GENERAL JIM MOORE BLVD Southbound				NORMANDY RD Westbound				GENERAL JIM MOORE BLVD Northbound				NORMANDY RD Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	8	**102**	**9**	**119**	**2**	1	13	16	14	171	13	198	8	7	5	20	353
05:00 PM	**13**	92	5	110	2	**11**	8	**21**	18	180	**17**	215	8	**8**	12	28	374
05:15 PM	11	87	8	106	1	5	**15**	21	**19**	**206**	11	**236**	**11**	7	**15**	**33**	**396**
05:30 PM	13	80	9	102	1	11	8	20	16	172	8	196	6	5	13	24	342
Total Volume	45	361	31	437	6	28	44	78	67	729	49	845	33	27	45	105	1465
% App. Total	10.3	82.6	7.1		7.7	35.9	56.4		7.9	86.3	5.8		31.4	25.7	42.9		
PHF	.865	.885	.861	.918	.750	.636	.733	.929	.882	.885	.721	.895	.750	.844	.750	.795	.925

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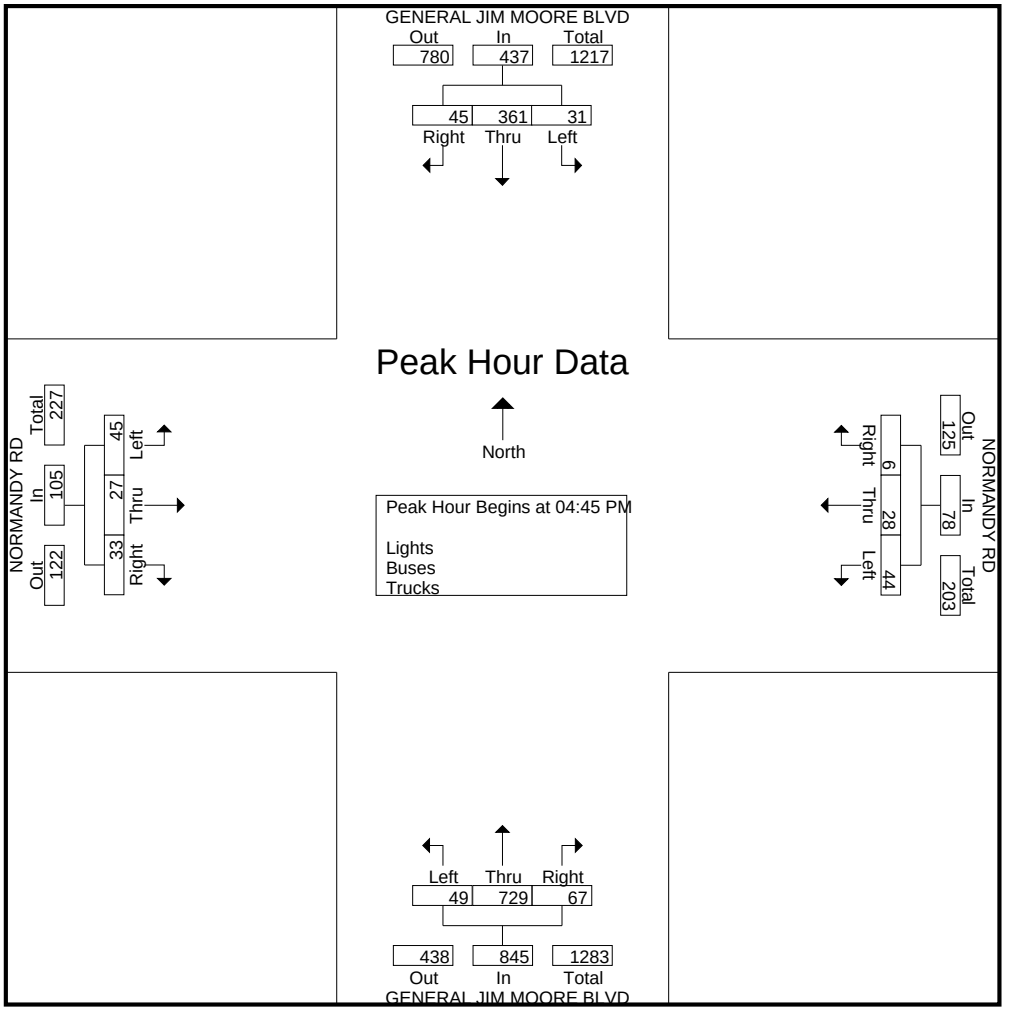

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Groups Printed- Bikes

	GENERAL JIM MOORE BLVD Southbound					NORMANDY RD Westbound					GENERAL JIM MOORE BLVD Northbound					NORMANDY RD Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
04:45 PM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	1	0	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2
05:00 PM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1
05:15 PM	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	2
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	3
Grand Total	0	0	1	0	1	1	0	3	0	4	0	0	0	0	0	0	0	0	0	0	5
Apprch %	0	0	100	0		25	0	75	0		0	0	0	0		0	0	0	0		
Total %	0	0	20	0	20	20	0	60	0	80	0	0	0	0	0	0	0	0	0	0	

	GENERAL JIM MOORE BLVD Southbound				NORMANDY RD Westbound				GENERAL JIM MOORE BLVD Northbound				NORMANDY RD Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	0	**1**	**1**	0	0	0	0	0	0	0	0	0	0	0	0	1
04:45 PM	0	0	0	0	**1**	0	0	1	0	0	0	0	0	0	0	0	1
05:00 PM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
05:15 PM	0	0	0	0	0	0	**2**	**2**	0	0	0	0	0	0	0	0	**2**
Total Volume	0	0	1	1	1	0	3	4	0	0	0	0	0	0	0	0	5
% App. Total	0	0	100		25	0	75		0	0	0		0	0	0		
PHF	.000	.000	.250	.250	.250	.000	.375	.500	.000	.000	.000	.000	.000	.000	.000	.000	.625

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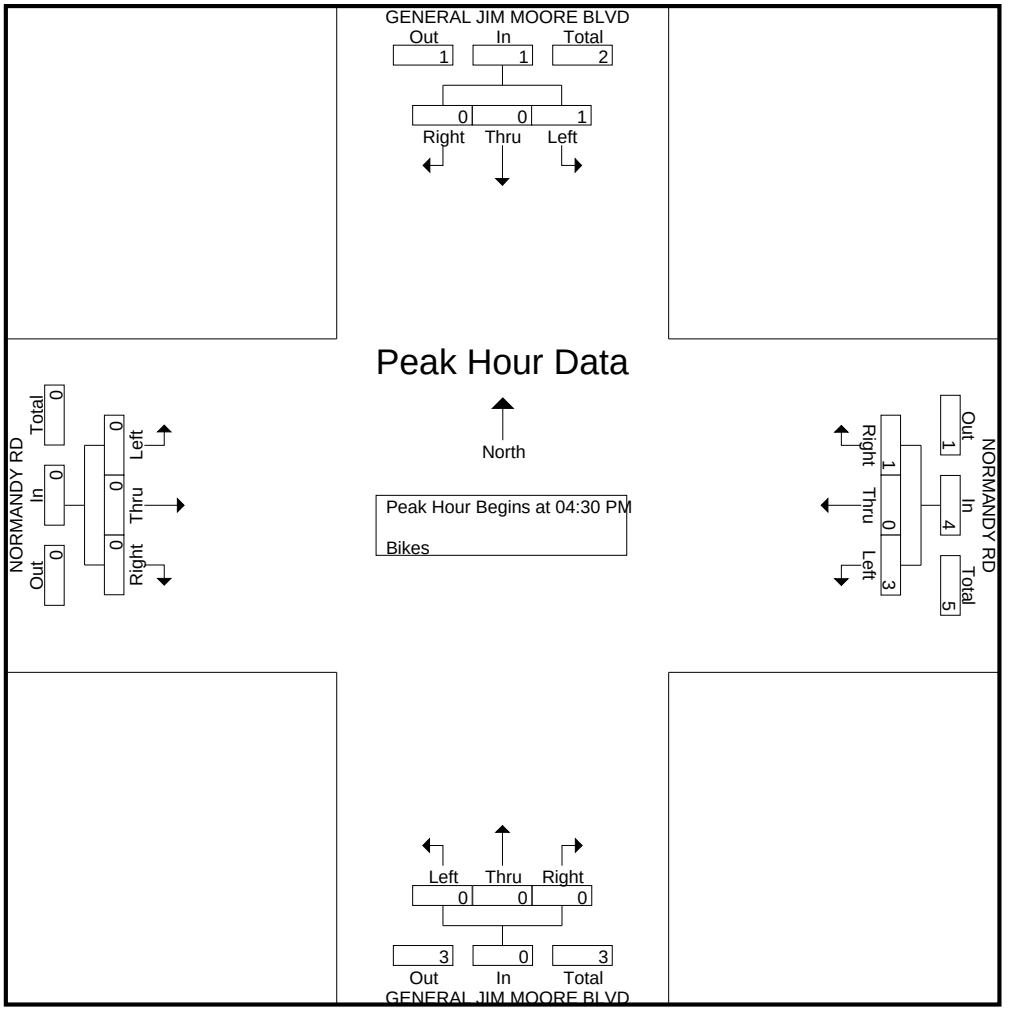

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Groups Printed- Lights - Buses - Trucks

	GENERAL JIM MOORE BLVD Southbound					EUCALYPTUS RD Westbound					GENERAL JIM MOORE BLVD Northbound					COE AVE Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	5	121	0	0	126	0	0	0	1	1	0	29	15	0	44	21	0	7	0	28	199
07:15 AM	19	239	0	0	258	0	0	0	0	0	0	57	17	0	74	60	0	14	2	76	408
07:30 AM	19	258	0	0	277	0	0	0	0	0	0	103	26	0	129	99	0	31	0	130	536
07:45 AM	42	230	0	1	273	0	0	0	0	0	1	122	48	0	171	111	0	34	0	145	589
Total	85	848	0	1	934	0	0	0	1	1	1	311	106	0	418	291	0	86	2	379	1732
08:00 AM	37	198	0	0	235	0	0	0	0	0	0	68	93	0	161	104	0	29	2	135	531
08:15 AM	37	188	0	0	225	0	0	0	0	0	0	46	54	0	100	116	0	20	0	136	461
08:30 AM	8	125	0	0	133	0	0	0	0	0	0	38	14	0	52	49	0	10	2	61	246
08:45 AM	9	102	0	0	111	0	0	0	0	0	0	49	11	0	60	21	0	6	1	28	199
Total	91	613	0	0	704	0	0	0	0	0	0	201	172	0	373	290	0	65	5	360	1437
Grand Total	176	1461	0	1	1638	0	0	0	1	1	1	512	278	0	791	581	0	151	7	739	3169
Apprch %	10.7	89.2	0	0.1		0	0	0	100		0.1	64.7	35.1	0		78.6	0	20.4	0.9		
Total %	5.6	46.1	0	0	51.7	0	0	0	0	0	0	16.2	8.8	0	25	18.3	0	4.8	0.2	23.3	
Lights	170	1431	0	1	1602	0	0	0	1	1	1	506	272	0	779	568	0	149	7	724	3106
% Lights	96.6	97.9	0	100	97.8	0	0	0	100	100	100	98.8	97.8	0	98.5	97.8	0	98.7	100	98	98
Buses	5	15	0	0	20	0	0	0	0	0	0	4	5	0	9	9	0	2	0	11	40
% Buses	2.8	1	0	0	1.2	0	0	0	0	0	0	0.8	1.8	0	1.1	1.5	0	1.3	0	1.5	1.3
Trucks	1	15	0	0	16	0	0	0	0	0	0	2	1	0	3	4	0	0	0	4	23
% Trucks	0.6	1	0	0	1	0	0	0	0	0	0	0.4	0.4	0	0.4	0.7	0	0	0	0.5	0.7

	GENERAL JIM MOORE BLVD Southbound				EUCALYPTUS RD Westbound				GENERAL JIM MOORE BLVD Northbound				COE AVE Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	19	**258**	0	**277**	0	0	0	0	0	103	26	129	99	0	31	130	536
07:45 AM	**42**	230	0	272	0	0	0	0	**1**	**122**	48	**171**	111	0	**34**	**145**	**588**
08:00 AM	37	198	0	235	0	0	0	0	0	68	**93**	161	104	0	29	133	529
08:15 AM	37	188	0	225	0	0	0	0	0	46	54	100	**116**	0	20	136	461
Total Volume	135	874	0	1009	0	0	0	0	1	339	221	561	430	0	114	544	2114
% App. Total	13.4	86.6	0		0	0	0		0.2	60.4	39.4		79	0	21		
PHF	.804	.847	.000	.911	.000	.000	.000	.000	.250	.695	.594	.820	.927	.000	.838	.938	.899

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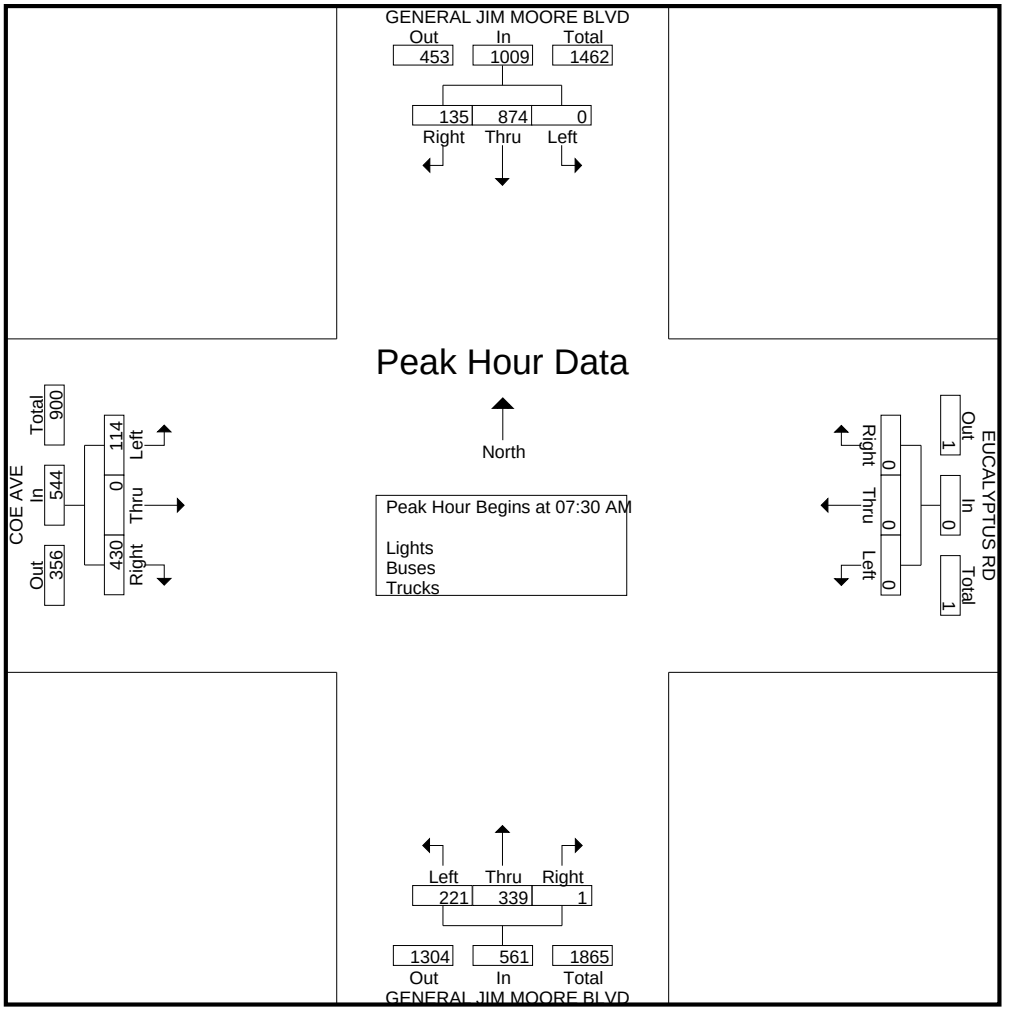

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Groups Printed- Bikes

	GENERAL JIM MOORE BLVD Southbound					EUCALYPTUS RD Westbound					GENERAL JIM MOORE BLVD Northbound					COE AVE Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	2
Total	0	1	0	0	1	0	0	0	0	0	1	2	0	0	3	0	0	0	0	0	4
Grand Total	0	1	0	0	1	0	0	0	0	0	1	3	0	0	4	0	0	0	0	0	5
Apprch %	0	100	0	0		0	0	0	0		25	75	0	0		0	0	0	0		
Total %	0	20	0	0	20	0	0	0	0	0	20	60	0	0	80	0	0	0	0	0	

	GENERAL JIM MOORE BLVD Southbound				EUCALYPTUS RD Westbound				GENERAL JIM MOORE BLVD Northbound				COE AVE Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	**1**	0	**1**	0	0	0	0	0	**1**	0	1	0	0	0	0	**2**
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	**1**	1	0	**2**	0	0	0	0	2
Total Volume	0	1	0	1	0	0	0	0	1	2	0	3	0	0	0	0	4
% App. Total	0	100	0		0	0	0		33.3	66.7	0		0	0	0		
PHF	.000	.250	.000	.250	.000	.000	.000	.000	.250	.500	.000	.375	.000	.000	.000	.000	.500

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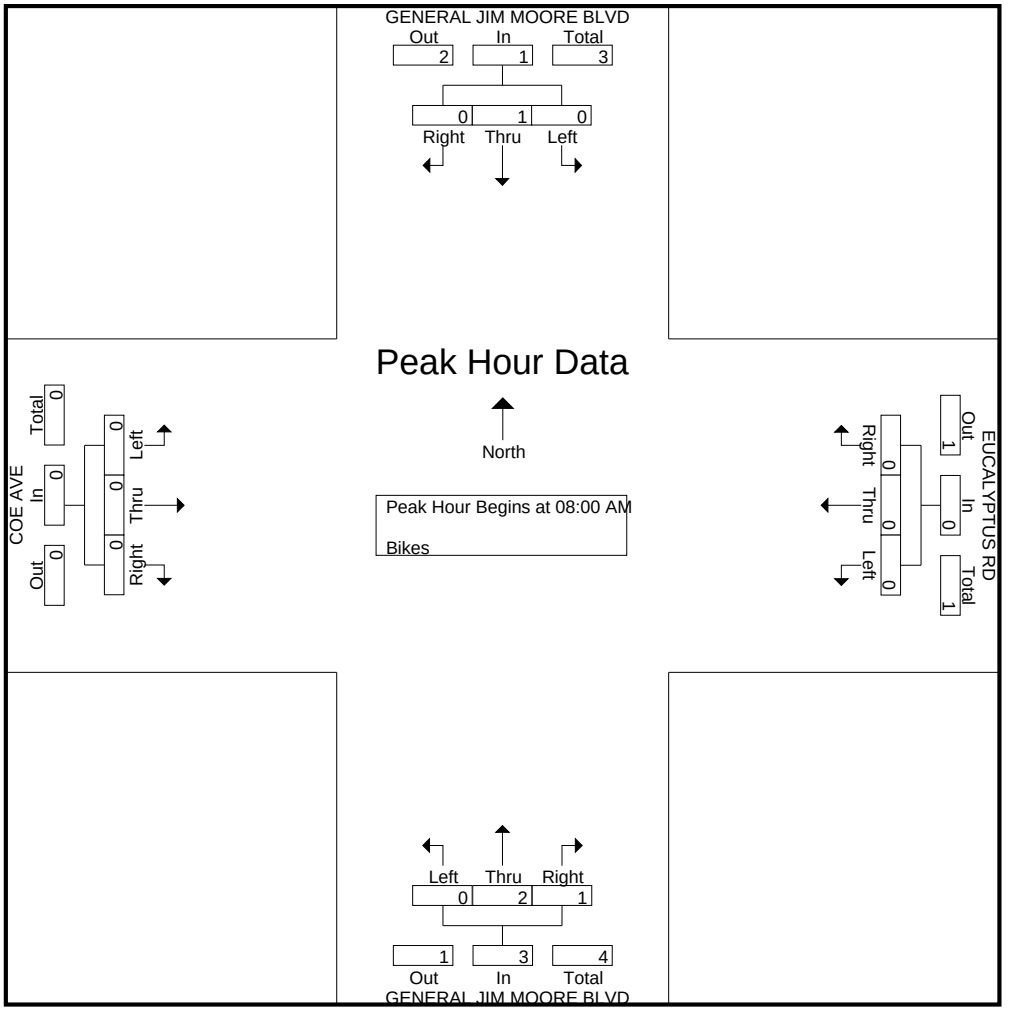

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Groups Printed- Lights - Buses - Trucks

	GENERAL JIM MOORE BLVD Southbound					EUCALYPTUS RD Westbound					GENERAL JIM MOORE BLVD Northbound					COE AVE Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	16	77	0	0	93	0	0	1	0	1	3	139	26	0	168	14	0	9	1	24	286
04:15 PM	12	54	0	0	66	0	1	0	0	1	1	130	40	3	174	13	0	2	0	15	256
04:30 PM	13	60	0	0	73	1	0	1	1	3	2	170	28	0	200	14	1	19	0	34	310
04:45 PM	20	89	0	3	112	2	1	0	2	5	0	197	35	3	235	17	0	12	0	29	381
Total	61	280	0	3	344	3	2	2	3	10	6	636	129	6	777	58	1	42	1	102	1233
05:00 PM	20	83	1	2	106	0	0	0	3	3	1	203	42	1	247	22	0	10	0	32	388
05:15 PM	22	80	1	1	104	0	0	3	0	3	1	227	39	0	267	38	1	20	1	60	434
05:30 PM	23	56	0	2	81	0	0	0	0	0	1	211	37	2	251	20	0	10	0	30	362
05:45 PM	21	62	1	1	85	0	0	1	2	3	1	139	26	3	169	17	0	18	0	35	292
Total	86	281	3	6	376	0	0	4	5	9	4	780	144	6	934	97	1	58	1	157	1476
Grand Total	147	561	3	9	720	3	2	6	8	19	10	1416	273	12	1711	155	2	100	2	259	2709
Apprch %	20.4	77.9	0.4	1.2		15.8	10.5	31.6	42.1		0.6	82.8	16	0.7		59.8	0.8	38.6	0.8		
Total %	5.4	20.7	0.1	0.3	26.6	0.1	0.1	0.2	0.3	0.7	0.4	52.3	10.1	0.4	63.2	5.7	0.1	3.7	0.1	9.6	
Lights	144	555	3	9	711	3	2	6	8	19	10	1404	272	12	1698	154	2	99	2	257	2685
% Lights	98	98.9	100	100	98.8	100	100	100	100	100	100	99.2	99.6	100	99.2	99.4	100	99	100	99.2	99.1
Buses	1	0	0	0	1	0	0	0	0	0	0	2	0	0	2	1	0	1	0	2	5
% Buses	0.7	0	0	0	0.1	0	0	0	0	0	0	0.1	0	0	0.1	0.6	0	1	0	0.8	0.2
Trucks	2	6	0	0	8	0	0	0	0	0	0	10	1	0	11	0	0	0	0	0	19
% Trucks	1.4	1.1	0	0	1.1	0	0	0	0	0	0	0.7	0.4	0	0.6	0	0	0	0	0	0.7

	GENERAL JIM MOORE BLVD Southbound				EUCALYPTUS RD Westbound				GENERAL JIM MOORE BLVD Northbound				COE AVE Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	20	**89**	0	**109**	**2**	**1**	0	**3**	0	197	35	232	17	0	12	29	373
05:00 PM	20	83	**1**	104	0	0	0	0	**1**	203	**42**	246	22	0	10	32	382
05:15 PM	22	80	1	103	0	0	**3**	3	1	**227**	39	**267**	**38**	**1**	**20**	**59**	**432**
05:30 PM	**23**	56	0	79	0	0	0	0	1	211	37	249	20	0	10	30	358
Total Volume	85	308	2	395	2	1	3	6	3	838	153	994	97	1	52	150	1545
% App. Total	21.5	78	0.5		33.3	16.7	50		0.3	84.3	15.4		64.7	0.7	34.7		
PHF	.924	.865	.500	.906	.250	.250	.250	.500	.750	.923	.911	.931	.638	.250	.650	.636	.894

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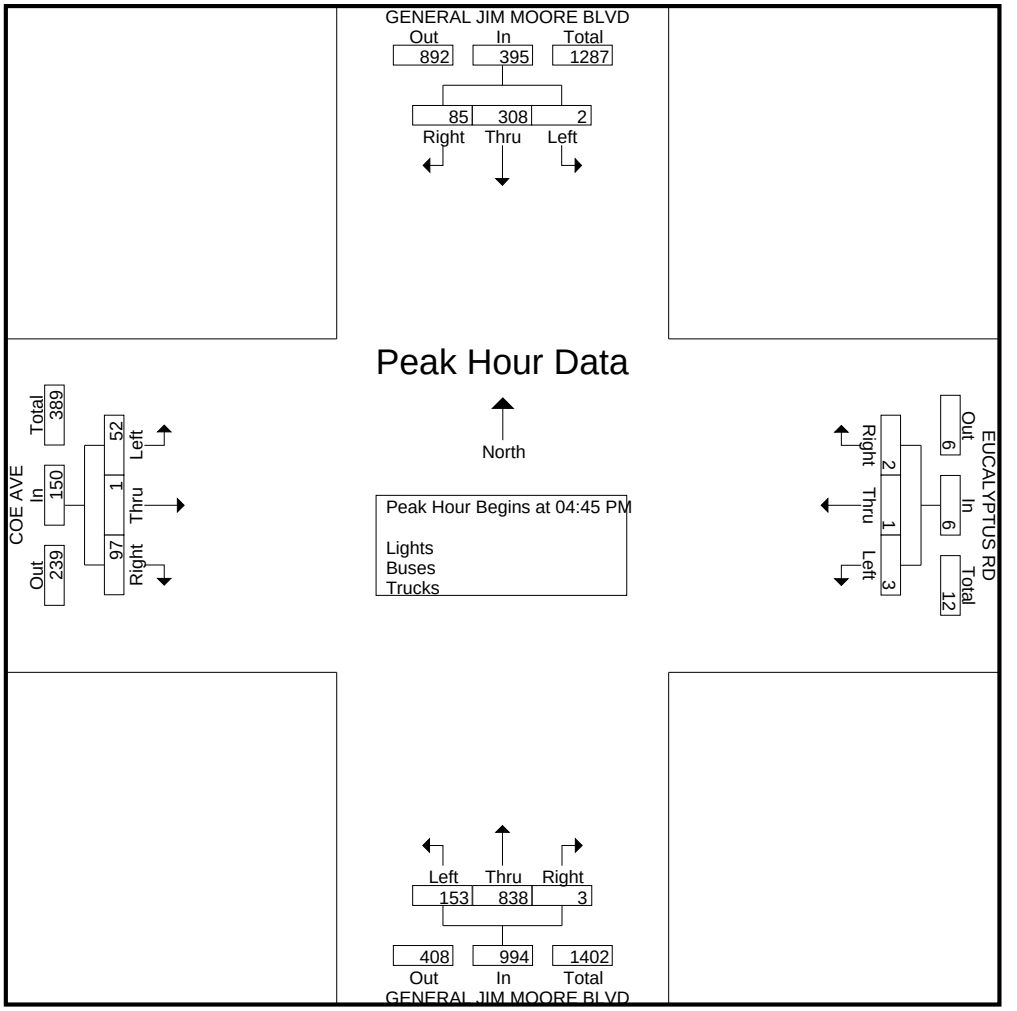

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Groups Printed- Bikes

	GENERAL JIM MOORE BLVD Southbound					EUCALYPTUS RD Westbound					GENERAL JIM MOORE BLVD Northbound					COE AVE Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	1	0	0	1	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	2
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
Total	0	1	0	0	1	0	0	1	0	1	0	1	0	0	1	0	0	0	0	0	3
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
05:30 PM	0	1	0	0	1	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	2
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	2	0	0	2	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	3
Grand Total	0	3	0	0	3	0	0	1	0	1	0	1	1	0	2	0	0	0	0	0	6
Apprch %	0	100	0	0		0	0	100	0		0	50	50	0		0	0	0	0		
Total %	0	50	0	0	50	0	0	16.7	0	16.7	0	16.7	16.7	0	33.3	0	0	0	0	0	

	GENERAL JIM MOORE BLVD Southbound				EUCALYPTUS RD Westbound				GENERAL JIM MOORE BLVD Northbound				COE AVE Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	0	0	0	0	0	0	0	0	**1**	0	**1**	0	0	0	0	1
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	**1**	0	**1**	0	0	0	0	0	0	0	0	0	0	0	0	1
05:30 PM	0	1	0	1	0	0	0	0	0	0	**1**	1	0	0	0	0	**2**
Total Volume	0	2	0	2	0	0	0	0	0	1	1	2	0	0	0	0	4
% App. Total	0	100	0		0	0	0		0	50	50		0	0	0		
PHF	.000	.500	.000	.500	.000	.000	.000	.000	.000	.250	.250	.500	.000	.000	.000	.000	.500

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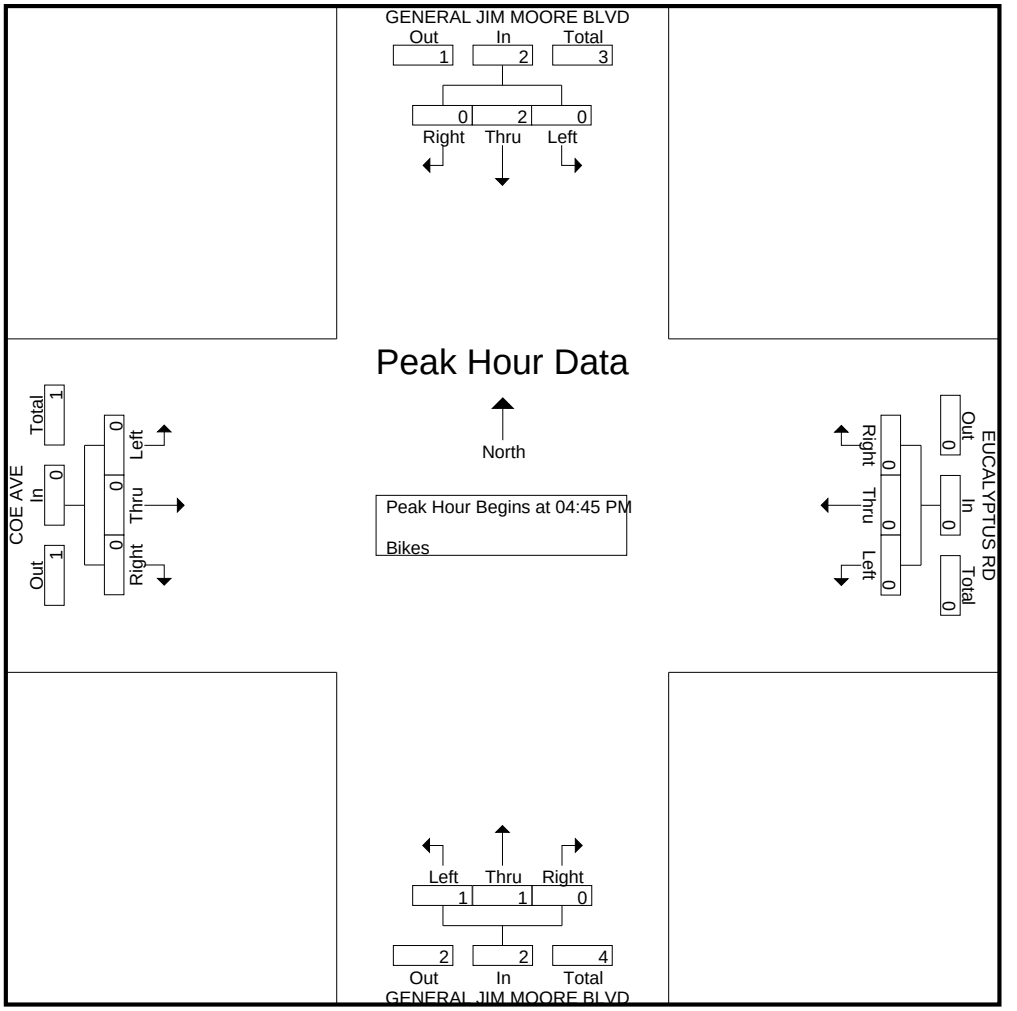

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File Name : 16AM FINAL
Site Code : 00000016
Start Date : 4/25/2018
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Groups Printed- Lights - Buses - Trucks

	7TH AVE Southbound					GIGLING RD Westbound					DRIVEWAY Northbound					GIGLING RD Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	6	0	0	0	6	0	76	0	0	76	0	0	0	0	0	0	21	2	0	23	105
07:15 AM	26	0	0	0	26	0	125	0	0	125	0	0	0	0	0	0	27	1	0	28	179
07:30 AM	27	0	0	0	27	0	108	0	0	108	0	0	0	0	0	0	27	5	0	32	167
07:45 AM	31	0	1	0	32	0	100	0	0	100	0	0	0	0	0	0	28	8	0	36	168
Total	90	0	1	0	91	0	409	0	0	409	0	0	0	0	0	0	103	16	0	119	619
08:00 AM	16	0	0	1	17	0	52	0	0	52	0	0	0	0	0	0	29	8	0	37	106
08:15 AM	16	0	1	0	17	0	54	0	0	54	0	0	0	0	0	0	27	1	0	28	99
08:30 AM	16	0	3	0	19	0	42	0	0	42	0	0	0	0	0	0	18	2	0	20	81
08:45 AM	6	0	0	0	6	0	30	0	0	30	0	0	0	0	0	0	14	1	0	15	51
Total	54	0	4	1	59	0	178	0	0	178	0	0	0	0	0	0	88	12	0	100	337
Grand Total	144	0	5	1	150	0	587	0	0	587	0	0	0	0	0	0	191	28	0	219	956
Apprch %	96	0	3.3	0.7		0	100	0	0		0	0	0	0		0	87.2	12.8	0		
Total %	15.1	0	0.5	0.1	15.7	0	61.4	0	0	61.4	0	0	0	0	0	0	20	2.9	0	22.9	
Lights	136	0	2	1	139	0	584	0	0	584	0	0	0	0	0	0	185	26	0	211	934
% Lights	94.4	0	40	100	92.7	0	99.5	0	0	99.5	0	0	0	0	0	0	96.9	92.9	0	96.3	97.7
Buses	2	0	1	0	3	0	2	0	0	2	0	0	0	0	0	0	5	1	0	6	11
% Buses	1.4	0	20	0	2	0	0.3	0	0	0.3	0	0	0	0	0	0	2.6	3.6	0	2.7	1.2
Trucks	6	0	2	0	8	0	1	0	0	1	0	0	0	0	0	0	1	1	0	2	11
% Trucks	4.2	0	40	0	5.3	0	0.2	0	0	0.2	0	0	0	0	0	0	0.5	3.6	0	0.9	1.2

	7TH AVE Southbound				GIGLING RD Westbound				DRIVEWAY Northbound				GIGLING RD Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	6	0	0	6	0	76	0	76	0	0	0	0	0	21	2	23	105
07:15 AM	26	0	0	26	0	**125**	0	**125**	0	0	0	0	0	27	1	28	**179**
07:30 AM	27	0	0	27	0	108	0	108	0	0	0	0	0	27	5	32	167
07:45 AM	**31**	0	**1**	**32**	0	100	0	100	0	0	0	0	0	**28**	**8**	**36**	168
Total Volume	90	0	1	91	0	409	0	409	0	0	0	0	0	103	16	119	619
% App. Total	98.9	0	1.1		0	100	0		0	0	0		0	86.6	13.4		
PHF	.726	.000	.250	.711	.000	.818	.000	.818	.000	.000	.000	.000	.000	.920	.500	.826	.865

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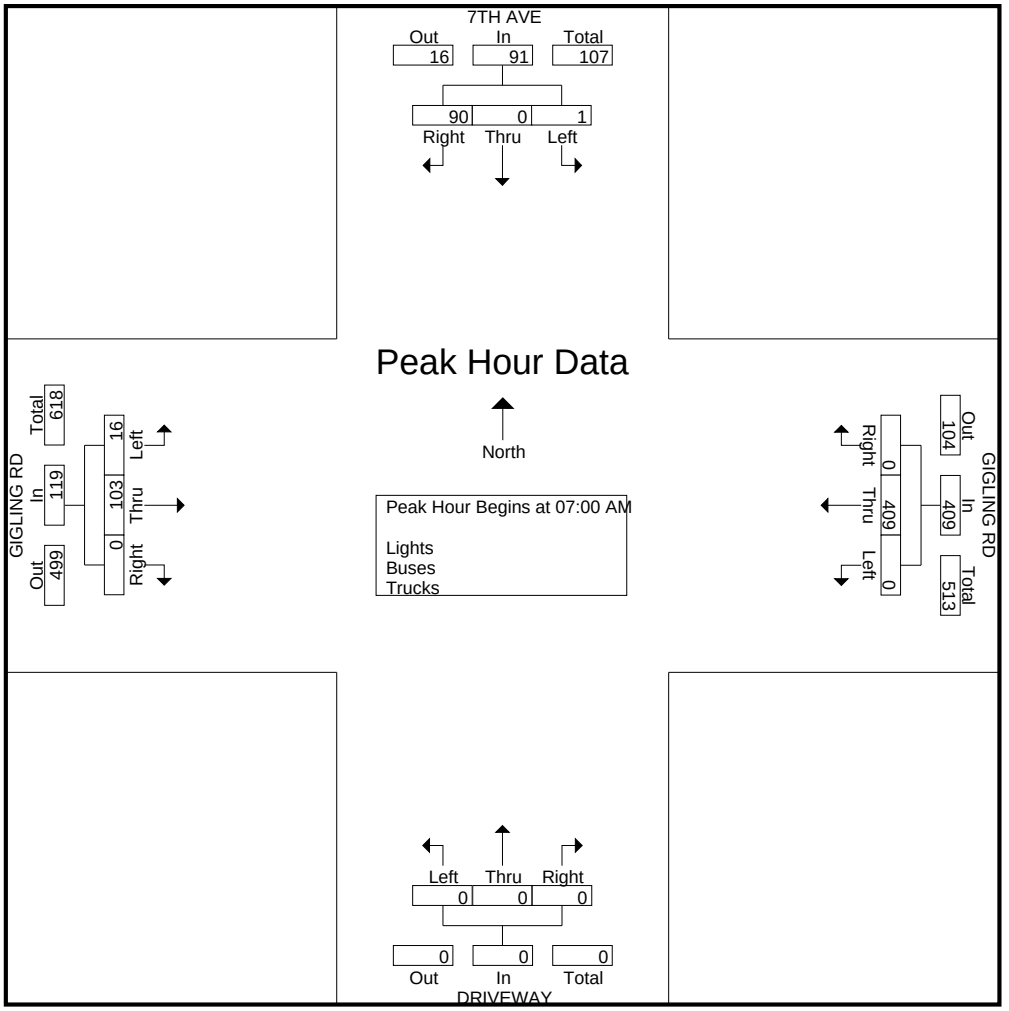

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Groups Printed- Bikes

	7TH AVE Southbound					GIGLING RD Westbound					DRIVEWAY Northbound					GIGLING RD Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		
Total %																					

	7TH AVE Southbound				GIGLING RD Westbound				DRIVEWAY Northbound				GIGLING RD Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

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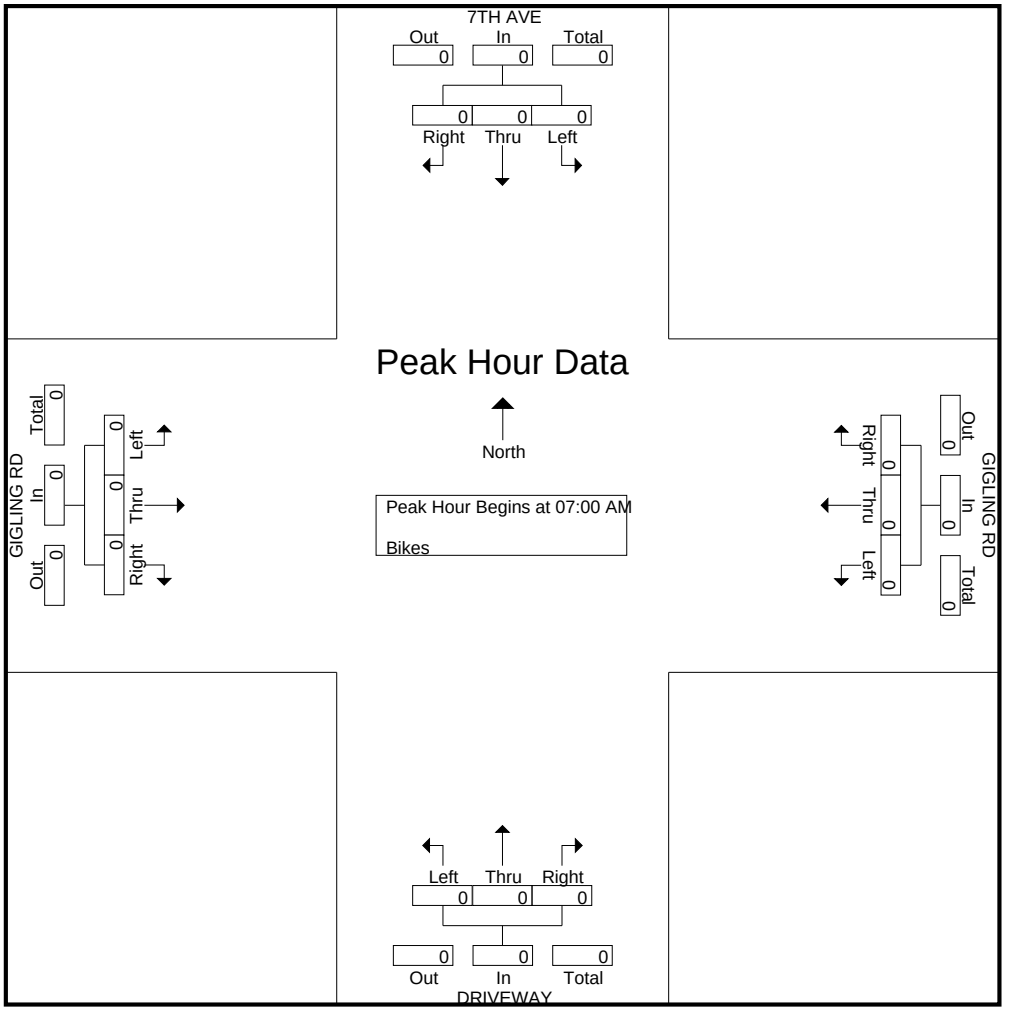

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File Name : 16PM FINAL
Site Code : 00000016
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Groups Printed- Lights - Buses - Trucks

	7TH AVE Southbound					GIGLING RD Westbound					DRIVEWAY Northbound					GIGLING RD Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	3	0	1	0	4	1	28	0	0	29	0	0	0	0	0	0	59	9	0	68	101
04:15 PM	6	0	0	0	6	0	15	0	0	15	0	0	0	0	0	0	61	7	0	68	89
04:30 PM	4	0	0	0	4	0	25	1	0	26	0	0	0	0	0	0	75	8	0	83	113
04:45 PM	7	0	0	0	7	1	30	0	0	31	0	0	0	0	0	0	86	11	0	97	135
Total	20	0	1	0	21	2	98	1	0	101	0	0	0	0	0	0	281	35	0	316	438
05:00 PM	7	0	0	0	7	0	27	0	0	27	0	0	0	0	0	0	86	8	0	94	128
05:15 PM	6	0	0	0	6	0	29	0	1	30	0	0	0	0	0	0	100	2	0	102	138
05:30 PM	4	0	0	0	4	0	30	0	0	30	0	0	0	0	0	0	81	9	0	90	124
05:45 PM	7	0	3	0	10	0	23	0	0	23	0	0	0	0	0	0	53	4	0	57	90
Total	24	0	3	0	27	0	109	0	1	110	0	0	0	0	0	0	320	23	0	343	480
Grand Total	44	0	4	0	48	2	207	1	1	211	0	0	0	0	0	0	601	58	0	659	918
Apprch %	91.7	0	8.3	0		0.9	98.1	0.5	0.5		0	0	0	0		0	91.2	8.8	0		
Total %	4.8	0	0.4	0	5.2	0.2	22.5	0.1	0.1	23	0	0	0	0	0	0	65.5	6.3	0	71.8	
Lights	41	0	4	0	45	1	204	1	1	207	0	0	0	0	0	0	589	53	0	642	894
% Lights	93.2	0	100	0	93.8	50	98.6	100	100	98.1	0	0	0	0	0	0	98	91.4	0	97.4	97.4
Buses	2	0	0	0	2	0	2	0	0	2	0	0	0	0	0	0	7	2	0	9	13
% Buses	4.5	0	0	0	4.2	0	1	0	0	0.9	0	0	0	0	0	0	1.2	3.4	0	1.4	1.4
Trucks	1	0	0	0	1	1	1	0	0	2	0	0	0	0	0	0	5	3	0	8	11
% Trucks	2.3	0	0	0	2.1	50	0.5	0	0	0.9	0	0	0	0	0	0	0.8	5.2	0	1.2	1.2

	7TH AVE Southbound				GIGLING RD Westbound				DRIVEWAY Northbound				GIGLING RD Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	**7**	0	0	**7**	**1**	**30**	0	**31**	0	0	0	0	0	86	**11**	97	135
05:00 PM	7	0	0	7	0	27	0	27	0	0	0	0	0	86	8	94	128
05:15 PM	6	0	0	6	0	29	0	29	0	0	0	0	0	**100**	2	**102**	**137**
05:30 PM	4	0	0	4	0	30	0	30	0	0	0	0	0	81	9	90	124
Total Volume	24	0	0	24	1	116	0	117	0	0	0	0	0	353	30	383	524
% App. Total	100	0	0		0.9	99.1	0		0	0	0		0	92.2	7.8		
PHF	.857	.000	.000	.857	.250	.967	.000	.944	.000	.000	.000	.000	.000	.883	.682	.939	.956

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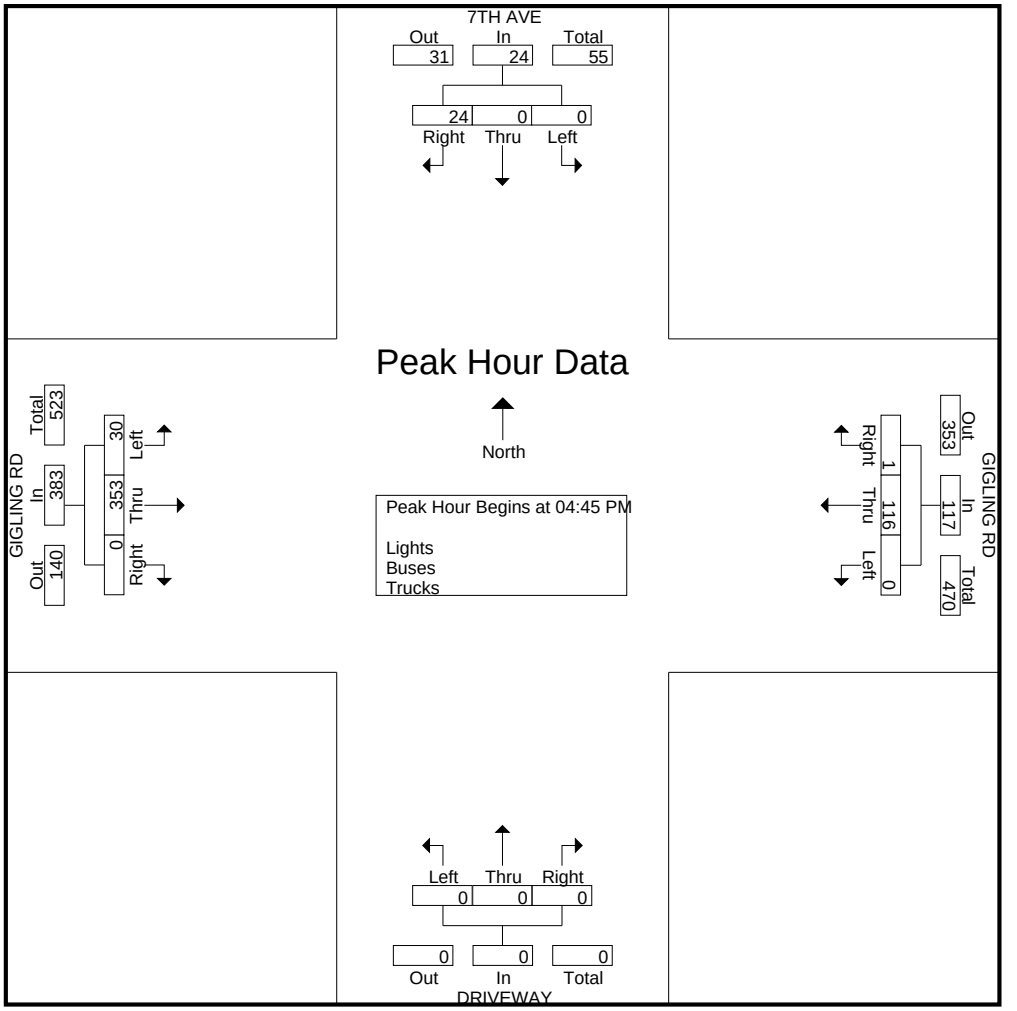

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Groups Printed- Bikes

	7TH AVE Southbound					GIGLING RD Westbound					DRIVEWAY Northbound					GIGLING RD Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
04:30 PM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
04:45 PM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	1	0	1	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	3
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Grand Total	0	0	1	0	1	2	0	0	0	2	0	0	0	0	0	0	0	1	0	1	4
Apprch %	0	0	100	0		100	0	0	0		0	0	0	0		0	0	100	0		
Total %	0	0	25	0	25	50	0	0	0	50	0	0	0	0	0	0	0	25	0	25	

	7TH AVE Southbound				GIGLING RD Westbound				DRIVEWAY Northbound				GIGLING RD Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	**1**	0	0	**1**	0	0	0	0	0	0	0	0	**1**
04:30 PM	0	0	**1**	**1**	0	0	0	0	0	0	0	0	0	0	0	0	1
04:45 PM	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1
Total Volume	0	0	1	1	2	0	0	2	0	0	0	0	0	0	0	0	3
% App. Total	0	0	100		100	0	0		0	0	0		0	0	0		
PHF	.000	.000	.250	.250	.500	.000	.000	.500	.000	.000	.000	.000	.000	.000	.000	.000	.750

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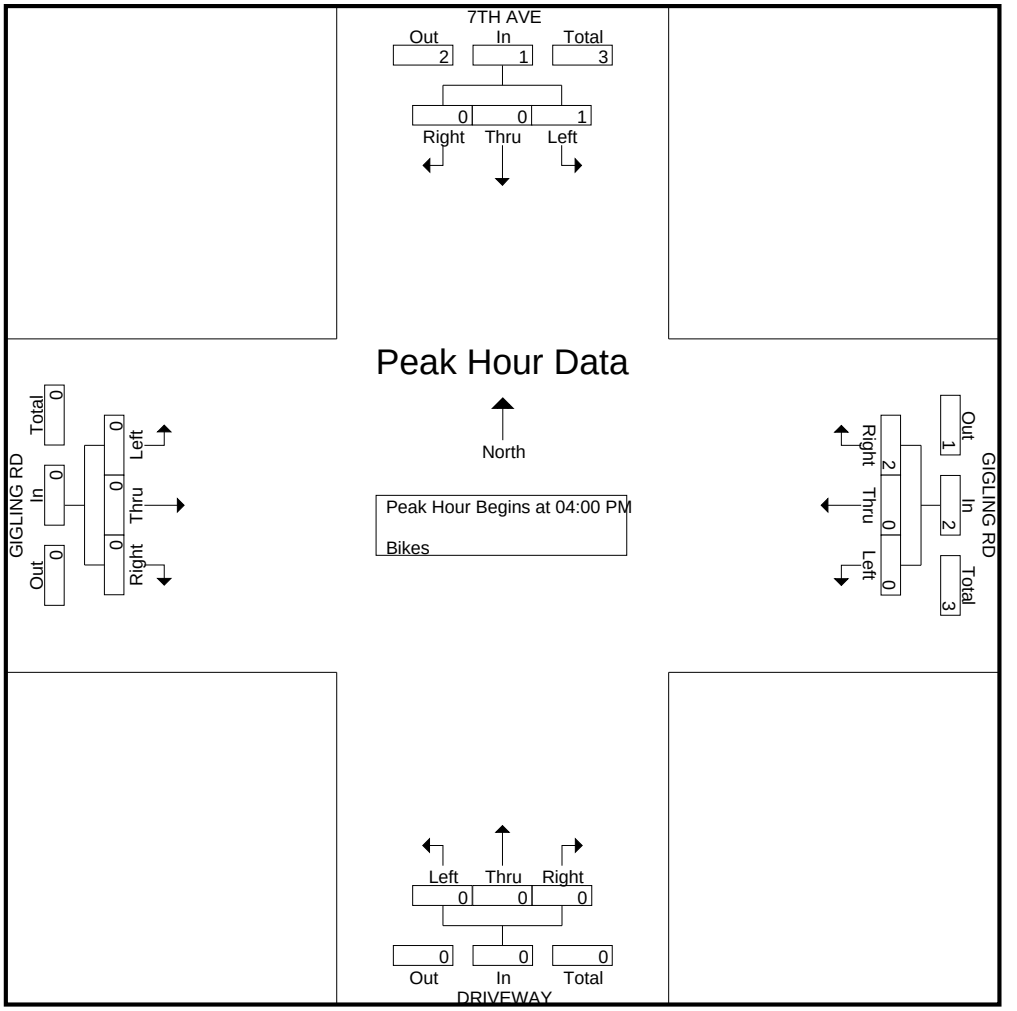

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File Name : 11AM FINAL
Site Code : 00000011
Start Date : 4/25/2018
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Groups Printed- Lights - Buses - Trucks

	7TH AVE Southbound					COLONEL DURHAM ST Westbound					7TH AVE Northbound					COLONEL DURHAM ST Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	9	7	0	0	16	0	44	0	0	44	0	2	0	0	2	0	3	4	0	7	69
07:15 AM	20	25	0	0	45	0	43	0	0	43	0	0	0	0	0	0	4	2	0	6	94
07:30 AM	22	24	0	0	46	0	56	2	0	58	0	6	0	0	6	0	7	3	0	10	120
07:45 AM	11	32	0	0	43	0	31	0	0	31	0	7	0	0	7	1	18	3	0	22	103
Total	62	88	0	0	150	0	174	2	0	176	0	15	0	0	15	1	32	12	0	45	386
08:00 AM	7	16	0	0	23	0	27	0	0	27	0	7	0	0	7	0	8	11	1	20	77
08:15 AM	1	17	0	0	18	0	19	0	0	19	0	1	0	0	1	0	7	9	0	16	54
08:30 AM	4	17	0	0	21	0	19	0	0	19	0	3	0	0	3	2	9	4	0	15	58
08:45 AM	3	6	0	0	9	0	15	0	0	15	0	1	0	0	1	0	5	4	0	9	34
Total	15	56	0	0	71	0	80	0	0	80	0	12	0	0	12	2	29	28	1	60	223
Grand Total	77	144	0	0	221	0	254	2	0	256	0	27	0	0	27	3	61	40	1	105	609
Apprch %	34.8	65.2	0	0		0	99.2	0.8	0		0	100	0	0		2.9	58.1	38.1	1		
Total %	12.6	23.6	0	0	36.3	0	41.7	0.3	0	42	0	4.4	0	0	4.4	0.5	10	6.6	0.2	17.2	
Lights	68	135	0	0	203	0	254	2	0	256	0	25	0	0	25	1	55	39	1	96	580
% Lights	88.3	93.8	0	0	91.9	0	100	100	0	100	0	92.6	0	0	92.6	33.3	90.2	97.5	100	91.4	95.2
Buses	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	2	5	0	0	7	9
% Buses	0	0.7	0	0	0.5	0	0	0	0	0	0	3.7	0	0	3.7	66.7	8.2	0	0	6.7	1.5
Trucks	9	8	0	0	17	0	0	0	0	0	0	1	0	0	1	0	1	1	0	2	20
% Trucks	11.7	5.6	0	0	7.7	0	0	0	0	0	0	3.7	0	0	3.7	0	1.6	2.5	0	1.9	3.3

	7TH AVE Southbound				COLONEL DURHAM ST Westbound				7TH AVE Northbound				COLONEL DURHAM ST Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	20	25	0	45	0	43	0	43	0	0	0	0	0	4	2	6	94
07:30 AM	**22**	24	0	**46**	0	**56**	**2**	**58**	0	6	0	6	0	7	3	10	**120**
07:45 AM	11	**32**	0	43	0	31	0	31	0	**7**	0	**7**	**1**	**18**	3	**22**	103
08:00 AM	7	16	0	23	0	27	0	27	0	7	0	7	0	8	**11**	19	76
Total Volume	60	97	0	157	0	157	2	159	0	20	0	20	1	37	19	57	393
% App. Total	38.2	61.8	0		0	98.7	1.3		0	100	0		1.8	64.9	33.3		
PHF	.682	.758	.000	.853	.000	.701	.250	.685	.000	.714	.000	.714	.250	.514	.432	.648	.819

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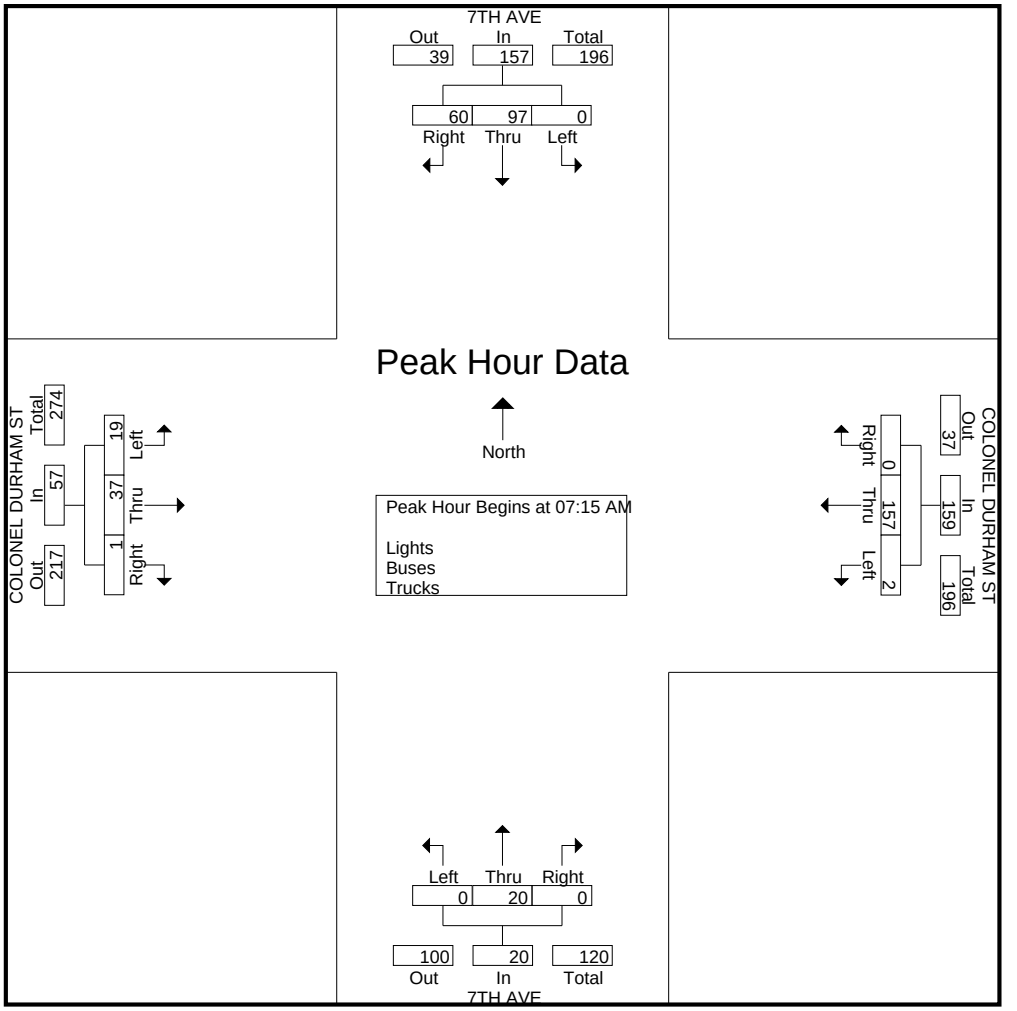

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Groups Printed- Bikes

	7TH AVE Southbound					COLONEL DURHAM ST Westbound					7TH AVE Northbound					COLONEL DURHAM ST Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		
Total %																					

	7TH AVE Southbound				COLONEL DURHAM ST Westbound				7TH AVE Northbound				COLONEL DURHAM ST Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

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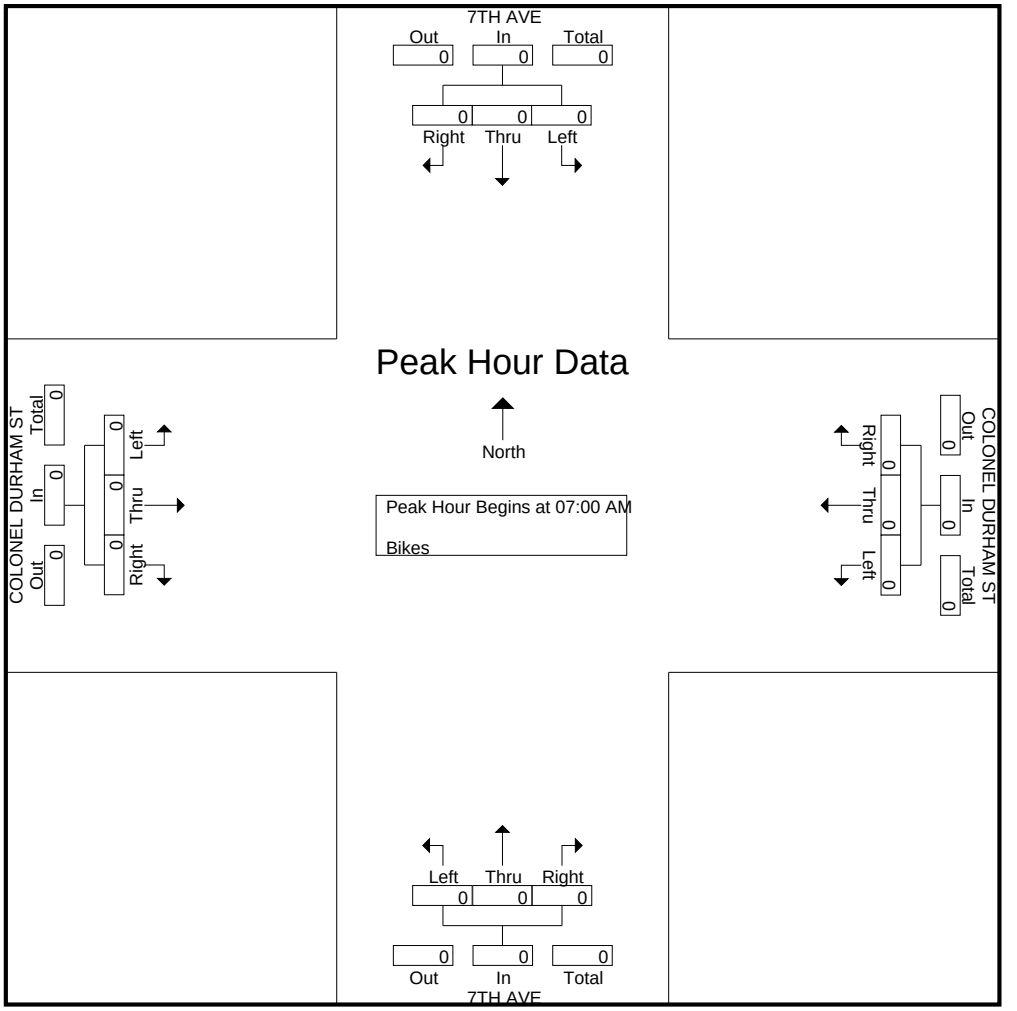

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Groups Printed- Lights - Buses - Trucks

	7TH AVE Southbound					COLONEL DURHAM ST Westbound					7TH AVE Northbound					COLONEL DURHAM ST Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	4	4	0	0	8	0	7	0	0	7	0	6	0	0	6	0	18	9	0	27	48
04:15 PM	2	6	0	0	8	0	9	0	0	9	0	8	0	0	8	0	15	6	0	21	46
04:30 PM	4	4	0	0	8	0	10	0	0	10	0	7	0	0	7	0	15	5	0	20	45
04:45 PM	1	6	0	0	7	0	25	0	0	25	0	12	0	0	12	1	28	3	0	32	76
Total	11	20	0	0	31	0	51	0	0	51	0	33	0	0	33	1	76	23	0	100	215
05:00 PM	7	7	0	0	14	0	6	0	0	6	0	9	0	0	9	0	27	3	0	30	59
05:15 PM	5	6	0	0	11	0	12	0	0	12	0	2	0	0	2	0	14	1	0	15	40
05:30 PM	3	5	0	0	8	0	10	0	0	10	0	8	0	0	8	0	17	2	0	19	45
05:45 PM	6	11	0	0	17	0	5	0	0	5	0	5	1	0	6	0	19	2	0	21	49
Total	21	29	0	0	50	0	33	0	0	33	0	24	1	0	25	0	77	8	0	85	193
Grand Total	32	49	0	0	81	0	84	0	0	84	0	57	1	0	58	1	153	31	0	185	408
Apprch %	39.5	60.5	0	0		0	100	0	0		0	98.3	1.7	0		0.5	82.7	16.8	0		
Total %	7.8	12	0	0	19.9	0	20.6	0	0	20.6	0	14	0.2	0	14.2	0.2	37.5	7.6	0	45.3	
Lights	32	46	0	0	78	0	82	0	0	82	0	53	1	0	54	0	151	25	0	176	390
% Lights	100	93.9	0	0	96.3	0	97.6	0	0	97.6	0	93	100	0	93.1	0	98.7	80.6	0	95.1	95.6
Buses	0	0	0	0	0	0	1	0	0	1	0	1	0	0	1	1	1	0	0	2	4
% Buses	0	0	0	0	0	0	1.2	0	0	1.2	0	1.8	0	0	1.7	100	0.7	0	0	1.1	1
Trucks	0	3	0	0	3	0	1	0	0	1	0	3	0	0	3	0	1	6	0	7	14
% Trucks	0	6.1	0	0	3.7	0	1.2	0	0	1.2	0	5.3	0	0	5.2	0	0.7	19.4	0	3.8	3.4

	7TH AVE Southbound				COLONEL DURHAM ST Westbound				7TH AVE Northbound				COLONEL DURHAM ST Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	2	6	0	8	0	9	0	9	0	8	0	8	0	15	**6**	21	46
04:30 PM	4	4	0	8	0	10	0	10	0	7	0	7	0	15	5	20	45
04:45 PM	1	6	0	7	0	**25**	0	**25**	0	**12**	0	**12**	**1**	**28**	3	**32**	**76**
05:00 PM	**7**	**7**	0	**14**	0	6	0	6	0	9	0	9	0	27	3	30	59
Total Volume	14	23	0	37	0	50	0	50	0	36	0	36	1	85	17	103	226
% App. Total	37.8	62.2	0		0	100	0		0	100	0		1	82.5	16.5		
PHF	.500	.821	.000	.661	.000	.500	.000	.500	.000	.750	.000	.750	.250	.759	.708	.805	.743

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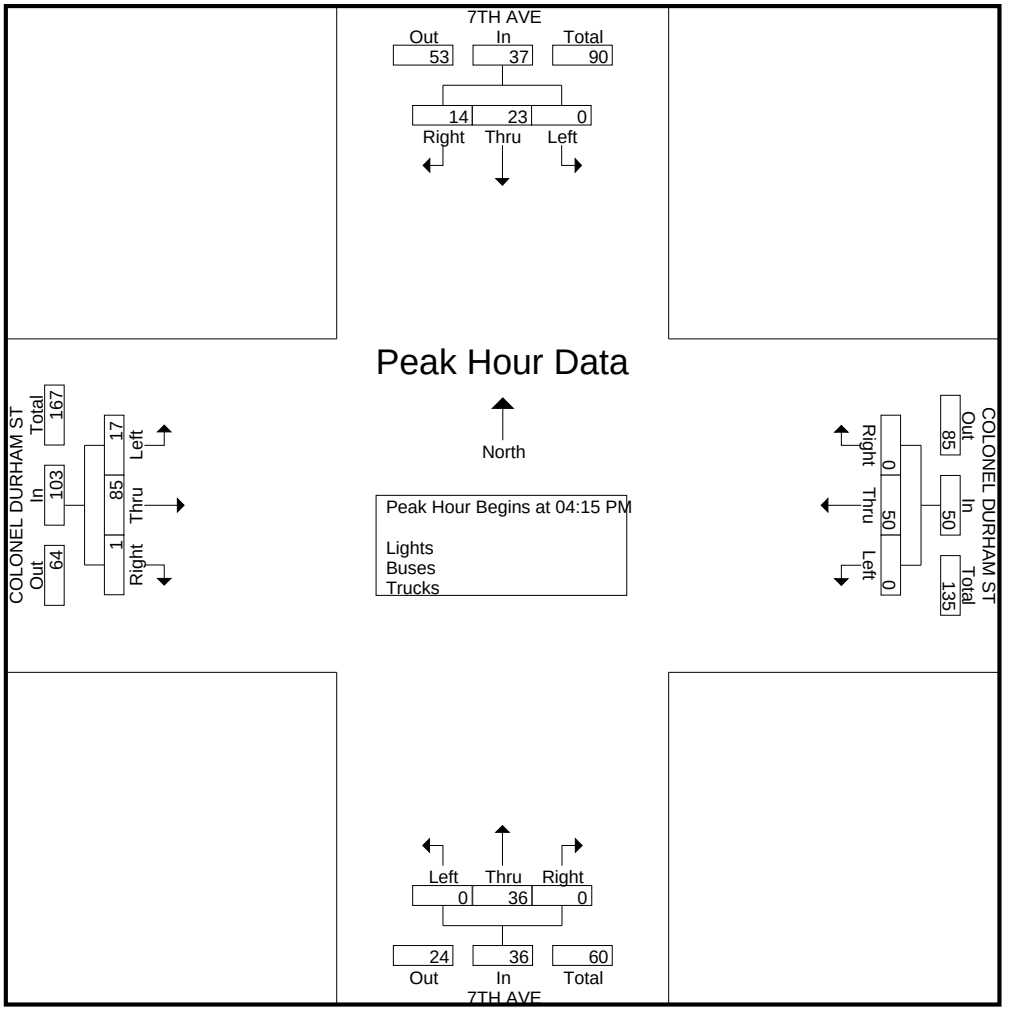

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Groups Printed- Bikes

	7TH AVE Southbound					COLONEL DURHAM ST Westbound					7TH AVE Northbound					COLONEL DURHAM ST Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	1	0	0	0	1	3
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
Grand Total	0	0	0	0	0	0	0	0	0	0	0	1	2	0	3	1	0	0	0	1	4
Apprch %	0	0	0	0		0	0	0	0		0	33.3	66.7	0		100	0	0	0		
Total %	0	0	0	0	0	0	0	0	0	0	0	25	50	0	75	25	0	0	0	25	

	7TH AVE Southbound				COLONEL DURHAM ST Westbound				7TH AVE Northbound				COLONEL DURHAM ST Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	**1**	**1**	0	0	0	0	**1**
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	**1**	0	0	**1**	1
04:45 PM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
Total Volume	0	0	0	0	0	0	0	0	0	0	2	2	1	0	0	1	3
% App. Total	0	0	0		0	0	0		0	0	100		100	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.500	.500	.250	.000	.000	.250	.750

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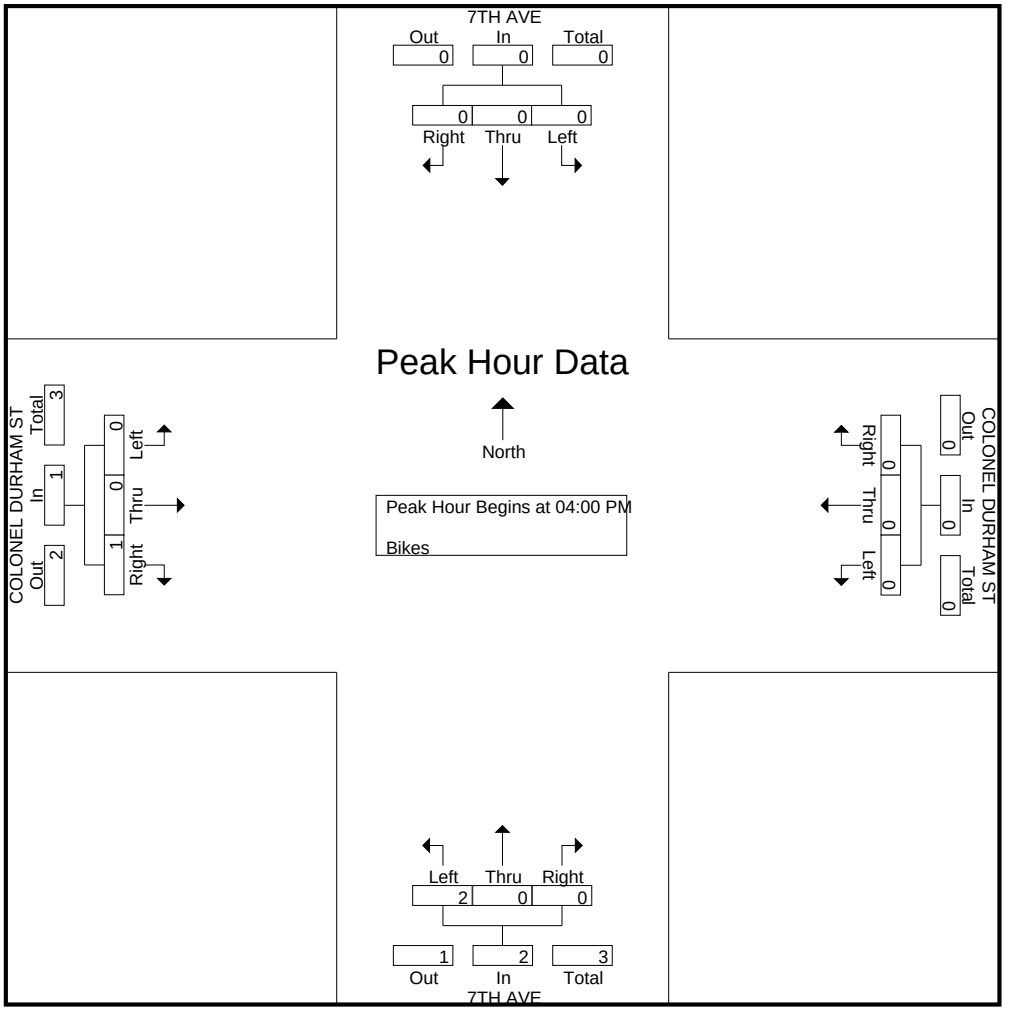


Appendix B:
Transit Capacity Data

Table G1. Transit Weekday PM Peak Period Ribership by Vehicle for Each Route

Ridership Per Day by Type of Vehicle	Route Number				
	12	18	74	75	Grand Total
1100	**247**	**1491**	**12**	**1283**	**3033**
29-Jan		31			31
30-Jan	12				12
Feb					
5-Feb		45			45
6-Feb	5			21	26
7-Feb		58			58
8-Feb		28			28
9-Feb				7	7
10-Feb				25	25
11-Feb		40			40
12-Feb		101			101
13-Feb	12				12
15-Feb	14				14
16-Feb	3				3
19-Feb		61			61
20-Feb		106			106
21-Feb		28			28
23-Feb		24			24
28-Feb		43			43
Mar					
5-Mar		45			45
6-Mar	10			37	47
7-Mar		29			29
8-Mar		23			23
9-Mar		37			37
12-Mar		21			21
13-Mar				26	26
15-Mar	3				3
16-Mar		27			27
17-Mar	7			27	34
18-Mar		30			30
19-Mar		64			64
20-Mar	2			54	56
21-Mar	1	33			34
22-Mar	8				8
26-Mar		19			19
27-Mar	5				5
28-Mar	1			30	31
29-Mar		33			33
30-Mar	1				1
Apr					
1-Apr		83			83

2-Apr		25			25
3-Apr	12	38			50
4-Apr	2				2
5-Apr	9	33			42
6-Apr	3				3
7-Apr	6			22	28
8-Apr		35			35
9-Apr		21			21
10-Apr	5			28	33
11-Apr	10			20	30
12-Apr	4				4
13-Apr				50	50
14-Apr	4				4
17-Apr	6				6
20-Apr	1				1
21-Apr				14	14
24-Apr	10				10
28-Apr		33			33
May					
1-May	6				6
3-May	1	38		16	55
4-May	9			14	23
5-May	4				4
6-May		13			13
7-May		86			86
8-May	5		12	24	41
9-May	9	72		54	135
10-May	9	33		14	56
11-May		25		15	40
12-May	7			8	15
15-May				34	34
16-May				59	59
17-May				51	51
18-May				16	16
19-May				23	23
22-May				16	16
23-May				57	57
25-May				13	13
26-May				18	18
30-May				36	36
31-May				32	32
1700	**42**	**751**	**461**	**2316**	**3570**
Jan					
2-Jan				11	11
3-Jan				26	26
4-Jan				23	23
5-Jan				29	29

12-Jan				53	53
17-Jan				24	24
18-Jan				19	19
20-Jan				39	39
23-Jan			14		14
24-Jan			42	31	73
25-Jan			8		8
26-Jan				26	26
27-Jan				45	45
28-Jan		121			121
29-Jan		53			53
30-Jan				34	34
31-Jan	4			15	19
Feb					
1-Feb	3		9	26	38
2-Feb	1				1
3-Feb			12	58	70
6-Feb				32	32
7-Feb	1		9	28	38
8-Feb	3		5		8
9-Feb			8	40	48
13-Feb				52	52
14-Feb			13	38	51
15-Feb	2	36			38
17-Feb				22	22
8-Mar			11	33	44
9-Mar				27	27
10-Mar			9	75	84
12-Mar		22			22
13-Mar			18	50	68
14-Mar			9		9
15-Mar			7		7
16-Mar			18	56	74
17-Mar			12		12
20-Mar			28		28
21-Mar			12		12
22-Mar	1		5		6
23-Mar			15		15
24-Mar				47	47
25-Mar		38			38
27-Mar			9	30	39
28-Mar				34	34
30-Mar				27	27
31-Mar				57	57
Apr					
2-Apr		42			42
6-Apr			15	31	46

7-Apr				62	62
10-Apr				36	36
11-Apr			22		22
13-Apr			8		8
17-Apr				1	1
18-Apr	7			31	38
19-Apr			14		14
20-Apr				39	39
21-Apr				19	19
23-Apr		70			70
24-Apr			9	24	33
25-Apr	4				4
26-Apr				36	36
27-Apr				47	47
28-Apr				37	37
29-Apr		97			97
30-Apr		93			93
May					
1-May	6		13	57	76
2-May			13	61	74
3-May	5		12		17
4-May	1			27	28
5-May				49	49
6-May		34			34
7-May		41			41
8-May				44	44
9-May				66	66
10-May				49	49
11-May			9	36	45
15-May				33	33
22-May				45	45
24-May				16	16
26-May				24	24
1800			**472**	**83**	**555**
Jan					
26-Jan			16		16
30-Jan			9		9
31-Jan			13		13
Feb					
1-Feb				28	28
2-Feb			11		11
6-Feb			14		14
10-Feb			25		25
13-Feb			9		9
15-Feb			3		3
16-Feb			7		7
17-Feb			6		6

23-Feb			15		15
24-Feb			14		14
Mar					
1-Mar			8		8
2-Mar			15		15
3-Mar			6		6
24-Mar			11		11
28-Mar			18		18
29-Mar			9		9
30-Mar			18		18
31-Mar			18		18
Apr					
3-Apr			10		10
4-Apr			12		12
5-Apr			8		8
7-Apr			11		11
10-Apr			13		13
12-Apr			9		9
14-Apr			9		9
17-Apr			10		10
18-Apr			23		23
19-Apr				36	36
20-Apr			17		17
21-Apr			7		7
25-Apr			11		11
26-Apr			9		9
27-Apr			10		10
May					
4-May			5		5
5-May			24	19	43
9-May			25		25
10-May			10		10
12-May			4		4
2000	**528**	**8011**		**2443**	**10982**
Jan					
6-Jan				50	50
9-Jan				30	30
10-Jan				55	55
12-Jan				29	29
13-Jan				31	31
23-Jan	11	116		63	190
24-Jan	8	111		52	171
25-Jan		70			70
26-Jan		95			95
27-Jan		161			161
30-Jan		77			77
31-Jan	9	94			103

Feb					
1-Feb	11	100			111
2-Feb	10	79		64	153
3-Feb	11	92		7	110
4-Feb		159			159
5-Feb		25			25
6-Feb		107			107
7-Feb	12	32		14	58
8-Feb	5	56		63	124
9-Feb	12	69			81
10-Feb	11	109		46	166
11-Feb		85			85
13-Feb		136			136
14-Feb	13	102		19	134
15-Feb		58		73	131
16-Feb	13	83		100	196
17-Feb	6	71		14	91
18-Feb		23			23
19-Feb		17			17
21-Feb	9	54		21	84
22-Feb	13	85		18	116
23-Feb	12	51		66	129
24-Feb	15	113		13	141
25-Feb		116			116
26-Feb		86			86
27-Feb	15	84		17	116
28-Feb	11	26		63	100
Mar					
1-Mar	9	88		45	142
2-Mar	8	89		110	207
3-Mar	9	98		16	123
4-Mar		84			84
5-Mar		33			33
6-Mar	6	81			87
7-Mar	14	56		34	104
8-Mar	8	59		26	93
9-Mar	18	95		27	140
10-Mar	9	86		24	119
11-Mar		102			102
12-Mar		20			20
13-Mar	10	105			115
14-Mar	7	97		74	178
15-Mar	7	78		82	167
16-Mar	10	69		45	124
17-Mar		73		11	84
18-Mar		52			52
19-Mar		21			21

20-Mar	5	59			64
21-Mar	11	46		57	114
22-Mar		59		67	126
23-Mar	9	67		74	150
24-Mar	4	84			88
25-Mar		46			46
26-Mar		61			61
27-Mar		82		35	117
28-Mar	5	101			106
29-Mar	9	70		79	158
30-Mar	8	80		25	113
31-Mar	4	121		9	134
Apr					
1-Apr		41			41
2-Apr		16			16
3-Apr	4	53		51	108
4-Apr	9	93		59	161
5-Apr	2	66		25	93
6-Apr	1	83		17	101
7-Apr		95			95
8-Apr		64			64
9-Apr		52			52
10-Apr	5	90			95
11-Apr		87		22	109
12-Apr	6	96		54	156
13-Apr	6	85		36	127
14-Apr	4	102		82	188
15-Apr		95			95
16-Apr		44			44
17-Apr	4	86		30	120
18-Apr	5	132		26	163
19-Apr	10	88		22	120
20-Apr	7	99			106
21-Apr	3	109			112
22-Apr		98			98
23-Apr		24			24
24-Apr	2	79		9	90
25-Apr	6	106		45	157
26-Apr	8	98			106
27-Apr	13	74			87
28-Apr	11	65			76
May					
1-May		84			84
2-May	9	109			118
3-May		53			53
4-May		99			99
5-May		96			96

8-May	9	85			94
9-May	2	23			25
10-May	3	59			62
11-May	8	78			86
12-May	14	101		36	151
17-May				25	25
18-May				28	28
19-May				26	26
24-May				33	33
25-May				29	29
30-May				12	12
31-May				28	28
2100	**15**	**34**	**36**	**172**	**257**
Jan					
17-Jan				25	25
27-Jan			6		6
30-Jan				22	22
31-Jan				28	28
Feb					
22-Feb			11		11
23-Feb				33	33
28-Feb	1				1
Mar					
1-Mar	9				9
9-Mar			13		13
14-Mar	2				2
Apr					
5-Apr				37	37
28-Apr			6		6
May					
2-May	3				3
3-May				27	27
6-May		34			34
Grand Total	**832**	**10287**	**981**	**6297**	**18397**

Appendix C:
MainStreet Inputs

Table C-1: Summary of MainStreet Input Variables (Existing Conditions)

MainStreet Variable	Units	Input Value	Source
Developed area	acres	124.6	
Proportion of households within ¼ mile of transit	percentage	100	
Transit available	binary (Yes/No)	Yes	
Location in Central Business District or Transit-Oriented Development	binary (Yes/No)	No	
Employment within 1 mile of Project Site	employment	7,386	MPO Model 2013
Employment within 30 minutes by transit	percentage of regional employment	1.5%	Environmental Protection Agency Smart Location Database 2013
Household size	people/household	2.51	Census 2000
Vehicle ownership	vehicles/household	1.70	Census 2000
Intersection density	intersections/square mile	25	Environmental Protection Agency Smart Location Database 2013

Source: Fehr & Peers, 2018.

Below is a brief description of the land use types that were considered for use in the trip generation estimates and an explanation for the land uses selected.

- Code 210: Single-Family Detached Housing – Single-family detached housing includes all single-family detached homes on individual lots. Other land use types that were considered were:
    - Code 230: Residential Condominium/Townhouse defined as ownership units that have at least one other owned unit within the same building structure. This land use combines both low-rise and high-rise buildings, which is not representative of the Campus Town Specific Plan residential development. In addition, the trip generation rates are approximately half of those for Single-Family Detached Housing.
    - Code 231: Low-Rise Residential Condominium/Townhouse are located in building that have one or two levels. This land use was not selected due to small sample size.
- Code 220: Apartment – Apartments are dwelling units located within the same building with at least three other dwelling units. Other land use types that were considered were:
    - Code 221: Low-Rise Apartments are units located in rental buildings that have one or two levels. This land use was not selected because it has a smaller sample size, which does not provide a representative same to use these trip generation rates.
- Code 310: Hotel – Hotels are places of lodging that provide sleeping accommodations and supporting facilities such as restaurants, meeting and banquet rooms, limited recreational facilities, and/or other retail and service shops. Given the uncertainty of the type of hotel that will be constructed, this was the most representative land use to use for this analysis.
- Code 320: Motel –Motels are places of lodging that provide sleeping accommodations and often a restaurant, but little or no meeting spaces and few supporting facilities. For hostel beds, the closest trip generation rate was Motel.
- Code 710: General Office Building: A general office building accommodates multiple tenants; it is a location where affairs of businesses, commercial, or industrial organizations, or professional persons or firms are conducted. Other land use types that were considered were:
    - Code 715: Single Tenant Office Building contains the offices, meeting rooms, and space for a single business or company. This land use was not selected because it is unlikely that a single tenant will occupy the office developed within the Plan area.
- Code 820: Shopping Center – A shopping center is an integrated group of commercial establishments that is planned, developed, owned and managed as a unit. They include neighborhood centers, community centers, regional centers, and super regional centers. Due to the uncertainty of the shopping facilities that will be built, Shopping Center was the only land use considered because it captures all potential types of retail development.

Appendix D:
Intersection Volumes

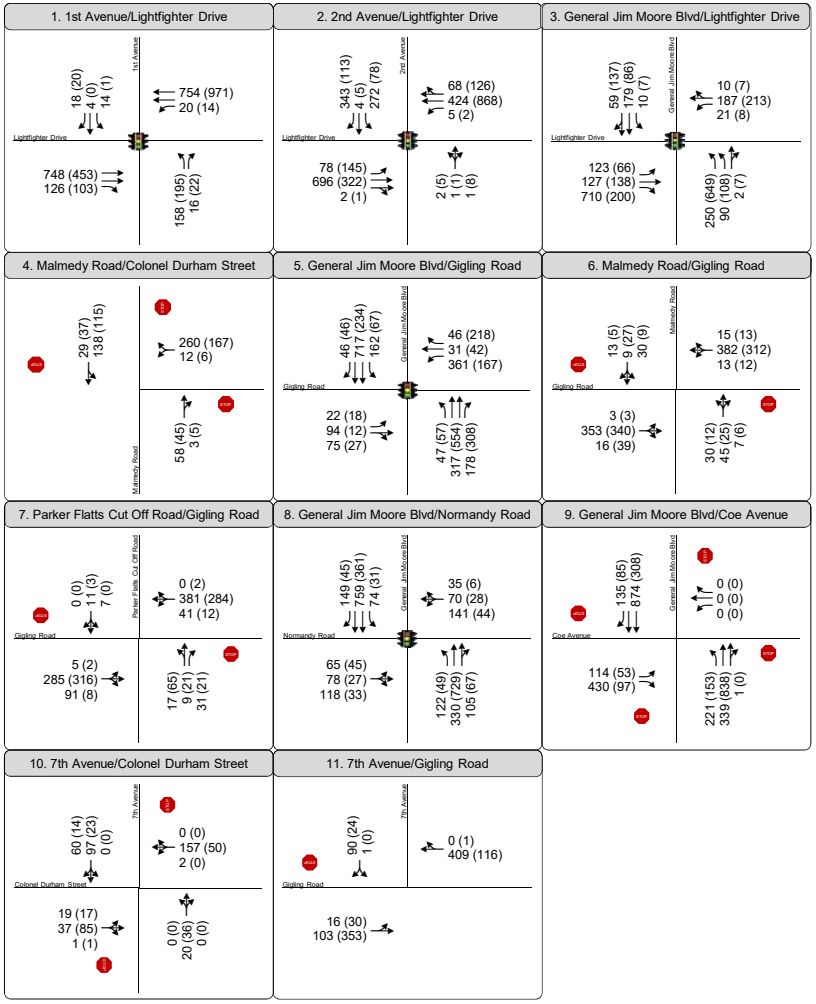


Figure 1
Traffic Volumes, Lane Configurations, and Level of Service
Campus Town Specific Plan - Existing Conditions

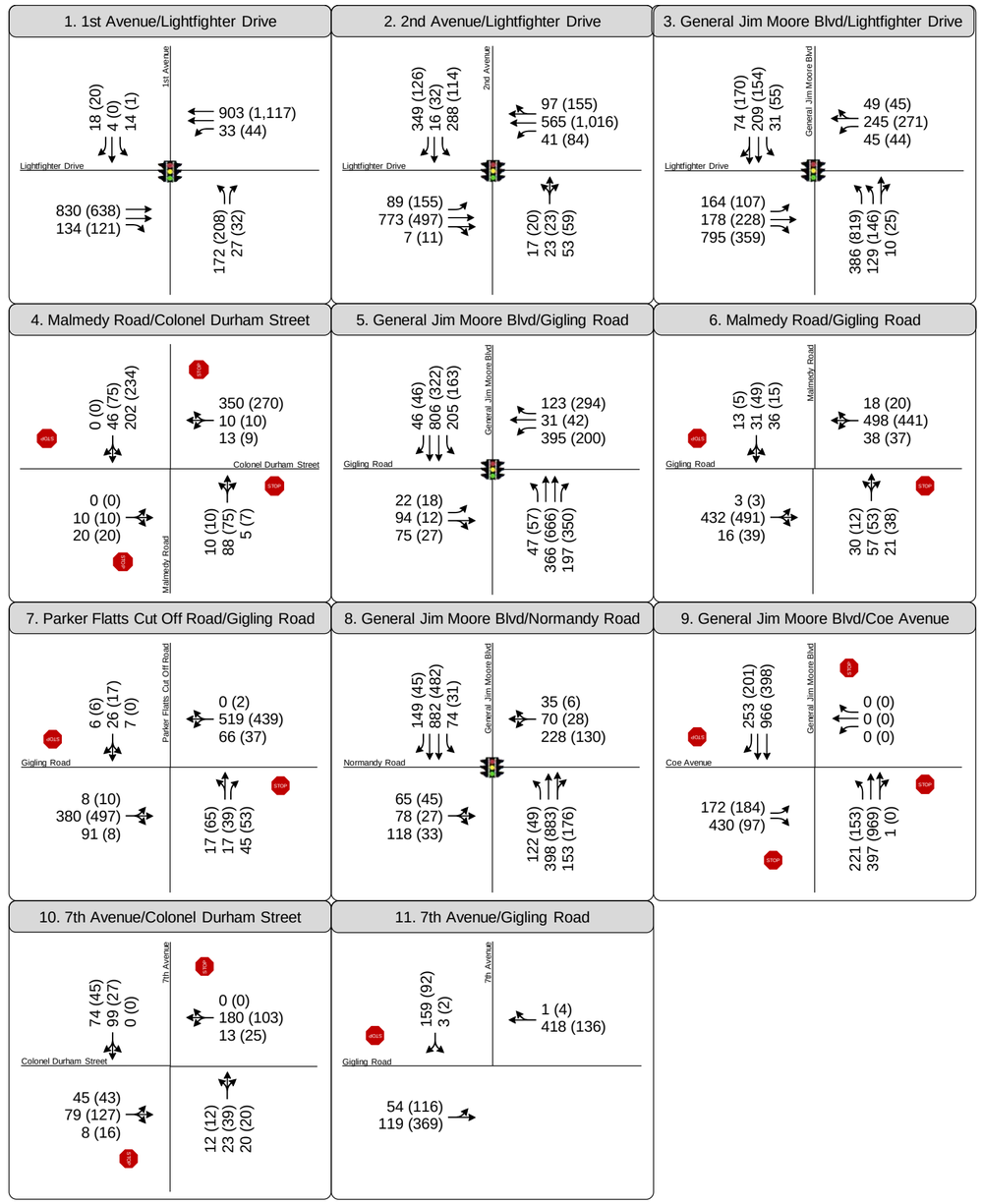


Figure 2
Traffic Volumes, Lane Configurations, and Level of Service
Campus Town Specific Plan - Existing with Plan Conditions

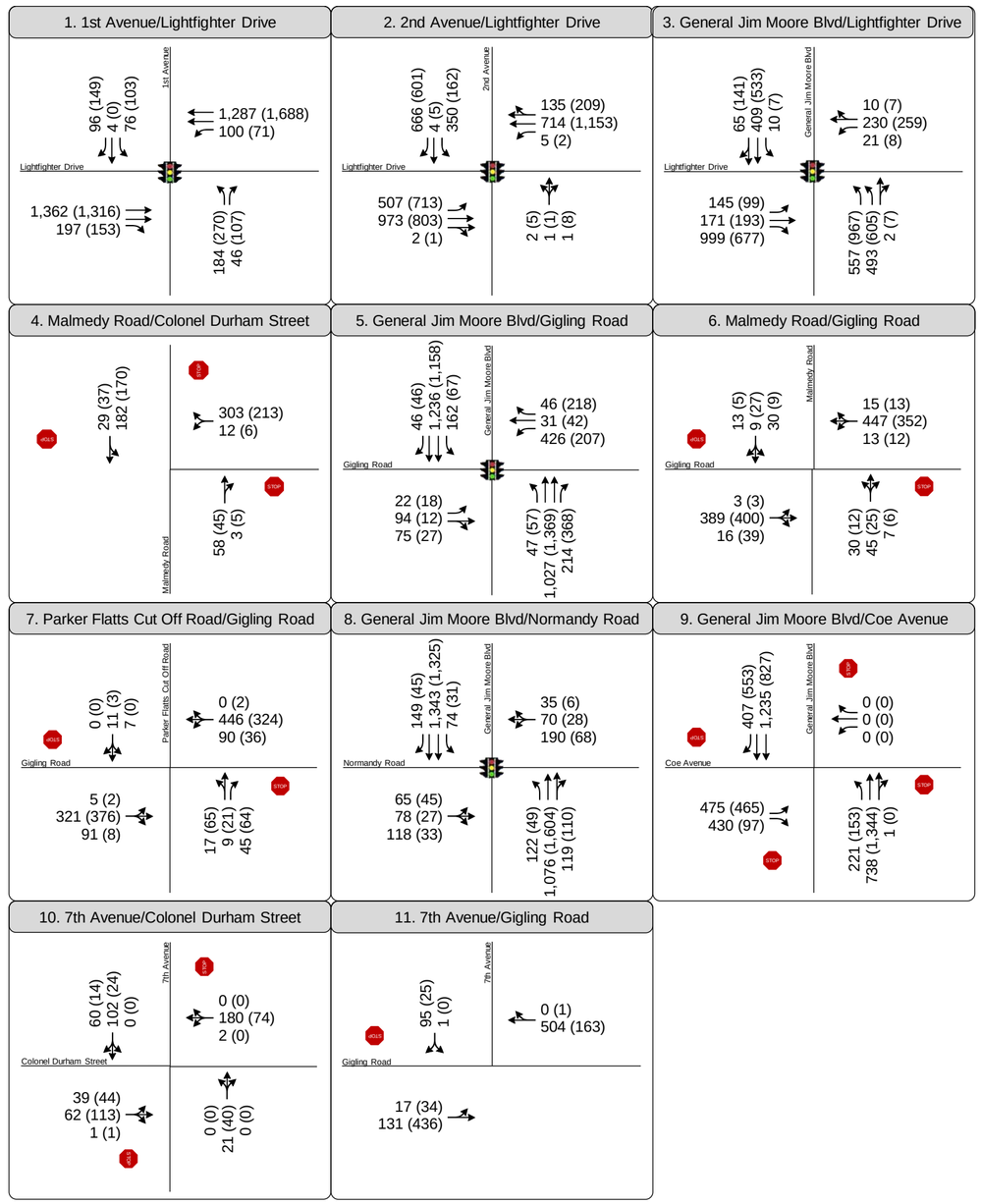


Figure 5
Traffic Volumes, Lane Configurations, and Level of Service
Campus Town Specific Plan - Background Conditions

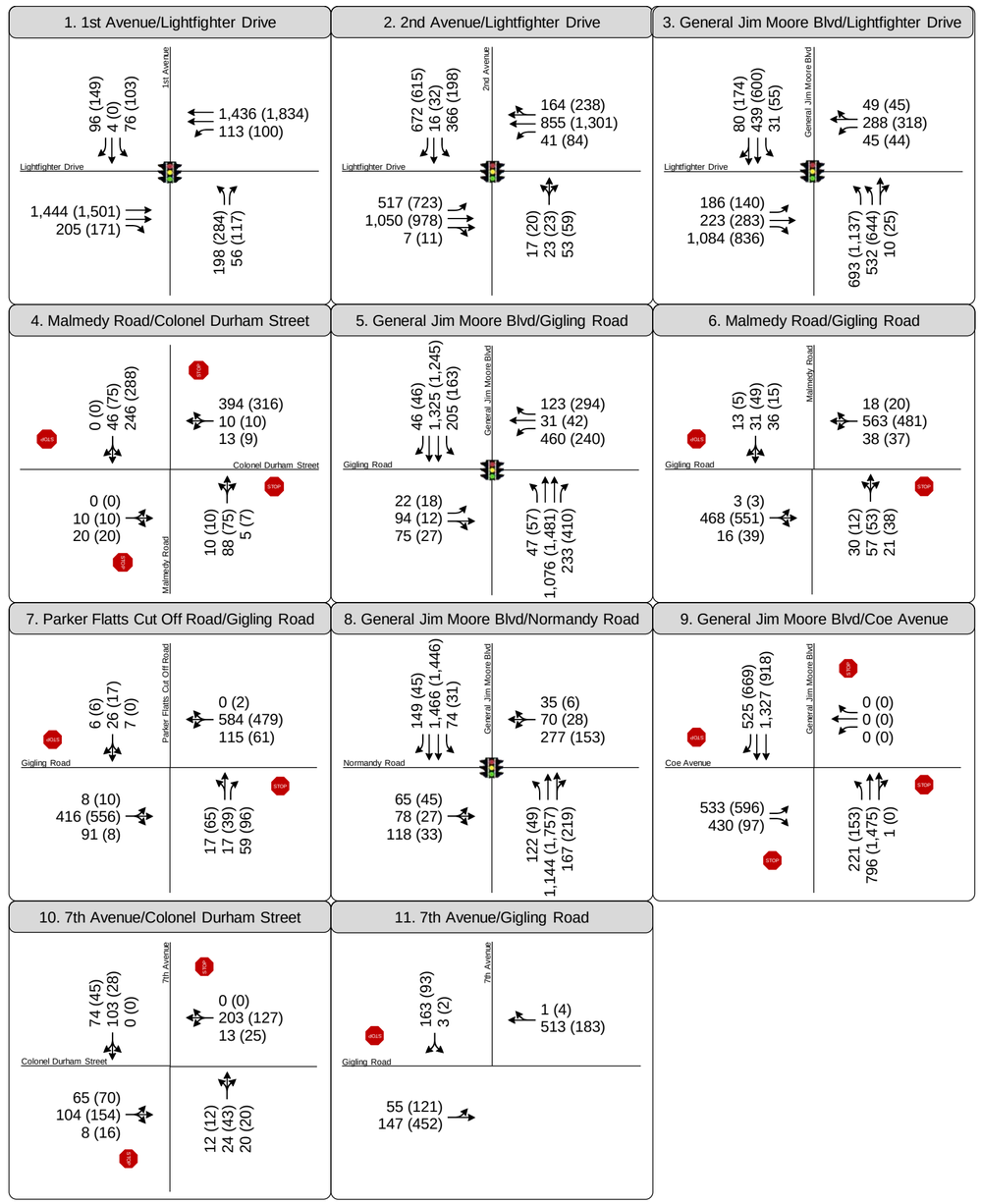


Figure 6
Traffic Volumes, Lane Configurations, and Level of Service
Campus Town Specific Plan - Background with Plan Conditions

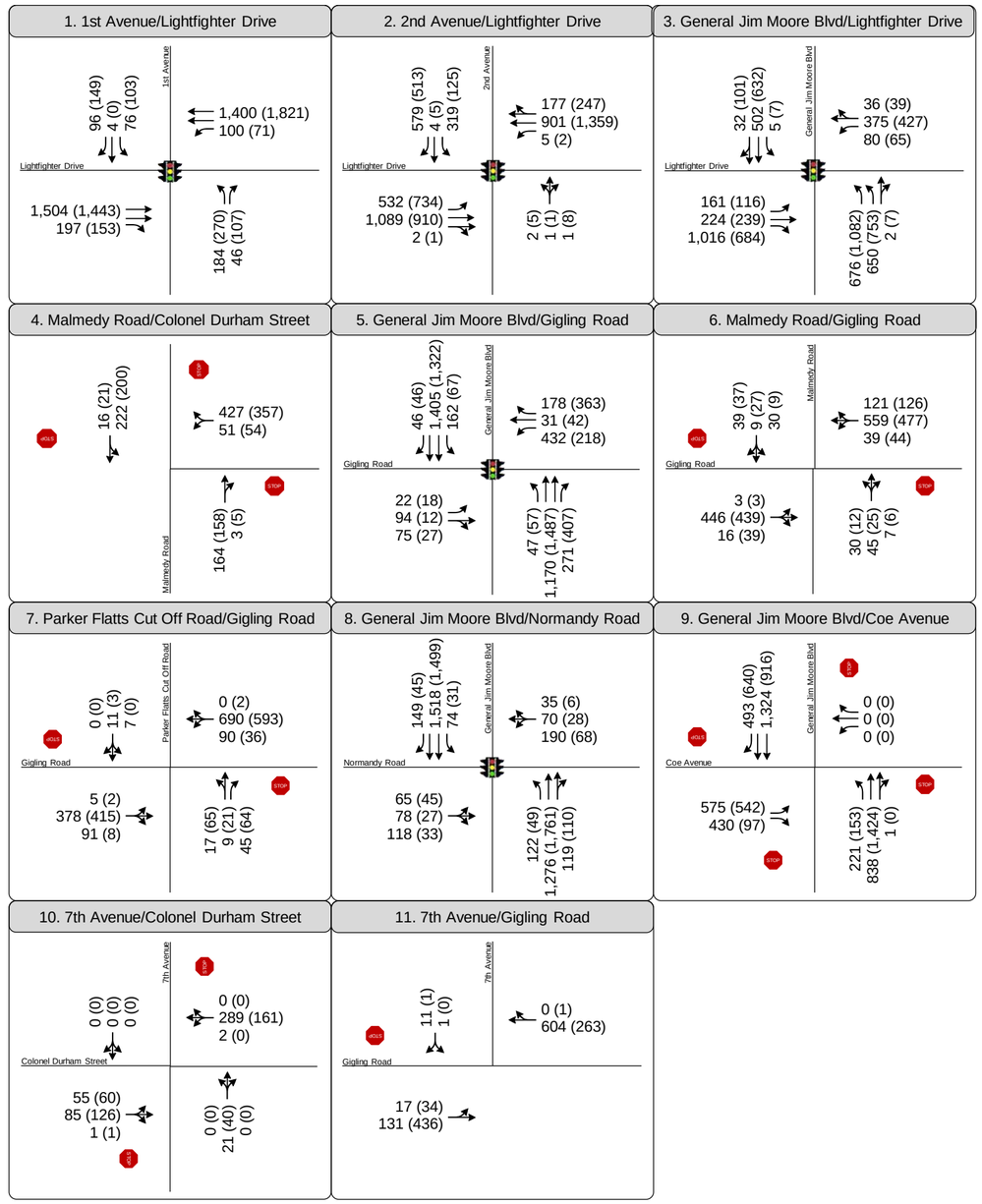


Figure 7
Traffic Volumes, Lane Configurations, and Level of Service
Campus Town Specific Plan - Cumulative Conditions

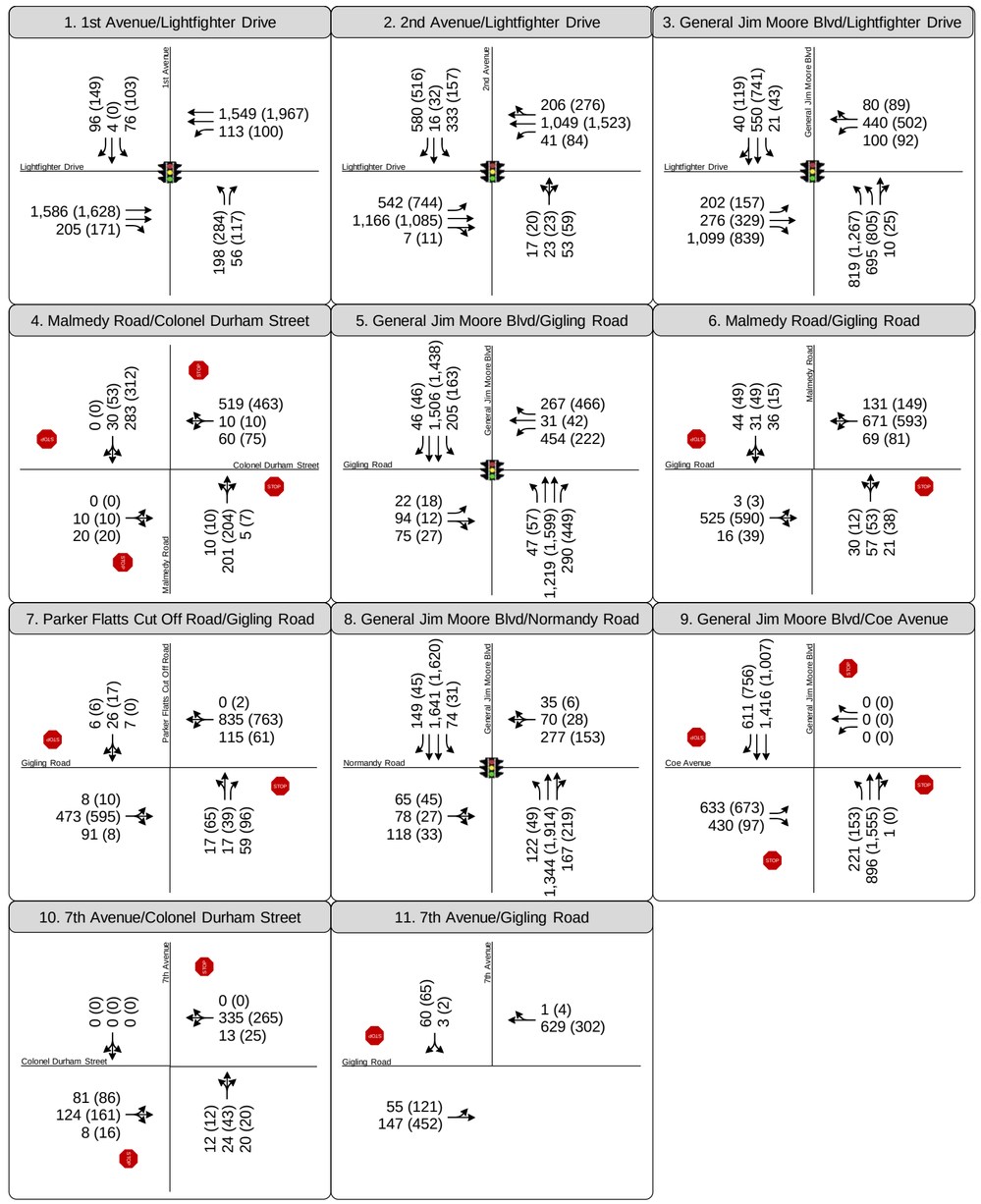


Figure 8
Traffic Volumes, Lane Configurations, and Level of Service
Campus Town Specific Plan - Cumulative with Plan Conditions

Appendix E:
Intersection LOS Calculations

Existing Conditions

AM Peak Hour

PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	748	126	20	754	0	158	0	16	14	4	18
Future Volume (veh/h)	0	748	126	20	754	0	158	0	16	14	4	18
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1863	1863	1863	0	1863	0	1863	1792	1792	1792
Adj Flow Rate, veh/h	0	890	0	24	898	0	188	0	5	17	5	2
Adj No. of Lanes	0	2	1	1	2	0	1	0	1	1	1	1
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	0	2	2	2	2	0	2	0	2	6	6	6
Cap, veh/h	0	1998	894	26	2446	0	0	0	0	24	25	21
Arrive On Green	0.00	0.56	0.00	0.01	0.69	0.00	0.00	0.00	0.00	0.01	0.01	0.01
Sat Flow, veh/h	0	3632	1583	1774	3632	0		0		1707	1792	1524
Grp Volume(v), veh/h	0	890	0	24	898	0		0.0		17	5	2
Grp Sat Flow(s),veh/h/ln	0	1770	1583	1774	1770	0				1707	1792	1524
Q Serve(g_s), s	0.0	4.6	0.0	0.4	3.3	0.0				0.3	0.1	0.0
Cycle Q Clear(g_c), s	0.0	4.6	0.0	0.4	3.3	0.0				0.3	0.1	0.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1998	894	26	2446	0				24	25	21
V/C Ratio(X)	0.00	0.45	0.00	0.92	0.37	0.00				0.71	0.20	0.09
Avail Cap(c_a), veh/h	0	5102	2283	1137	5102	0				1367	1436	1220
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	1.00	1.00	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	4.0	0.0	15.4	2.0	0.0				15.3	15.2	15.2
Incr Delay (d2), s/veh	0.0	0.2	0.0	33.8	0.1	0.0				13.4	1.4	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	2.2	0.0	0.4	1.5	0.0				0.2	0.1	0.0
LnGrp Delay(d),s/veh	0.0	4.2	0.0	49.2	2.1	0.0				28.8	16.6	15.9
LnGrp LOS		A		D	A					C	B	B
Approach Vol, veh/h		890			922						24	
Approach Delay, s/veh		4.2			3.4						25.2	
Approach LOS		A			A						C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs			3	4		6		8
Phs Duration (G+Y+Rc), s			4.0	22.2		5.0		26.2
Change Period (Y+Rc), s			3.5	4.6		4.6		4.6
Max Green Setting (Gmax), s			20.0	45.0		25.0		45.0
Max Q Clear Time (g_c+I1), s			2.4	6.6		2.3		5.3
Green Ext Time (p_c), s			0.0	11.1		0.0		10.4

Intersection Summary	
HCM 2010 Ctrl Delay	4.0
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	78	696	2	5	424	68	2	1	1	272	4	343
Future Volume (veh/h)	78	696	2	5	424	68	2	1	1	272	4	343
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1827	1827	1900	1900	1900	1900	1881	1881	1881
Adj Flow Rate, veh/h	87	773	2	6	471	67	2	1	0	302	4	105
Adj No. of Lanes	1	2	0	1	2	0	0	1	0	1	1	1
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	4	4	4	0	0	0	1	1	1
Cap, veh/h	111	2281	6	11	1752	248	276	126	0	403	436	371
Arrive On Green	0.06	0.63	0.63	0.01	0.57	0.57	0.24	0.23	0.00	0.23	0.23	0.23
Sat Flow, veh/h	1774	3621	9	1740	3054	432	930	545	0	1424	1881	1599
Grp Volume(v), veh/h	87	378	397	6	267	271	3	0	0	302	4	105
Grp Sat Flow(s),veh/h/ln	1774	1770	1861	1740	1736	1751	1476	0	0	1424	1881	1599
Q Serve(g_s), s	4.8	10.0	10.0	0.3	7.7	7.8	0.0	0.0	0.0	20.5	0.2	5.4
Cycle Q Clear(g_c), s	4.8	10.0	10.0	0.3	7.7	7.8	0.1	0.0	0.0	20.6	0.2	5.4
Prop In Lane	1.00		0.01	1.00		0.25	0.67		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	111	1115	1172	11	995	1004	411	0	0	403	436	371
V/C Ratio(X)	0.79	0.34	0.34	0.56	0.27	0.27	0.01	0.00	0.00	0.75	0.01	0.28
Avail Cap(c_a), veh/h	220	1115	1172	216	995	1004	662	0	0	648	760	646
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.87	0.87	0.87	0.82	0.82	0.82	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.2	8.7	8.7	49.6	10.7	10.8	29.4	0.0	0.0	37.4	29.6	31.6
Incr Delay (d2), s/veh	4.0	0.7	0.7	13.3	0.5	0.5	0.0	0.0	0.0	1.1	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	5.0	5.3	0.2	3.9	3.9	0.1	0.0	0.0	8.3	0.1	2.4
LnGrp Delay(d),s/veh	50.2	9.4	9.4	62.9	11.3	11.3	29.4	0.0	0.0	38.5	29.6	31.7
LnGrp LOS	D	A	A	E	B	B	C			D	C	C
Approach Vol, veh/h		862			544			3			411	
Approach Delay, s/veh		13.5			11.9			29.4			36.7	
Approach LOS		B			B			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.6	67.6		27.8	10.2	62.0		27.8
Change Period (Y+Rc), s	4.0	4.6		4.6	4.0	4.6		4.6
Max Green Setting (Gmax), s	12.4	34.0		40.4	12.4	24.4		40.4
Max Q Clear Time (g_c+I1), s	2.3	12.0		22.6	6.8	9.8		2.1
Green Ext Time (p_c), s	0.0	2.8		0.6	0.0	1.7		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	18.3
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	123	127	710	21	187	10	250	90	2	10	179	59
Future Volume (veh/h)	123	127	710	21	187	10	250	90	2	10	179	59
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	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
Adj Sat Flow, veh/h/ln	1863	1863	1863	1792	1792	1900	1881	1881	1900	1863	1863	1900
Adj Flow Rate, veh/h	138	143	0	24	210	9	281	101	1	11	201	66
Adj No. of Lanes	1	1	1	1	1	0	2	1	0	1	2	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	6	6	6	1	1	1	2	2	2
Cap, veh/h	183	493	419	39	314	13	682	633	6	20	411	131
Arrive On Green	0.10	0.26	0.00	0.02	0.18	0.18	0.20	0.34	0.34	0.01	0.16	0.16
Sat Flow, veh/h	1774	1863	1583	1707	1706	73	3476	1859	18	1774	2639	841
Grp Volume(v), veh/h	138	143	0	24	0	219	281	0	102	11	133	134
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1707	0	1779	1738	0	1878	1774	1770	1710
Q Serve(g_s), s	3.8	3.1	0.0	0.7	0.0	5.7	3.5	0.0	1.9	0.3	3.4	3.6
Cycle Q Clear(g_c), s	3.8	3.1	0.0	0.7	0.0	5.7	3.5	0.0	1.9	0.3	3.4	3.6
Prop In Lane	1.00		1.00	1.00		0.04	1.00		0.01	1.00		0.49
Lane Grp Cap(c), veh/h	183	493	419	39	0	328	682	0	640	20	275	266
V/C Ratio(X)	0.75	0.29	0.00	0.62	0.00	0.67	0.41	0.00	0.16	0.55	0.48	0.50
Avail Cap(c_a), veh/h	711	1120	952	684	0	1069	696	0	1129	533	1064	1028
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.8	14.6	0.0	24.2	0.0	18.9	17.5	0.0	11.5	24.5	19.2	19.3
Incr Delay (d2), s/veh	6.1	0.4	0.0	5.9	0.0	2.8	0.3	0.0	0.2	8.3	1.6	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	1.6	0.0	0.4	0.0	3.1	1.7	0.0	1.0	0.2	1.8	1.8
LnGrp Delay(d),s/veh	27.9	15.0	0.0	30.0	0.0	21.8	17.8	0.0	11.7	32.9	20.8	21.1
LnGrp LOS	C	B		C		C	B		B	C	C	C
Approach Vol, veh/h		281			243			383			278	
Approach Delay, s/veh		21.3			22.6			16.2			21.4	
Approach LOS		C			C			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.3	12.3	9.7	13.7	5.1	21.5	5.6	17.7
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	10.0	30.0	20.0	30.0	15.0	30.0	20.0	30.0
Max Q Clear Time (g_c+I1), s	5.7	5.6	5.8	7.7	2.3	3.9	2.7	5.1
Green Ext Time (p_c), s	0.3	1.8	0.3	1.5	0.0	0.9	0.0	0.8

Intersection Summary	
HCM 2010 Ctrl Delay	20.0
HCM 2010 LOS	B

Intersection	
Intersection Delay, s/veh	9.9
Intersection LOS	A

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	12	260	58	3	138	29
Future Vol, veh/h	12	260	58	3	138	29
Peak Hour Factor	0.77	0.77	0.77	0.77	0.77	0.77
Heavy Vehicles, %	4	4	3	3	2	2
Mvmt Flow	16	338	75	4	179	38
Number of Lanes	1	0	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	1	0
HCM Control Delay	10	8.6	10.1
HCM LOS	A	A	B

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	0%	4%	83%
Vol Thru, %	95%	0%	17%
Vol Right, %	5%	96%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	61	272	167
LT Vol	0	12	138
Through Vol	58	0	29
RT Vol	3	260	0
Lane Flow Rate	79	353	217
Geometry Grp	1	1	1
Degree of Util (X)	0.109	0.407	0.299
Departure Headway (Hd)	4.964	4.145	4.96
Convergence, Y/N	Yes	Yes	Yes
Cap	718	869	722
Service Time	3.025	2.175	3.013
HCM Lane V/C Ratio	0.11	0.406	0.301
HCM Control Delay	8.6	10	10.1
HCM Lane LOS	A	A	B
HCM 95th-tile Q	0.4	2	1.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	94	75	361	31	46	47	317	178	162	717	46
Future Volume (veh/h)	22	94	75	361	31	46	47	317	178	162	717	46
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1810	1810	1900	1863	1863	1863	1881	1881	1881	1863	1863	1863
Adj Flow Rate, veh/h	25	108	54	415	36	0	54	364	0	186	824	0
Adj No. of Lanes	1	1	0	1	1	1	1	2	1	1	2	1
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	5	5	5	2	2	2	1	1	1	2	2	2
Cap, veh/h	49	144	72	460	667	567	88	683	306	229	961	430
Arrive On Green	0.03	0.13	0.13	0.26	0.36	0.00	0.05	0.19	0.00	0.13	0.27	0.00
Sat Flow, veh/h	1723	1138	569	1774	1863	1583	1792	3574	1599	1774	3539	1583
Grp Volume(v), veh/h	25	0	162	415	36	0	54	364	0	186	824	0
Grp Sat Flow(s),veh/h/ln	1723	0	1707	1774	1863	1583	1792	1787	1599	1774	1770	1583
Q Serve(g_s), s	0.9	0.0	5.6	13.9	0.8	0.0	1.8	5.6	0.0	6.3	13.6	0.0
Cycle Q Clear(g_c), s	0.9	0.0	5.6	13.9	0.8	0.0	1.8	5.6	0.0	6.3	13.6	0.0
Prop In Lane	1.00		0.33	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	49	0	217	460	667	567	88	683	306	229	961	430
V/C Ratio(X)	0.51	0.00	0.75	0.90	0.05	0.00	0.62	0.53	0.00	0.81	0.86	0.00
Avail Cap(c_a), veh/h	295	0	862	592	1243	1057	160	1455	651	448	2017	902
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	29.4	0.0	25.9	22.0	12.9	0.0	28.6	22.4	0.0	26.0	21.2	0.0
Incr Delay (d2), s/veh	3.1	0.0	1.9	12.5	0.0	0.0	2.6	0.2	0.0	2.6	0.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.0	2.8	8.4	0.4	0.0	1.0	2.8	0.0	3.2	6.8	0.0
LnGrp Delay(d),s/veh	32.5	0.0	27.8	34.5	12.9	0.0	31.2	22.6	0.0	28.6	22.1	0.0
LnGrp LOS	C		C	C	B		C	C		C	C	
Approach Vol, veh/h		187			451			418			1010	
Approach Delay, s/veh		28.4			32.8			23.7			23.3	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.5	21.2	6.2	26.5	12.4	16.2	20.4	12.3
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.5	35.0	10.5	41.0	15.5	25.0	20.5	31.0
Max Q Clear Time (g_c+I1), s	3.8	15.6	2.9	2.8	8.3	7.6	15.9	7.6
Green Ext Time (p_c), s	0.0	1.1	0.0	0.0	0.0	0.4	0.1	0.1

Intersection Summary	
HCM 2010 Ctrl Delay	25.9
HCM 2010 LOS	C

Notes

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

Intersection	
Int Delay, s/veh	3.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	3	353	16	13	382	15	30	45	7	30	9	13
Future Vol, veh/h	3	353	16	13	382	15	30	45	7	30	9	13
Conflicting Peds, #/hr	0	0	1	1	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	3	3	3	3	3	3	2	2	2	4	4	4
Mvmt Flow	3	401	18	15	434	17	34	51	8	34	10	15

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	451	0	0	420	0	0	902	898	411	919	899	443
Stage 1	-	-	-	-	-	-	417	417	-	473	473	-
Stage 2	-	-	-	-	-	-	485	481	-	446	426	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.12	6.52	6.22	7.14	6.54	6.24
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.14	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.14	5.54	-
Follow-up Hdwy	2.227	-	-	2.227	-	-	3.518	4.018	3.318	3.536	4.036	3.336
Pot Cap-1 Maneuver	1104	-	-	1134	-	-	259	279	641	250	277	611
Stage 1	-	-	-	-	-	-	613	591	-	568	555	-
Stage 2	-	-	-	-	-	-	563	554	-	588	582	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1104	-	-	1133	-	-	241	273	640	208	271	611
Mov Cap-2 Maneuver	-	-	-	-	-	-	241	273	-	208	271	-
Stage 1	-	-	-	-	-	-	610	588	-	566	545	-
Stage 2	-	-	-	-	-	-	529	544	-	528	579	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.3	24.9	22.7
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	273	1104	-	-	1133	-	-	262
HCM Lane V/C Ratio	0.341	0.003	-	-	0.013	-	-	0.226
HCM Control Delay (s)	24.9	8.3	0	-	8.2	0	-	22.7
HCM Lane LOS	C	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	1.5	0	-	-	0	-	-	0.8

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	5	285	91	41	381	0	17	9	31	7	11	0
Future Vol, veh/h	5	285	91	41	381	0	17	9	31	7	11	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	135	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	84	84	84	84	84	84	84	84	84	84	84
Heavy Vehicles, %	3	3	3	2	2	2	2	2	2	0	0	0
Mvmt Flow	6	339	108	49	454	0	20	11	37	8	13	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	454	0	0	447	0	0	964	957	393	981	1011	454
Stage 1	-	-	-	-	-	-	405	405	-	552	552	-
Stage 2	-	-	-	-	-	-	559	552	-	429	459	-
Critical Hdwy	4.13	-	-	4.12	-	-	7.12	6.52	6.22	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.1	5.5	-
Follow-up Hdwy	2.227	-	-	2.218	-	-	3.518	4.018	3.318	3.5	4	3.3
Pot Cap-1 Maneuver	1101	-	-	1113	-	-	235	258	656	231	241	610
Stage 1	-	-	-	-	-	-	622	598	-	522	518	-
Stage 2	-	-	-	-	-	-	513	515	-	608	570	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1101	-	-	1113	-	-	213	241	656	200	225	610
Mov Cap-2 Maneuver	-	-	-	-	-	-	213	241	-	200	225	-
Stage 1	-	-	-	-	-	-	618	594	-	518	487	-
Stage 2	-	-	-	-	-	-	470	485	-	560	566	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.8	16.7	23.6
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	222	656	1101	-	-	1113	-	-	215
HCM Lane V/C Ratio	0.139	0.056	0.005	-	-	0.044	-	-	0.1
HCM Control Delay (s)	23.8	10.8	8.3	0	-	8.4	0	-	23.6
HCM Lane LOS	C	B	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0.5	0.2	0	-	-	0.1	-	-	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	65	78	118	141	70	35	122	330	105	74	759	149
Future Volume (veh/h)	65	78	118	141	70	35	122	330	105	74	759	149
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		0.97	0.99		0.97	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1881	1900	1900	1863	1900	1881	1881	1900	1863	1863	1863
Adj Flow Rate, veh/h	83	100	122	181	90	41	156	423	108	95	973	122
Adj No. of Lanes	0	1	0	0	1	0	1	2	0	1	2	1
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Percent Heavy Veh, %	1	1	1	2	2	2	1	1	1	2	2	2
Cap, veh/h	194	230	232	350	164	64	196	579	146	383	1105	489
Arrive On Green	0.36	0.35	0.35	0.36	0.35	0.35	0.11	0.21	0.21	0.22	0.31	0.31
Sat Flow, veh/h	334	649	655	722	463	179	1792	2816	712	1774	3539	1566
Grp Volume(v), veh/h	305	0	0	312	0	0	156	267	264	95	973	122
Grp Sat Flow(s),veh/h/ln	1637	0	0	1365	0	0	1792	1787	1741	1774	1770	1566
Q Serve(g_s), s	0.0	0.0	0.0	2.8	0.0	0.0	5.1	8.4	8.6	2.7	15.7	3.5
Cycle Q Clear(g_c), s	8.3	0.0	0.0	11.1	0.0	0.0	5.1	8.4	8.6	2.7	15.7	3.5
Prop In Lane	0.27		0.40	0.58		0.13	1.00		0.41	1.00		1.00
Lane Grp Cap(c), veh/h	670	0	0	590	0	0	196	367	358	383	1105	489
V/C Ratio(X)	0.46	0.00	0.00	0.53	0.00	0.00	0.80	0.73	0.74	0.25	0.88	0.25
Avail Cap(c_a), veh/h	967	0	0	847	0	0	238	756	736	383	1497	662
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.2	0.0	0.0	15.8	0.0	0.0	26.2	22.4	22.4	19.6	19.7	15.5
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.3	0.0	0.0	11.6	1.0	1.1	0.1	4.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.9	0.0	0.0	4.3	0.0	0.0	3.1	4.3	4.2	1.3	8.2	1.5
LnGrp Delay(d),s/veh	15.3	0.0	0.0	16.1	0.0	0.0	37.8	23.4	23.6	19.7	23.7	15.6
LnGrp LOS	B			B			D	C	C	B	C	B
Approach Vol, veh/h		305			312			687			1190	
Approach Delay, s/veh		15.3			16.1			26.7			22.5	
Approach LOS		B			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	11.1	23.3		25.9	17.5	16.9		25.9
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	8.0	25.5		33.0	8.0	25.5		33.0
Max Q Clear Time (g_c+I1), s	7.1	17.7		13.1	4.7	10.6		10.3
Green Ext Time (p_c), s	0.0	1.1		0.5	0.0	0.5		0.4

Intersection Summary		
HCM 2010 Ctrl Delay		22.0
HCM 2010 LOS		C

Intersection	
Intersection Delay, s/veh	97.3
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	114	0	430	0	0	0	221	339	1	0	874	135
Future Vol, veh/h	114	0	430	0	0	0	221	339	1	0	874	135
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, %	1	1	1	2	2	2	1	1	1	2	2	2
Mvmt Flow	127	0	478	0	0	0	246	377	1	0	971	150
Number of Lanes	1	0	1	1	1	1	1	2	0	0	2	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	2	3	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	3	2	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	3	3	2
HCM Control Delay	122.4	0	29.3	121.5
HCM LOS	F	-	D	F

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%
Vol Thru, %	0%	100%	99%	0%	0%	100%	100%	100%	100%	100%	0%
Vol Right, %	0%	0%	1%	0%	100%	0%	0%	0%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	221	226	114	114	430	0	0	0	437	437	135
LT Vol	221	0	0	114	0	0	0	0	0	0	0
Through Vol	0	226	113	0	0	0	0	0	437	437	0
RT Vol	0	0	1	0	430	0	0	0	0	0	135
Lane Flow Rate	246	251	127	127	478	0	0	0	486	486	150
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.672	0.652	0.329	0.365	1.219	0	0	0	1.191	1.191	0.267
Departure Headway (Hd)	10.97	10.446	10.439	10.888	9.668	12.602	12.602	12.602	9.474	9.474	6.924
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	332	349	347	333	377	0	0	0	388	388	522
Service Time	8.67	8.146	8.139	8.588	7.368	10.302	10.302	10.302	7.174	7.174	4.624
HCM Lane V/C Ratio	0.741	0.719	0.366	0.381	1.268	0	0	0	1.253	1.253	0.287
HCM Control Delay	33.5	30.7	18.2	19.7	149.6	15.3	15.3	15.3	138.4	138.4	12.1
HCM Lane LOS	D	D	C	C	F	N	N	N	F	F	B
HCM 95th-tile Q	4.6	4.4	1.4	1.6	19.1	0	0	0	18.3	18.3	1.1

Intersection	
Int Delay, s/veh	6.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	19	37	1	2	157	0	0	20	0	0	97	60
Future Vol, veh/h	19	37	1	2	157	0	0	20	0	0	97	60
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	1	1	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	82	82	82	82	82	82	82	82	82	82	82	82
Heavy Vehicles, %	12	12	12	0	0	0	10	10	10	10	10	10
Mvmt Flow	23	45	1	2	191	0	0	24	0	0	118	73

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	275	180	155	203	216	25	191	0	0	25	0	0
Stage 1	155	155	-	25	25	-	-	-	-	-	-	-
Stage 2	120	25	-	178	191	-	-	-	-	-	-	-
Critical Hdwy	7.22	6.62	6.32	7.1	6.5	6.2	4.2	-	-	4.2	-	-
Critical Hdwy Stg 1	6.22	5.62	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.22	5.62	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.608	4.108	3.408	3.5	4	3.3	2.29	-	-	2.29	-	-
Pot Cap-1 Maneuver	658	696	865	759	685	1057	1336	-	-	1539	-	-
Stage 1	824	751	-	998	878	-	-	-	-	-	-	-
Stage 2	861	855	-	828	746	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	516	695	865	720	684	1056	1336	-	-	1538	-	-
Mov Cap-2 Maneuver	516	695	-	720	684	-	-	-	-	-	-	-
Stage 1	824	751	-	997	877	-	-	-	-	-	-	-
Stage 2	673	854	-	777	746	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11.5	12.3	0	0
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1336	-	-	625	684	1538	-	-
HCM Lane V/C Ratio	-	-	-	0.111	0.283	-	-	-
HCM Control Delay (s)	0	-	-	11.5	12.3	0	-	-
HCM Lane LOS	A	-	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.4	1.2	0	-	-

Intersection	
Int Delay, s/veh	2.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	16	103	409	0	1	90
Future Vol, veh/h	16	103	409	0	1	90
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	3	3	0	0	8	8
Mvmt Flow	19	120	476	0	1	105

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	476	0	-	0	634	476
Stage 1	-	-	-	-	476	-
Stage 2	-	-	-	-	158	-
Critical Hdwy	4.13	-	-	-	6.48	6.28
Critical Hdwy Stg 1	-	-	-	-	5.48	-
Critical Hdwy Stg 2	-	-	-	-	5.48	-
Follow-up Hdwy	2.227	-	-	-	3.572	3.372
Pot Cap-1 Maneuver	1081	-	-	-	434	577
Stage 1	-	-	-	-	613	-
Stage 2	-	-	-	-	856	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1081	-	-	-	426	577
Mov Cap-2 Maneuver	-	-	-	-	426	-
Stage 1	-	-	-	-	601	-
Stage 2	-	-	-	-	856	-

Approach	EB	WB	SB
HCM Control Delay, s	1.1	0	12.7
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1081	-	-	-	575
HCM Lane V/C Ratio	0.017	-	-	-	0.184
HCM Control Delay (s)	8.4	0	-	-	12.7
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱	↰	↑↑		↰		↱	↰	↑	↱
Traffic Volume (veh/h)	0	453	103	14	971	0	195	0	22	1	0	20
Future Volume (veh/h)	0	453	103	14	971	0	195	0	22	1	0	20
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1881	1881	1881	1881	0	1881	0	1881	1810	1810	1810
Adj Flow Rate, veh/h	0	477	0	15	1022	0	205	0	10	1	0	4
Adj No. of Lanes	0	2	1	1	2	0	1	0	1	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	1	1	1	1	0	1	0	1	5	5	5
Cap, veh/h	0	2314	1035	16	2682	0	0	0	0	5	5	4
Arrive On Green	0.00	0.65	0.00	0.01	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sat Flow, veh/h	0	3668	1599	1792	3668	0		0		1723	1810	1538
Grp Volume(v), veh/h	0	477	0	15	1022	0		0.0		1	0	4
Grp Sat Flow(s),veh/h/ln	0	1787	1599	1792	1787	0				1723	1810	1538
Q Serve(g_s), s	0.0	2.0	0.0	0.3	3.7	0.0				0.0	0.0	0.1
Cycle Q Clear(g_c), s	0.0	2.0	0.0	0.3	3.7	0.0				0.0	0.0	0.1
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2314	1035	16	2682	0				5	5	4
V/C Ratio(X)	0.00	0.21	0.00	0.94	0.38	0.00				0.20	0.00	0.92
Avail Cap(c_a), veh/h	0	4316	1931	962	4316	0				1156	1214	1032
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	2.7	0.0	18.5	1.6	0.0				18.5	0.0	18.6
Incr Delay (d2), s/veh	0.0	0.1	0.0	48.9	0.1	0.0				7.4	0.0	99.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.0	0.0	0.4	1.8	0.0				0.0	0.0	0.2
LnGrp Delay(d),s/veh	0.0	2.7	0.0	67.4	1.8	0.0				26.0	0.0	117.9
LnGrp LOS		A		E	A					C		F
Approach Vol, veh/h		477			1037						5	
Approach Delay, s/veh		2.7			2.7						99.5	
Approach LOS		A			A						F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs			3	4		6		8
Phs Duration (G+Y+Rc), s			3.8	28.7		4.7		32.6
Change Period (Y+Rc), s			3.5	4.6		4.6		4.6
Max Green Setting (Gmax), s			20.0	45.0		25.0		45.0
Max Q Clear Time (g_c+I1), s			2.3	4.0		2.1		5.7
Green Ext Time (p_c), s			0.0	20.1		0.0		19.7

Intersection Summary	
HCM 2010 Ctrl Delay	3.0
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	145	322	1	2	868	126	5	1	8	78	5	113
Future Volume (veh/h)	145	322	1	2	868	126	5	1	8	78	5	113
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	0.71		0.98	0.76		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
Adj Sat Flow, veh/h/ln	1881	1881	1900	1881	1881	1900	1900	1900	1900	1845	1845	1845
Adj Flow Rate, veh/h	153	339	1	2	914	125	5	1	7	82	5	-142
Adj No. of Lanes	1	2	0	1	2	0	0	1	0	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	1	1	1	0	0	0	3	3	3
Cap, veh/h	184	3333	10	4	2564	351	50	0	0	73	2	2
Arrive On Green	0.10	0.91	0.91	0.00	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00
Sat Flow, veh/h	1792	3656	11	1792	3160	432	0	0	0	1059	1845	1568
Grp Volume(v), veh/h	153	166	174	2	517	522	13	0	0	82	5	-142
Grp Sat Flow(s),veh/h/ln	1792	1787	1879	1792	1787	1805	0	0	0	1059	1845	1568
Q Serve(g_s), s	8.4	0.9	0.9	0.1	7.7	7.7	0.0	0.0	0.0	0.0	0.1	0.0
Cycle Q Clear(g_c), s	8.4	0.9	0.9	0.1	7.7	7.7	0.1	0.0	0.0	0.1	0.1	0.0
Prop In Lane	1.00		0.01	1.00		0.24	0.38		0.54	1.00		1.00
Lane Grp Cap(c), veh/h	184	1630	1714	4	1450	1464	50	0	0	73	2	2
V/C Ratio(X)	0.83	0.10	0.10	0.52	0.36	0.36	0.26	0.00	0.00	1.12	2.71	-90.56
Avail Cap(c_a), veh/h	222	1630	1714	222	1450	1464	644	0	0	550	745	633
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.98	0.98	0.98	0.37	0.37	0.37	1.00	0.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	44.0	0.4	0.4	49.8	2.5	2.5	50.0	0.0	0.0	50.0	50.0	0.0
Incr Delay (d2), s/veh	16.7	0.1	0.1	13.7	0.3	0.2	1.0	0.0	0.0	67.8	878.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	563.0	0.0
%ile BackOfQ(50%),veh/ln	5.0	0.5	0.5	0.1	3.8	3.9	0.4	0.0	0.0	5.4	0.8	0.0
LnGrp Delay(d),s/veh	60.7	0.6	0.5	63.5	2.8	2.8	51.1	0.0	0.0	118.0	1491.4	0.0
LnGrp LOS	E	A	A	E	A	A	D			F	F	
Approach Vol, veh/h		493			1041			13			-55	
Approach Delay, s/veh		19.2			2.9			51.1			-311.4	
Approach LOS		B			A			D			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	14.2	95.8		0.0	14.3	85.7		0.0
Change Period (Y+Rc), s	4.0	4.6		4.6	4.0	4.6		4.6
Max Green Setting (Gmax), s	12.4	34.0		40.4	12.4	24.4		40.4
Max Q Clear Time (g_c+I1), s	12.1	2.9		2.1	10.4	9.7		2.1
Green Ext Time (p_c), s	0.0	5.9		0.3	0.0	4.8		0.3

Intersection Summary		
HCM 2010 Ctrl Delay	20.3	
HCM 2010 LOS	C	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	66	138	200	8	213	7	649	108	7	7	86	137
Future Volume (veh/h)	66	138	200	8	213	7	649	108	7	7	86	137
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1881	1900	1900	1900	1881	1881	1900	1900	1900	1900
Adj Flow Rate, veh/h	69	144	0	8	222	5	676	112	6	7	90	143
Adj No. of Lanes	1	1	1	1	1	0	2	1	0	1	2	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	1	1	1	0	0	0	1	1	1	0	0	0
Cap, veh/h	89	455	387	15	372	8	708	664	36	13	323	289
Arrive On Green	0.05	0.24	0.00	0.01	0.20	0.20	0.20	0.38	0.38	0.01	0.18	0.18
Sat Flow, veh/h	1792	1881	1599	1810	1851	42	3476	1770	95	1810	1805	1615
Grp Volume(v), veh/h	69	144	0	8	0	227	676	0	118	7	90	143
Grp Sat Flow(s),veh/h/ln	1792	1881	1599	1810	0	1893	1738	0	1864	1810	1805	1615
Q Serve(g_s), s	1.9	3.1	0.0	0.2	0.0	5.3	9.4	0.0	2.1	0.2	2.1	3.9
Cycle Q Clear(g_c), s	1.9	3.1	0.0	0.2	0.0	5.3	9.4	0.0	2.1	0.2	2.1	3.9
Prop In Lane	1.00		1.00	1.00		0.02	1.00		0.05	1.00		1.00
Lane Grp Cap(c), veh/h	89	455	387	15	0	380	708	0	700	13	323	289
V/C Ratio(X)	0.78	0.32	0.00	0.52	0.00	0.60	0.95	0.00	0.17	0.52	0.28	0.50
Avail Cap(c_a), veh/h	730	1150	978	738	0	1157	708	0	1140	553	1104	987
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.0	15.3	0.0	24.2	0.0	17.8	19.3	0.0	10.2	24.3	17.4	18.1
Incr Delay (d2), s/veh	13.3	0.5	0.0	10.0	0.0	1.8	23.1	0.0	0.2	11.1	0.6	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	1.7	0.0	0.1	0.0	3.0	6.8	0.0	1.1	0.1	1.1	1.9
LnGrp Delay(d),s/veh	36.3	15.7	0.0	34.2	0.0	19.6	42.4	0.0	10.5	35.4	18.0	19.7
LnGrp LOS	D	B		C		B	D		B	D	B	B
Approach Vol, veh/h		213			235			794			240	
Approach Delay, s/veh		22.4			20.1			37.7			19.5	
Approach LOS		C			C			D			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.5	13.3	6.9	14.4	4.9	22.9	4.9	16.4
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	10.0	30.0	20.0	30.0	15.0	30.0	20.0	30.0
Max Q Clear Time (g_c+I1), s	11.4	5.9	3.9	7.3	2.2	4.1	2.2	5.1
Green Ext Time (p_c), s	0.0	2.9	0.1	2.6	0.0	2.9	0.0	2.6

Intersection Summary	
HCM 2010 Ctrl Delay	29.7
HCM 2010 LOS	C

Intersection	
Intersection Delay, s/veh	8.3
Intersection LOS	A

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	6	167	45	5	115	37
Future Vol, veh/h	6	167	45	5	115	37
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles, %	0	0	2	2	1	1
Mvmt Flow	7	190	51	6	131	42
Number of Lanes	1	0	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	1	0
HCM Control Delay	7.9	7.8	8.8
HCM LOS	A	A	A

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	0%	3%	76%
Vol Thru, %	90%	0%	24%
Vol Right, %	10%	97%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	50	173	152
LT Vol	0	6	115
Through Vol	45	0	37
RT Vol	5	167	0
Lane Flow Rate	57	197	173
Geometry Grp	1	1	1
Degree of Util (X)	0.071	0.211	0.214
Departure Headway (Hd)	4.471	3.868	4.46
Convergence, Y/N	Yes	Yes	Yes
Cap	803	934	793
Service Time	2.487	1.871	2.551
HCM Lane V/C Ratio	0.071	0.211	0.218
HCM Control Delay	7.8	7.9	8.8
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.2	0.8	0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	18	12	27	167	42	218	57	554	308	67	234	46
Future Volume (veh/h)	18	12	27	167	42	218	57	554	308	67	234	46
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1776	1776	1900	1881	1881	1881	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	20	13	-1	188	47	0	64	622	0	75	263	0
Adj No. of Lanes	1	1	0	1	1	1	1	2	1	1	2	1
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	7	7	7	1	1	1	2	2	2	2	2	2
Cap, veh/h	42	152	0	240	366	311	114	878	393	126	903	404
Arrive On Green	0.02	0.09	0.00	0.13	0.19	0.00	0.06	0.25	0.00	0.07	0.26	0.00
Sat Flow, veh/h	1691	1776	0	1792	1881	1599	1774	3539	1583	1774	3539	1583
Grp Volume(v), veh/h	20	12	0	188	47	0	64	622	0	75	263	0
Grp Sat Flow(s),veh/h/ln	1691	1776	0	1792	1881	1599	1774	1770	1583	1774	1770	1583
Q Serve(g_s), s	0.5	0.2	0.0	4.0	0.8	0.0	1.4	6.3	0.0	1.6	2.3	0.0
Cycle Q Clear(g_c), s	0.5	0.2	0.0	4.0	0.8	0.0	1.4	6.3	0.0	1.6	2.3	0.0
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	42	152	0	240	366	311	114	878	393	126	903	404
V/C Ratio(X)	0.47	0.08	0.00	0.78	0.13	0.00	0.56	0.71	0.00	0.59	0.29	0.00
Avail Cap(c_a), veh/h	889	1388	0	941	1471	1250	477	2313	1035	477	2313	1035
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	18.8	16.4	0.0	16.4	13.0	0.0	17.7	13.4	0.0	17.6	11.7	0.0
Incr Delay (d2), s/veh	3.0	0.1	0.0	2.1	0.1	0.0	1.6	0.4	0.0	1.6	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.1	0.0	2.1	0.4	0.0	0.7	3.1	0.0	0.8	1.1	0.0
LnGrp Delay(d),s/veh	21.8	16.5	0.0	18.5	13.0	0.0	19.3	13.8	0.0	19.2	11.8	0.0
LnGrp LOS	C	B		B	B		B	B		B	B	
Approach Vol, veh/h		32			235			686			338	
Approach Delay, s/veh		19.8			17.4			14.3			13.4	
Approach LOS		B			B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.0	14.5	5.5	12.1	7.3	14.2	9.7	7.8
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	10.5	25.5	20.5	30.5	10.5	25.5	20.5	30.5
Max Q Clear Time (g_c+I1), s	3.4	4.3	2.5	2.8	3.6	8.3	6.0	2.2
Green Ext Time (p_c), s	0.0	1.1	0.0	0.0	0.0	1.1	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	14.8
HCM 2010 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	340	39	12	312	13	12	25	6	9	27	5
Future Vol, veh/h	3	340	39	12	312	13	12	25	6	9	27	5
Conflicting Peds, #/hr	1	0	2	2	0	1	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	1	1	1	0	0	0	5	5	5
Mvmt Flow	3	374	43	13	343	14	13	27	7	10	30	5

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	358	0	0	419	0	0	798	788	398	796	802	351
Stage 1	-	-	-	-	-	-	404	404	-	377	377	-
Stage 2	-	-	-	-	-	-	394	384	-	419	425	-
Critical Hdwy	4.12	-	-	4.11	-	-	7.1	6.5	6.2	7.15	6.55	6.25
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.15	5.55	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.15	5.55	-
Follow-up Hdwy	2.218	-	-	2.209	-	-	3.5	4	3.3	3.545	4.045	3.345
Pot Cap-1 Maneuver	1201	-	-	1145	-	-	306	326	656	301	314	686
Stage 1	-	-	-	-	-	-	627	603	-	638	611	-
Stage 2	-	-	-	-	-	-	635	615	-	606	581	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1200	-	-	1143	-	-	277	319	655	275	308	685
Mov Cap-2 Maneuver	-	-	-	-	-	-	277	319	-	275	308	-
Stage 1	-	-	-	-	-	-	624	600	-	635	602	-
Stage 2	-	-	-	-	-	-	590	606	-	571	578	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.3	17.8	18
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	329	1200	-	-	1143	-	-	321
HCM Lane V/C Ratio	0.144	0.003	-	-	0.012	-	-	0.14
HCM Control Delay (s)	17.8	8	0	-	8.2	0	-	18
HCM Lane LOS	C	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0.5	0	-	-	0	-	-	0.5

Intersection	
Int Delay, s/veh	2.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↰	↱		↕	
Traffic Vol, veh/h	2	316	8	12	284	2	65	21	21	0	3	0
Future Vol, veh/h	2	316	8	12	284	2	65	21	21	0	3	0
Conflicting Peds, #/hr	3	0	0	0	0	3	2	0	0	0	0	2
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	135	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	1	1	1	0	0	0	0	0	0
Mvmt Flow	2	355	9	13	319	2	73	24	24	0	3	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	324	0	0	364	0	0	714	714	360	737	717	325
Stage 1	-	-	-	-	-	-	364	364	-	349	349	-
Stage 2	-	-	-	-	-	-	350	350	-	388	368	-
Critical Hdwy	4.12	-	-	4.11	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.218	-	-	2.209	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1236	-	-	1200	-	-	349	359	689	337	358	721
Stage 1	-	-	-	-	-	-	659	627	-	671	637	-
Stage 2	-	-	-	-	-	-	671	636	-	640	625	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1232	-	-	1200	-	-	342	353	689	304	352	718
Mov Cap-2 Maneuver	-	-	-	-	-	-	342	353	-	304	352	-
Stage 1	-	-	-	-	-	-	658	626	-	668	627	-
Stage 2	-	-	-	-	-	-	657	626	-	594	624	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.3	17.6	15.3
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	345	689	1232	-	-	1200	-	-	352
HCM Lane V/C Ratio	0.28	0.034	0.002	-	-	0.011	-	-	0.01
HCM Control Delay (s)	19.4	10.4	7.9	0	-	8	0	-	15.3
HCM Lane LOS	C	B	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	1.1	0.1	0	-	-	0	-	-	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	27	33	44	28	6	49	729	67	31	361	45
Future Volume (veh/h)	45	27	33	44	28	6	49	729	67	31	361	45
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1881	1900	1881	1881	1900	1900	1900	1900
Adj Flow Rate, veh/h	49	29	11	48	30	4	53	792	50	34	392	-10
Adj No. of Lanes	0	1	0	0	1	0	1	2	0	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	1	1	1	1	1	1	0	0	0
Cap, veh/h	316	105	31	329	119	12	290	1065	67	75	692	310
Arrive On Green	0.18	0.16	0.16	0.18	0.16	0.16	0.16	0.31	0.31	0.04	0.19	0.00
Sat Flow, veh/h	723	667	196	776	756	79	1792	3414	216	1810	3610	1615
Grp Volume(v), veh/h	89	0	0	82	0	0	53	414	428	34	392	-10
Grp Sat Flow(s),veh/h/ln	1586	0	0	1611	0	0	1792	1787	1843	1810	1805	1615
Q Serve(g_s), s	0.1	0.0	0.0	0.0	0.0	0.0	0.7	5.7	5.7	0.5	2.7	0.0
Cycle Q Clear(g_c), s	1.2	0.0	0.0	1.1	0.0	0.0	0.7	5.7	5.7	0.5	2.7	0.0
Prop In Lane	0.55		0.12	0.59		0.05	1.00		0.12	1.00		1.00
Lane Grp Cap(c), veh/h	480	0	0	489	0	0	290	558	575	75	692	310
V/C Ratio(X)	0.19	0.00	0.00	0.17	0.00	0.00	0.18	0.74	0.74	0.45	0.57	-0.03
Avail Cap(c_a), veh/h	2062	0	0	2082	0	0	520	1652	1704	525	3337	1493
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	10.2	0.0	0.0	10.1	0.0	0.0	10.0	8.5	8.5	12.9	10.1	0.0
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.1	0.0	0.0	0.1	0.7	0.7	1.6	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	0.0	0.5	0.0	0.0	0.3	2.9	3.0	0.3	1.3	0.0
LnGrp Delay(d),s/veh	10.2	0.0	0.0	10.2	0.0	0.0	10.1	9.2	9.2	14.5	10.4	0.0
LnGrp LOS	B			B			B	A	A	B	B	
Approach Vol, veh/h		89			82			895			416	
Approach Delay, s/veh		10.2			10.2			9.3			11.0	
Approach LOS		B			B			A			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	9.0	9.8		8.8	5.6	13.1		8.8
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	8.0	25.5		33.0	8.0	25.5		33.0
Max Q Clear Time (g_c+I1), s	2.7	4.7		3.1	2.5	7.7		3.2
Green Ext Time (p_c), s	0.0	0.5		0.2	0.0	0.8		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	9.9
HCM 2010 LOS	A

Intersection	
Intersection Delay, s/veh	18.4
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	53	0	97	0	0	0	153	838	0	0	308	85
Future Vol, veh/h	53	0	97	0	0	0	153	838	0	0	308	85
Peak Hour Factor	0.89	0.92	0.89	0.92	0.92	0.92	0.89	0.89	0.92	0.92	0.89	0.89
Heavy Vehicles, %	1	2	1	2	2	2	1	1	2	2	1	1
Mvmt Flow	60	0	109	0	0	0	172	942	0	0	346	96
Number of Lanes	1	0	1	1	1	1	1	2	0	0	2	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	2	3	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	3	2	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	3	3	2
HCM Control Delay	12.6	0	21.5	12.7
HCM LOS	B	-	C	B

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%
Vol Thru, %	0%	100%	100%	0%	0%	100%	100%	100%	100%	100%	0%
Vol Right, %	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	153	419	419	53	97	0	0	0	154	154	85
LT Vol	153	0	0	53	0	0	0	0	0	0	0
Through Vol	0	419	419	0	0	0	0	0	154	154	0
RT Vol	0	0	0	0	97	0	0	0	0	0	85
Lane Flow Rate	172	471	471	60	109	0	0	0	173	173	96
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.325	0.823	0.596	0.144	0.226	0	0	0	0.352	0.352	0.126
Departure Headway (Hd)	6.801	6.295	4.558	8.682	7.472	8.795	8.795	8.795	7.319	7.319	4.767
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	524	570	782	415	483	0	0	0	495	495	741
Service Time	4.598	4.091	2.353	6.396	5.186	6.518	6.518	6.518	5.019	5.019	2.567
HCM Lane V/C Ratio	0.328	0.826	0.602	0.145	0.226	0	0	0	0.349	0.349	0.13
HCM Control Delay	12.9	32.1	14	12.9	12.4	11.5	11.5	11.5	13.9	13.9	8.3
HCM Lane LOS	B	D	B	B	B	N	N	N	B	B	A
HCM 95th-tile Q	1.4	8.4	4	0.5	0.9	0	0	0	1.6	1.6	0.4

Intersection	
Int Delay, s/veh	7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	17	85	1	0	50	0	0	36	0	0	23	14
Future Vol, veh/h	17	85	1	0	50	0	0	36	0	0	23	14
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	74	74	74	74	74	74	74	74	74	74	74	74
Heavy Vehicles, %	3	3	3	2	2	2	3	3	3	8	8	8
Mvmt Flow	23	115	1	0	68	0	0	49	0	0	31	19

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	124	90	41	148	99	49	50	0	0	49	0	0
Stage 1	41	41	-	49	49	-	-	-	-	-	-	-
Stage 2	83	49	-	99	50	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.12	6.52	6.22	4.13	-	-	4.18	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.518	4.018	3.318	2.227	-	-	2.272	-	-
Pot Cap-1 Maneuver	848	798	1027	820	791	1020	1550	-	-	1520	-	-
Stage 1	971	859	-	964	854	-	-	-	-	-	-	-
Stage 2	923	852	-	907	853	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	793	798	1027	728	791	1020	1550	-	-	1520	-	-
Mov Cap-2 Maneuver	793	798	-	728	791	-	-	-	-	-	-	-
Stage 1	971	859	-	964	854	-	-	-	-	-	-	-
Stage 2	850	852	-	785	853	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.5	10	0	0
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1550	-	-	799	791	1520	-	-
HCM Lane V/C Ratio	-	-	-	0.174	0.085	-	-	-
HCM Control Delay (s)	0	-	-	10.5	10	0	-	-
HCM Lane LOS	A	-	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.6	0.3	0	-	-

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	30	353	116	1	0	24
Future Vol, veh/h	30	353	116	1	0	24
Conflicting Peds, #/hr	0	0	0	0	0	1
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	2	1	1	4	4
Mvmt Flow	31	368	121	1	0	25

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	122	0	-	0	552	123
Stage 1	-	-	-	-	122	-
Stage 2	-	-	-	-	430	-
Critical Hdwy	4.12	-	-	-	6.44	6.24
Critical Hdwy Stg 1	-	-	-	-	5.44	-
Critical Hdwy Stg 2	-	-	-	-	5.44	-
Follow-up Hdwy	2.218	-	-	-	3.536	3.336
Pot Cap-1 Maneuver	1465	-	-	-	491	923
Stage 1	-	-	-	-	898	-
Stage 2	-	-	-	-	652	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	1465	-	-	-	478	922
Mov Cap-2 Maneuver	-	-	-	-	478	-
Stage 1	-	-	-	-	874	-
Stage 2	-	-	-	-	652	-

Approach	EB	WB	SB
HCM Control Delay, s	0.6	0	9
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1465	-	-	-	922
HCM Lane V/C Ratio	0.021	-	-	-	0.027
HCM Control Delay (s)	7.5	0	-	-	9
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	-	0.1

Existing with Plan Conditions

AM Peak Hour

PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	830	134	33	903	0	172	0	27	14	4	18
Future Volume (veh/h)	0	830	134	33	903	0	172	0	27	14	4	18
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1863	1863	1863	0	1863	0	1863	1792	1792	1792
Adj Flow Rate, veh/h	0	988	0	39	1075	0	205	0	18	17	5	2
Adj No. of Lanes	0	2	1	1	2	0	1	0	1	1	1	1
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	0	2	2	2	2	0	2	0	2	6	6	6
Cap, veh/h	0	2082	932	45	2534	0	0	0	0	24	25	21
Arrive On Green	0.00	0.59	0.00	0.03	0.72	0.00	0.00	0.00	0.00	0.01	0.01	0.01
Sat Flow, veh/h	0	3632	1583	1774	3632	0		0		1707	1792	1524
Grp Volume(v), veh/h	0	988	0	39	1075	0		0.0		17	5	2
Grp Sat Flow(s),veh/h/ln	0	1770	1583	1774	1770	0				1707	1792	1524
Q Serve(g_s), s	0.0	5.4	0.0	0.7	4.2	0.0				0.3	0.1	0.0
Cycle Q Clear(g_c), s	0.0	5.4	0.0	0.7	4.2	0.0				0.3	0.1	0.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2082	932	45	2534	0				24	25	21
V/C Ratio(X)	0.00	0.47	0.00	0.88	0.42	0.00				0.71	0.20	0.09
Avail Cap(c_a), veh/h	0	4671	2090	1041	4671	0				1252	1314	1117
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	1.00	1.00	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	4.0	0.0	16.6	2.0	0.0				16.7	16.6	16.6
Incr Delay (d2), s/veh	0.0	0.2	0.0	17.4	0.2	0.0				13.3	1.4	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	2.7	0.0	0.6	2.0	0.0				0.2	0.1	0.0
LnGrp Delay(d),s/veh	0.0	4.2	0.0	34.0	2.1	0.0				30.0	18.0	17.3
LnGrp LOS		A		C	A					C	B	B
Approach Vol, veh/h		988			1114						24	
Approach Delay, s/veh		4.2			3.2						26.5	
Approach LOS		A			A						C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs			3	4		6		8
Phs Duration (G+Y+Rc), s			4.4	24.7		5.1		29.0
Change Period (Y+Rc), s			3.5	4.6		4.6		4.6
Max Green Setting (Gmax), s			20.0	45.0		25.0		45.0
Max Q Clear Time (g_c+I1), s			2.7	7.4		2.3		6.2
Green Ext Time (p_c), s			0.0	12.6		0.0		13.3

Intersection Summary	
HCM 2010 Ctrl Delay	4.0
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	89	773	7	41	565	97	17	23	53	288	16	349
Future Volume (veh/h)	89	773	7	41	565	97	17	23	53	288	16	349
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1827	1827	1900	1900	1900	1900	1881	1881	1881
Adj Flow Rate, veh/h	99	859	8	46	628	99	19	26	58	320	18	112
Adj No. of Lanes	1	2	0	1	2	0	0	1	0	1	1	1
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	4	4	4	0	0	0	1	1	1
Cap, veh/h	125	2075	19	58	1625	256	94	133	238	419	484	411
Arrive On Green	0.07	0.58	0.58	0.03	0.54	0.54	0.25	0.26	0.26	0.26	0.26	0.26
Sat Flow, veh/h	1774	3593	33	1740	3006	473	199	518	924	1321	1881	1599
Grp Volume(v), veh/h	99	423	444	46	362	365	103	0	0	320	18	112
Grp Sat Flow(s),veh/h/ln	1774	1770	1857	1740	1736	1743	1641	0	0	1321	1881	1599
Q Serve(g_s), s	5.5	13.3	13.3	2.6	12.1	12.2	0.0	0.0	0.0	18.3	0.7	5.6
Cycle Q Clear(g_c), s	5.5	13.3	13.3	2.6	12.1	12.2	4.7	0.0	0.0	23.0	0.7	5.6
Prop In Lane	1.00		0.02	1.00		0.27	0.18		0.56	1.00		1.00
Lane Grp Cap(c), veh/h	125	1022	1072	58	938	942	455	0	0	419	484	411
V/C Ratio(X)	0.79	0.41	0.41	0.79	0.39	0.39	0.23	0.00	0.00	0.76	0.04	0.27
Avail Cap(c_a), veh/h	220	1022	1072	216	938	942	689	0	0	613	760	646
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.84	0.84	0.84	0.45	0.45	0.45	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.8	11.7	11.7	48.0	13.3	13.4	29.4	0.0	0.0	35.9	27.9	29.7
Incr Delay (d2), s/veh	3.6	1.0	1.0	4.1	0.5	0.5	0.1	0.0	0.0	1.6	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	6.8	7.1	1.3	5.9	5.9	2.3	0.0	0.0	8.7	0.4	2.5
LnGrp Delay(d),s/veh	49.3	12.8	12.7	52.1	13.9	13.9	29.5	0.0	0.0	37.6	27.9	29.8
LnGrp LOS	D	B	B	D	B	B	C			D	C	C
Approach Vol, veh/h		966			773			103			450	
Approach Delay, s/veh		16.5			16.2			29.5			35.2	
Approach LOS		B			B			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	7.3	62.3		30.3	11.0	58.6		30.3
Change Period (Y+Rc), s	4.0	4.6		4.6	4.0	4.6		4.6
Max Green Setting (Gmax), s	12.4	34.0		40.4	12.4	24.4		40.4
Max Q Clear Time (g_c+I1), s	4.6	15.3		25.0	7.5	14.2		6.7
Green Ext Time (p_c), s	0.0	3.1		0.7	0.0	2.1		0.4

Intersection Summary	
HCM 2010 Ctrl Delay	20.6
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	164	178	795	45	245	49	386	129	10	31	209	74
Future Volume (veh/h)	164	178	795	45	245	49	386	129	10	31	209	74
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1792	1792	1900	1881	1881	1900	1863	1863	1900
Adj Flow Rate, veh/h	184	200	0	51	275	53	434	145	10	35	235	83
Adj No. of Lanes	1	1	1	1	1	0	2	1	0	1	2	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	6	6	6	1	1	1	2	2	2
Cap, veh/h	236	634	539	65	358	69	571	516	36	52	417	143
Arrive On Green	0.13	0.34	0.00	0.04	0.25	0.25	0.16	0.30	0.30	0.03	0.16	0.16
Sat Flow, veh/h	1774	1863	1583	1707	1460	281	3476	1740	120	1774	2584	888
Grp Volume(v), veh/h	184	200	0	51	0	328	434	0	155	35	159	159
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1707	0	1741	1738	0	1860	1774	1770	1702
Q Serve(g_s), s	6.1	4.8	0.0	1.8	0.0	10.6	7.2	0.0	3.9	1.2	5.0	5.3
Cycle Q Clear(g_c), s	6.1	4.8	0.0	1.8	0.0	10.6	7.2	0.0	3.9	1.2	5.0	5.3
Prop In Lane	1.00		1.00	1.00		0.16	1.00		0.06	1.00		0.52
Lane Grp Cap(c), veh/h	236	634	539	65	0	427	571	0	551	52	285	275
V/C Ratio(X)	0.78	0.32	0.00	0.79	0.00	0.77	0.76	0.00	0.28	0.67	0.56	0.58
Avail Cap(c_a), veh/h	584	919	781	562	0	859	572	0	918	438	873	840
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.5	14.8	0.0	29.0	0.0	21.3	24.3	0.0	16.4	29.2	23.5	23.6
Incr Delay (d2), s/veh	5.5	0.3	0.0	7.6	0.0	3.5	5.6	0.0	0.6	5.5	2.0	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	3.3	2.5	0.0	1.0	0.0	5.5	3.9	0.0	2.1	0.7	2.6	2.7
LnGrp Delay(d),s/veh	31.0	15.2	0.0	36.6	0.0	24.8	29.9	0.0	17.0	34.7	25.5	25.9
LnGrp LOS	C	B		D		C	C		B	C	C	C
Approach Vol, veh/h		384			379			589			353	
Approach Delay, s/veh		22.8			26.4			26.5			26.6	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.5	14.3	12.6	19.4	6.3	22.5	6.8	25.2
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	10.0	30.0	20.0	30.0	15.0	30.0	20.0	30.0
Max Q Clear Time (g_c+I1), s	8.1	7.3	8.1	12.6	3.2	5.9	3.8	6.8
Green Ext Time (p_c), s	0.1	2.1	0.4	2.3	0.0	1.5	0.0	1.2

Intersection Summary	
HCM 2010 Ctrl Delay	25.7
HCM 2010 LOS	C

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	0	10	20	13	10	350	10	88	5	202	46	0
Future Vol, veh/h	0	10	20	13	10	350	10	88	5	202	46	0
Peak Hour Factor	0.25	0.25	0.25	0.77	0.25	0.77	0.25	0.77	0.77	0.77	0.77	0.25
Heavy Vehicles, %	0	0	0	4	0	4	0	3	3	2	2	0
Mvmt Flow	0	0	0	17	0	455	0	114	6	262	60	0
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	0	14.7	9.9	13.7
HCM LOS	-	B	A	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	10%	0%	3%	81%
Vol Thru, %	85%	33%	3%	19%
Vol Right, %	5%	67%	94%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	103	30	373	248
LT Vol	10	0	13	202
Through Vol	88	10	10	46
RT Vol	5	20	350	0
Lane Flow Rate	121	0	471	322
Geometry Grp	1	1	1	1
Degree of Util (X)	0.188	0	0.611	0.49
Departure Headway (Hd)	5.591	5.451	4.668	5.478
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	641	0	778	657
Service Time	3.631	3.501	2.668	3.51
HCM Lane V/C Ratio	0.189	0	0.605	0.49
HCM Control Delay	9.9	8.5	14.7	13.7
HCM Lane LOS	A	N	B	B
HCM 95th-tile Q	0.7	0	4.2	2.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	94	75	395	31	123	47	366	197	205	806	46
Future Volume (veh/h)	22	94	75	395	31	123	47	366	197	205	806	46
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1810	1810	1900	1863	1863	1863	1881	1881	1881	1863	1863	1863
Adj Flow Rate, veh/h	25	108	54	454	36	0	54	421	0	236	926	0
Adj No. of Lanes	1	1	0	1	1	1	1	2	1	1	2	1
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	5	5	5	2	2	2	1	1	1	2	2	2
Cap, veh/h	47	141	70	492	696	592	83	663	296	278	1047	468
Arrive On Green	0.03	0.12	0.12	0.28	0.37	0.00	0.05	0.19	0.00	0.16	0.30	0.00
Sat Flow, veh/h	1723	1138	569	1774	1863	1583	1792	3574	1599	1774	3539	1583
Grp Volume(v), veh/h	25	0	162	454	36	0	54	421	0	236	926	0
Grp Sat Flow(s),veh/h/ln	1723	0	1707	1774	1863	1583	1792	1787	1599	1774	1770	1583
Q Serve(g_s), s	1.0	0.0	6.4	17.4	0.9	0.0	2.1	7.6	0.0	9.1	17.5	0.0
Cycle Q Clear(g_c), s	1.0	0.0	6.4	17.4	0.9	0.0	2.1	7.6	0.0	9.1	17.5	0.0
Prop In Lane	1.00		0.33	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	47	0	211	492	696	592	83	663	296	278	1047	468
V/C Ratio(X)	0.53	0.00	0.77	0.92	0.05	0.00	0.65	0.64	0.00	0.85	0.88	0.00
Avail Cap(c_a), veh/h	258	0	755	519	1089	926	141	1274	570	392	1766	790
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	33.6	0.0	29.7	24.6	14.0	0.0	32.9	26.4	0.0	28.8	23.6	0.0
Incr Delay (d2), s/veh	3.3	0.0	2.2	21.0	0.0	0.0	3.1	0.4	0.0	8.6	1.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.0	3.1	11.3	0.4	0.0	1.1	3.8	0.0	5.1	8.7	0.0
LnGrp Delay(d),s/veh	37.0	0.0	31.9	45.6	14.0	0.0	36.0	26.8	0.0	37.4	25.1	0.0
LnGrp LOS	D		C	D	B		D	C		D	C	
Approach Vol, veh/h		187			490			475			1162	
Approach Delay, s/veh		32.6			43.3			27.8			27.6	
Approach LOS		C			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.8	25.2	6.4	30.7	15.5	17.5	24.0	13.2
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.5	35.0	10.5	41.0	15.5	25.0	20.5	31.0
Max Q Clear Time (g_c+I1), s	4.1	19.5	3.0	2.9	11.1	9.6	19.4	8.4
Green Ext Time (p_c), s	0.0	1.2	0.0	0.0	0.0	0.5	0.0	0.1

Intersection Summary	
HCM 2010 Ctrl Delay	31.4
HCM 2010 LOS	C

Notes

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

Intersection	
Int Delay, s/veh	10

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	3	432	16	38	498	18	30	57	21	36	31	13
Future Vol, veh/h	3	432	16	38	498	18	30	57	21	36	31	13
Conflicting Peds, #/hr	0	0	1	1	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	3	3	3	3	3	3	2	2	2	4	4	4
Mvmt Flow	3	491	18	43	566	20	34	65	24	41	35	15

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	586	0	0	510	0	0	1194	1179	501	1213	1178	576
Stage 1	-	-	-	-	-	-	507	507	-	662	662	-
Stage 2	-	-	-	-	-	-	687	672	-	551	516	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.12	6.52	6.22	7.14	6.54	6.24
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.14	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.14	5.54	-
Follow-up Hdwy	2.227	-	-	2.227	-	-	3.518	4.018	3.318	3.536	4.036	3.336
Pot Cap-1 Maneuver	984	-	-	1050	-	-	163	190	570	157	189	513
Stage 1	-	-	-	-	-	-	548	539	-	448	456	-
Stage 2	-	-	-	-	-	-	437	454	-	515	531	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	984	-	-	1049	-	-	127	177	569	103	177	513
Mov Cap-2 Maneuver	-	-	-	-	-	-	127	177	-	103	177	-
Stage 1	-	-	-	-	-	-	545	536	-	446	428	-
Stage 2	-	-	-	-	-	-	366	426	-	432	528	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.6	58.8	64.4
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	181	984	-	-	1049	-	-	145
HCM Lane V/C Ratio	0.678	0.003	-	-	0.041	-	-	0.627
HCM Control Delay (s)	58.8	8.7	0	-	8.6	0	-	64.4
HCM Lane LOS	F	A	A	-	A	A	-	F
HCM 95th %tile Q(veh)	4.1	0	-	-	0.1	-	-	3.4

Intersection	
Int Delay, s/veh	4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↰	↱		↕	
Traffic Vol, veh/h	8	380	91	66	519	0	17	17	45	7	26	6
Future Vol, veh/h	8	380	91	66	519	0	17	17	45	7	26	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	135	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	84	84	84	84	84	84	84	84	84	84	84
Heavy Vehicles, %	3	3	3	2	2	2	2	2	2	0	0	0
Mvmt Flow	10	452	108	79	618	0	20	20	54	8	31	7

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	618	0	0	560	0	0	1321	1302	506	1339	1356	618
Stage 1	-	-	-	-	-	-	526	526	-	776	776	-
Stage 2	-	-	-	-	-	-	795	776	-	563	580	-
Critical Hdwy	4.13	-	-	4.12	-	-	7.12	6.52	6.22	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.1	5.5	-
Follow-up Hdwy	2.227	-	-	2.218	-	-	3.518	4.018	3.318	3.5	4	3.3
Pot Cap-1 Maneuver	957	-	-	1011	-	-	134	161	566	131	151	493
Stage 1	-	-	-	-	-	-	535	529	-	393	410	-
Stage 2	-	-	-	-	-	-	381	407	-	514	503	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	957	-	-	1011	-	-	98	140	566	95	131	493
Mov Cap-2 Maneuver	-	-	-	-	-	-	98	140	-	95	131	-
Stage 1	-	-	-	-	-	-	527	521	-	387	361	-
Stage 2	-	-	-	-	-	-	302	359	-	441	495	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	1	29.4	44.2
HCM LOS			D	E

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	115	566	957	-	-	1011	-	-	137
HCM Lane V/C Ratio	0.352	0.095	0.01	-	-	0.078	-	-	0.339
HCM Control Delay (s)	52.4	12	8.8	0	-	8.9	0	-	44.2
HCM Lane LOS	F	B	A	A	-	A	A	-	E
HCM 95th %tile Q(veh)	1.4	0.3	0	-	-	0.3	-	-	1.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	65	78	118	228	70	35	122	398	153	74	882	149
Future Volume (veh/h)	65	78	118	228	70	35	122	398	153	74	882	149
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.98	0.99		0.98	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1881	1900	1900	1863	1900	1881	1881	1900	1863	1863	1863
Adj Flow Rate, veh/h	83	100	122	292	90	41	156	510	169	95	1131	122
Adj No. of Lanes	0	1	0	0	1	0	1	2	0	1	2	1
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Percent Heavy Veh, %	1	1	1	2	2	2	1	1	1	2	2	2
Cap, veh/h	206	250	265	404	100	46	184	606	200	354	1157	512
Arrive On Green	0.39	0.40	0.40	0.39	0.40	0.40	0.10	0.23	0.23	0.20	0.33	0.33
Sat Flow, veh/h	371	629	667	819	252	115	1792	2632	867	1774	3539	1566
Grp Volume(v), veh/h	305	0	0	423	0	0	156	345	334	95	1131	122
Grp Sat Flow(s),veh/h/ln	1667	0	0	1187	0	0	1792	1787	1712	1774	1770	1566
Q Serve(g_s), s	0.0	0.0	0.0	16.5	0.0	0.0	6.7	14.4	14.5	3.5	24.7	4.4
Cycle Q Clear(g_c), s	10.3	0.0	0.0	26.7	0.0	0.0	6.7	14.4	14.5	3.5	24.7	4.4
Prop In Lane	0.27		0.40	0.69		0.10	1.00		0.51	1.00		1.00
Lane Grp Cap(c), veh/h	711	0	0	542	0	0	184	411	394	354	1157	512
V/C Ratio(X)	0.43	0.00	0.00	0.78	0.00	0.00	0.85	0.84	0.85	0.27	0.98	0.24
Avail Cap(c_a), veh/h	750	0	0	575	0	0	184	584	560	354	1157	512
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.3	0.0	0.0	23.1	0.0	0.0	34.4	28.7	28.7	26.4	26.0	19.2
Incr Delay (d2), s/veh	0.2	0.0	0.0	5.7	0.0	0.0	28.1	5.3	6.0	0.1	21.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.9	0.0	0.0	9.6	0.0	0.0	4.7	7.7	7.5	1.7	15.3	1.9
LnGrp Delay(d),s/veh	17.4	0.0	0.0	28.8	0.0	0.0	62.5	33.9	34.7	26.6	47.0	19.3
LnGrp LOS	B			C			E	C	C	C	D	B
Approach Vol, veh/h		305			423			835			1348	
Approach Delay, s/veh		17.4			28.8			39.6			43.1	
Approach LOS		B			C			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	12.5	30.0		35.5	20.0	22.5		35.5
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	8.0	25.5		33.0	8.0	25.5		33.0
Max Q Clear Time (g_c+I1), s	8.7	26.7		28.7	5.5	16.5		12.3
Green Ext Time (p_c), s	0.0	0.0		0.4	0.0	0.6		0.4

Intersection Summary	
HCM 2010 Ctrl Delay	37.3
HCM 2010 LOS	D

Intersection	
Intersection Delay, s/veh	142.1
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	172	0	430	0	0	0	221	397	1	0	966	253
Future Vol, veh/h	172	0	430	0	0	0	221	397	1	0	966	253
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, %	1	1	1	2	2	2	1	1	1	2	2	2
Mvmt Flow	191	0	478	0	0	0	246	441	1	0	1073	281
Number of Lanes	1	0	1	1	1	1	1	2	0	0	2	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	2	3	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	3	2	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	3	3	2
HCM Control Delay	154.6	0	46	184.8
HCM LOS	F	-	E	F

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%
Vol Thru, %	0%	100%	99%	0%	0%	100%	100%	100%	100%	100%	0%
Vol Right, %	0%	0%	1%	0%	100%	0%	0%	0%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	221	265	133	172	430	0	0	0	483	483	253
LT Vol	221	0	0	172	0	0	0	0	0	0	0
Through Vol	0	265	132	0	0	0	0	0	483	483	0
RT Vol	0	0	1	0	430	0	0	0	0	0	253
Lane Flow Rate	246	294	148	191	478	0	0	0	537	537	281
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.735	0.839	0.423	0.599	1.34	0	0	0	1.41	1.41	0.549
Departure Headway (Hd)	13.233	12.709	12.704	12.625	11.404	13.584	13.584	13.584	10.342	10.342	7.789
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	275	288	286	289	325	0	0	0	354	354	467
Service Time	10.933	10.409	10.404	10.325	9.104	11.284	11.284	11.284	8.042	8.042	5.489
HCM Lane V/C Ratio	0.895	1.021	0.517	0.661	1.471	0	0	0	1.517	1.517	0.602
HCM Control Delay	45.4	57.4	24.4	32.5	203.4	16.3	16.3	16.3	228.1	228.1	19.6
HCM Lane LOS	E	F	C	D	F	N	N	N	F	F	C
HCM 95th-tile Q	5.3	7	2	3.6	21	0	0	0	25.2	25.2	3.2

Intersection	
Intersection Delay, s/veh	142.1
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	172	0	430	0	0	0	221	397	1	0	966	253
Future Vol, veh/h	172	0	430	0	0	0	221	397	1	0	966	253
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, %	1	1	1	2	2	2	1	1	1	2	2	2
Mvmt Flow	191	0	478	0	0	0	246	441	1	0	1073	281
Number of Lanes	1	0	1	1	1	1	1	2	0	0	2	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	2	3	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	3	2	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	3	3	2
HCM Control Delay	154.6	0	46	184.8
HCM LOS	F	-	E	F

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%
Vol Thru, %	0%	100%	99%	0%	0%	100%	100%	100%	100%	100%	0%
Vol Right, %	0%	0%	1%	0%	100%	0%	0%	0%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	221	265	133	172	430	0	0	0	483	483	253
LT Vol	221	0	0	172	0	0	0	0	0	0	0
Through Vol	0	265	132	0	0	0	0	0	483	483	0
RT Vol	0	0	1	0	430	0	0	0	0	0	253
Lane Flow Rate	246	294	148	191	478	0	0	0	537	537	281
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.735	0.839	0.423	0.599	1.34	0	0	0	1.41	1.41	0.549
Departure Headway (Hd)	13.233	12.709	12.704	12.625	11.404	13.584	13.584	13.584	10.342	10.342	7.789
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	275	288	286	289	325	0	0	0	354	354	467
Service Time	10.933	10.409	10.404	10.325	9.104	11.284	11.284	11.284	8.042	8.042	5.489
HCM Lane V/C Ratio	0.895	1.021	0.517	0.661	1.471	0	0	0	1.517	1.517	0.602
HCM Control Delay	45.4	57.4	24.4	32.5	203.4	16.3	16.3	16.3	228.1	228.1	19.6
HCM Lane LOS	E	F	C	D	F	N	N	N	F	F	C
HCM 95th-tile Q	5.3	7	2	3.6	21	0	0	0	25.2	25.2	3.2

Intersection	
Int Delay, s/veh	8.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	45	79	8	13	180	0	12	23	20	0	99	74
Future Vol, veh/h	45	79	8	13	180	0	12	23	20	0	99	74
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	1	1	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	82	82	82	82	82	82	82	82	82	82	82	82
Heavy Vehicles, %	12	12	12	0	0	0	10	10	10	10	10	10
Mvmt Flow	55	96	10	16	220	0	15	28	24	0	121	90

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	346	249	166	290	282	41	211	0	0	53	0	0
Stage 1	166	166	-	71	71	-	-	-	-	-	-	-
Stage 2	180	83	-	219	211	-	-	-	-	-	-	-
Critical Hdwy	7.22	6.62	6.32	7.1	6.5	6.2	4.2	-	-	4.2	-	-
Critical Hdwy Stg 1	6.22	5.62	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.22	5.62	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.608	4.108	3.408	3.5	4	3.3	2.29	-	-	2.29	-	-
Pot Cap-1 Maneuver	590	637	853	666	630	1036	1313	-	-	1503	-	-
Stage 1	813	742	-	944	840	-	-	-	-	-	-	-
Stage 2	799	807	-	788	731	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	425	629	853	575	622	1035	1313	-	-	1502	-	-
Mov Cap-2 Maneuver	425	629	-	575	622	-	-	-	-	-	-	-
Stage 1	803	742	-	932	829	-	-	-	-	-	-	-
Stage 2	580	797	-	678	731	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	14.3	14.3	1.7	0
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1313	-	-	548	619	1502	-	-
HCM Lane V/C Ratio	0.011	-	-	0.294	0.38	-	-	-
HCM Control Delay (s)	7.8	0	-	14.3	14.3	0	-	-
HCM Lane LOS	A	A	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	1.2	1.8	0	-	-

Intersection	
Int Delay, s/veh	3.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	54	119	418	1	3	159
Future Vol, veh/h	54	119	418	1	3	159
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	3	3	0	0	8	8
Mvmt Flow	63	138	486	1	3	185

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	487	0	-	0	751	487
Stage 1	-	-	-	-	487	-
Stage 2	-	-	-	-	264	-
Critical Hdwy	4.13	-	-	-	6.48	6.28
Critical Hdwy Stg 1	-	-	-	-	5.48	-
Critical Hdwy Stg 2	-	-	-	-	5.48	-
Follow-up Hdwy	2.227	-	-	-	3.572	3.372
Pot Cap-1 Maneuver	1071	-	-	-	370	569
Stage 1	-	-	-	-	606	-
Stage 2	-	-	-	-	766	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1071	-	-	-	346	569
Mov Cap-2 Maneuver	-	-	-	-	346	-
Stage 1	-	-	-	-	567	-
Stage 2	-	-	-	-	766	-

Approach	EB	WB	SB
HCM Control Delay, s	2.7	0	14.6
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1071	-	-	-	562
HCM Lane V/C Ratio	0.059	-	-	-	0.335
HCM Control Delay (s)	8.6	0	-	-	14.6
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.2	-	-	-	1.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱	↰	↑↑		↰		↱	↰	↑	↱
Traffic Volume (veh/h)	0	638	121	44	1117	0	208	0	32	1	0	20
Future Volume (veh/h)	0	638	121	44	1117	0	208	0	32	1	0	20
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1881	1881	1881	1881	0	1881	0	1881	1810	1810	1810
Adj Flow Rate, veh/h	0	672	0	46	1176	0	219	0	21	1	0	4
Adj No. of Lanes	0	2	1	1	2	0	1	0	1	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	1	1	1	1	0	1	0	1	5	5	5
Cap, veh/h	0	2446	1094	55	2834	0	0	0	0	5	5	4
Arrive On Green	0.00	0.68	0.00	0.03	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sat Flow, veh/h	0	3668	1599	1792	3668	0		0		1723	1810	1538
Grp Volume(v), veh/h	0	672	0	46	1176	0		0.0		1	0	4
Grp Sat Flow(s),veh/h/ln	0	1787	1599	1792	1787	0				1723	1810	1538
Q Serve(g_s), s	0.0	3.3	0.0	1.2	4.6	0.0				0.0	0.0	0.1
Cycle Q Clear(g_c), s	0.0	3.3	0.0	1.2	4.6	0.0				0.0	0.0	0.1
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2446	1094	55	2834	0				5	5	4
V/C Ratio(X)	0.00	0.27	0.00	0.83	0.41	0.00				0.20	0.00	0.91
Avail Cap(c_a), veh/h	0	3572	1598	796	3572	0				957	1005	854
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	2.8	0.0	21.7	1.4	0.0				22.4	0.0	22.4
Incr Delay (d2), s/veh	0.0	0.1	0.0	11.2	0.1	0.0				7.4	0.0	98.1
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	1.6	0.0	0.7	2.2	0.0				0.0	0.0	0.2
LnGrp Delay(d),s/veh	0.0	2.9	0.0	32.9	1.6	0.0				29.8	0.0	120.5
LnGrp LOS		A		C	A					C		F
Approach Vol, veh/h		672			1222						5	
Approach Delay, s/veh		2.9			2.8						102.4	
Approach LOS		A			A						F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs			3	4		6		8
Phs Duration (G+Y+Rc), s			4.9	35.4		4.7		40.3
Change Period (Y+Rc), s			3.5	4.6		4.6		4.6
Max Green Setting (Gmax), s			20.0	45.0		25.0		45.0
Max Q Clear Time (g_c+I1), s			3.2	5.3		2.1		6.6
Green Ext Time (p_c), s			0.0	25.5		0.0		25.0

Intersection Summary	
HCM 2010 Ctrl Delay	3.1
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	155	497	11	84	1016	155	20	23	59	114	32	126
Future Volume (veh/h)	155	497	11	84	1016	155	20	23	59	114	32	126
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	0.99		0.99	0.99		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1900	1881	1881	1900	1900	1900	1900	1845	1845	1845
Adj Flow Rate, veh/h	163	523	12	88	1069	155	21	24	61	120	34	-128
Adj No. of Lanes	1	2	0	1	2	0	0	1	0	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	1	1	1	0	0	0	3	3	3
Cap, veh/h	194	2414	55	112	1975	286	68	66	123	234	239	203
Arrive On Green	0.11	0.68	0.68	0.06	0.63	0.63	0.12	0.13	0.13	0.13	0.13	0.00
Sat Flow, veh/h	1792	3572	82	1792	3134	454	190	513	954	1286	1845	1568
Grp Volume(v), veh/h	163	261	274	88	609	615	106	0	0	120	34	-128
Grp Sat Flow(s),veh/h/ln	1792	1787	1867	1792	1787	1801	1658	0	0	1286	1845	1568
Q Serve(g_s), s	8.9	5.6	5.6	4.8	19.1	19.2	0.8	0.0	0.0	3.5	1.6	0.0
Cycle Q Clear(g_c), s	8.9	5.6	5.6	4.8	19.1	19.2	5.8	0.0	0.0	9.3	1.6	0.0
Prop In Lane	1.00		0.04	1.00		0.25	0.20		0.58	1.00		1.00
Lane Grp Cap(c), veh/h	194	1208	1262	112	1126	1135	248	0	0	234	239	203
V/C Ratio(X)	0.84	0.22	0.22	0.78	0.54	0.54	0.43	0.00	0.00	0.51	0.14	-0.63
Avail Cap(c_a), veh/h	222	1208	1262	222	1126	1135	692	0	0	587	745	633
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.93	0.93	0.93	0.09	0.09	0.09	1.00	0.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	43.7	6.2	6.2	46.2	10.4	10.4	40.5	0.0	0.0	42.0	38.6	0.0
Incr Delay (d2), s/veh	18.5	0.4	0.4	0.4	0.2	0.2	0.4	0.0	0.0	0.6	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.4	2.8	2.9	2.4	9.4	9.5	2.8	0.0	0.0	3.2	0.8	0.0
LnGrp Delay(d),s/veh	62.3	6.5	6.5	46.6	10.5	10.5	40.9	0.0	0.0	42.7	38.7	0.0
LnGrp LOS	E	A	A	D	B	B	D			D	D	
Approach Vol, veh/h		698			1312			106			26	
Approach Delay, s/veh		19.5			13.0			40.9			247.5	
Approach LOS		B			B			D			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	10.3	72.2		17.5	14.8	67.6		17.5
Change Period (Y+Rc), s	4.0	4.6		4.6	4.0	4.6		4.6
Max Green Setting (Gmax), s	12.4	34.0		40.4	12.4	24.4		40.4
Max Q Clear Time (g_c+I1), s	6.8	7.6		11.3	10.9	21.2		7.8
Green Ext Time (p_c), s	0.0	8.0		0.7	0.0	2.2		0.7

Intersection Summary	
HCM 2010 Ctrl Delay	19.3
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	107	228	359	44	271	45	819	146	25	55	154	170
Future Volume (veh/h)	107	228	359	44	271	45	819	146	25	55	154	170
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1881	1900	1900	1900	1881	1881	1900	1900	1900	1900
Adj Flow Rate, veh/h	111	238	0	46	282	45	853	152	25	57	160	177
Adj No. of Lanes	1	1	1	1	1	0	2	1	0	1	2	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	1	1	1	0	0	0	1	1	1	0	0	0
Cap, veh/h	147	569	483	64	409	65	572	513	84	74	363	325
Arrive On Green	0.08	0.30	0.00	0.04	0.26	0.26	0.16	0.33	0.33	0.04	0.20	0.20
Sat Flow, veh/h	1792	1881	1599	1810	1600	255	3476	1576	259	1810	1805	1615
Grp Volume(v), veh/h	111	238	0	46	0	327	853	0	177	57	160	177
Grp Sat Flow(s),veh/h/ln	1792	1881	1599	1810	0	1855	1738	0	1835	1810	1805	1615
Q Serve(g_s), s	3.7	6.1	0.0	1.5	0.0	9.7	10.0	0.0	4.4	1.9	4.7	6.0
Cycle Q Clear(g_c), s	3.7	6.1	0.0	1.5	0.0	9.7	10.0	0.0	4.4	1.9	4.7	6.0
Prop In Lane	1.00		1.00	1.00		0.14	1.00		0.14	1.00		1.00
Lane Grp Cap(c), veh/h	147	569	483	64	0	475	572	0	597	74	363	325
V/C Ratio(X)	0.76	0.42	0.00	0.72	0.00	0.69	1.49	0.00	0.30	0.77	0.44	0.54
Avail Cap(c_a), veh/h	590	929	789	596	0	916	572	0	906	447	891	797
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.3	16.9	0.0	29.0	0.0	20.4	25.4	0.0	15.3	28.9	21.3	21.8
Incr Delay (d2), s/veh	7.7	0.6	0.0	5.4	0.0	2.2	230.3	0.0	0.6	6.3	1.0	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	3.3	0.0	0.9	0.0	5.2	23.0	0.0	2.3	1.1	2.5	2.8
LnGrp Delay(d),s/veh	35.0	17.5	0.0	34.4	0.0	22.6	255.6	0.0	15.9	35.2	22.3	23.5
LnGrp LOS	C	B		C		C	F		B	D	C	C
Approach Vol, veh/h		349			373			1030			394	
Approach Delay, s/veh		23.1			24.0			214.4			24.7	
Approach LOS		C			C			F			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.5	16.7	9.5	20.1	7.0	24.3	6.7	22.9
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	10.0	30.0	20.0	30.0	15.0	30.0	20.0	30.0
Max Q Clear Time (g_c+I1), s	12.0	8.0	5.7	11.7	3.9	6.4	3.5	8.1
Green Ext Time (p_c), s	0.0	4.3	0.2	3.9	0.0	4.4	0.0	4.1

Intersection Summary	
HCM 2010 Ctrl Delay	115.4
HCM 2010 LOS	F

Intersection	
Intersection Delay, s/veh	11.1
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	10	20	9	10	270	10	75	7	234	75	0
Future Vol, veh/h	0	10	20	9	10	270	10	75	7	234	75	0
Peak Hour Factor	0.25	0.25	0.25	0.88	0.25	0.88	0.25	0.88	0.88	0.88	0.88	0.25
Heavy Vehicles, %	0	0	0	0	0	0	0	2	2	1	1	0
Mvmt Flow	0	0	0	10	0	307	0	85	8	266	85	0
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	0	10.3	8.9	12.4
HCM LOS	-	B	A	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	11%	0%	3%	76%
Vol Thru, %	82%	33%	3%	24%
Vol Right, %	8%	67%	93%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	92	30	289	309
LT Vol	10	0	9	234
Through Vol	75	10	10	75
RT Vol	7	20	270	0
Lane Flow Rate	93	0	317	351
Geometry Grp	1	1	1	1
Degree of Util (X)	0.13	0	0.391	0.478
Departure Headway (Hd)	5.041	5.006	4.437	4.902
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	704	0	808	730
Service Time	3.125	3.095	2.485	2.971
HCM Lane V/C Ratio	0.132	0	0.392	0.481
HCM Control Delay	8.9	8.1	10.3	12.4
HCM Lane LOS	A	N	B	B
HCM 95th-tile Q	0.4	0	1.9	2.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	18	12	27	200	42	294	57	666	350	163	322	46
Future Volume (veh/h)	18	12	27	200	42	294	57	666	350	163	322	46
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1776	1776	1900	1881	1881	1881	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	20	13	-1	225	47	0	64	748	0	183	362	0
Adj No. of Lanes	1	1	0	1	1	1	1	2	1	1	2	1
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	7	7	7	1	1	1	2	2	2	2	2	2
Cap, veh/h	41	140	0	278	395	335	105	957	428	230	1206	540
Arrive On Green	0.02	0.08	0.00	0.16	0.21	0.00	0.06	0.27	0.00	0.13	0.34	0.00
Sat Flow, veh/h	1691	1776	0	1792	1881	1599	1774	3539	1583	1774	3539	1583
Grp Volume(v), veh/h	20	12	0	225	47	0	64	748	0	183	362	0
Grp Sat Flow(s),veh/h/ln	1691	1776	0	1792	1881	1599	1774	1770	1583	1774	1770	1583
Q Serve(g_s), s	0.6	0.3	0.0	6.0	1.0	0.0	1.7	9.6	0.0	4.9	3.7	0.0
Cycle Q Clear(g_c), s	0.6	0.3	0.0	6.0	1.0	0.0	1.7	9.6	0.0	4.9	3.7	0.0
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	41	140	0	278	395	335	105	957	428	230	1206	540
V/C Ratio(X)	0.49	0.09	0.00	0.81	0.12	0.00	0.61	0.78	0.00	0.80	0.30	0.00
Avail Cap(c_a), veh/h	705	1101	0	747	1166	991	379	1835	821	379	1835	821
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	23.7	21.0	0.0	20.1	15.8	0.0	22.6	16.6	0.0	20.8	11.9	0.0
Incr Delay (d2), s/veh	3.3	0.1	0.0	2.1	0.0	0.0	2.1	0.5	0.0	2.4	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.2	0.0	3.1	0.5	0.0	0.9	4.7	0.0	2.5	1.8	0.0
LnGrp Delay(d),s/veh	27.0	21.1	0.0	22.2	15.8	0.0	24.7	17.1	0.0	23.2	12.0	0.0
LnGrp LOS	C	C		C	B		C	B		C	B	
Approach Vol, veh/h		32			272			812			545	
Approach Delay, s/veh		24.8			21.1			17.7			15.7	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.4	21.3	5.7	14.8	10.9	17.8	12.1	8.4
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	10.5	25.5	20.5	30.5	10.5	25.5	20.5	30.5
Max Q Clear Time (g_c+I1), s	3.7	5.7	2.6	3.0	6.9	11.6	8.0	2.3
Green Ext Time (p_c), s	0.0	1.5	0.0	0.0	0.0	1.4	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	17.8
HCM 2010 LOS	B

Notes

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

Intersection	
Int Delay, s/veh	6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	3	491	39	37	441	20	12	53	38	15	49	5
Future Vol, veh/h	3	491	39	37	441	20	12	53	38	15	49	5
Conflicting Peds, #/hr	1	0	2	2	0	1	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	1	1	1	0	0	0	5	5	5
Mvmt Flow	3	540	43	41	485	22	13	58	42	16	54	5

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	508	0	0	585	0	0	1178	1160	564	1197	1170	497
Stage 1	-	-	-	-	-	-	570	570	-	579	579	-
Stage 2	-	-	-	-	-	-	608	590	-	618	591	-
Critical Hdwy	4.12	-	-	4.11	-	-	7.1	6.5	6.2	7.15	6.55	6.25
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.15	5.55	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.15	5.55	-
Follow-up Hdwy	2.218	-	-	2.209	-	-	3.5	4	3.3	3.545	4.045	3.345
Pot Cap-1 Maneuver	1057	-	-	995	-	-	169	197	529	160	190	567
Stage 1	-	-	-	-	-	-	510	509	-	496	496	-
Stage 2	-	-	-	-	-	-	486	498	-	472	490	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1056	-	-	993	-	-	122	184	528	106	178	566
Mov Cap-2 Maneuver	-	-	-	-	-	-	122	184	-	106	178	-
Stage 1	-	-	-	-	-	-	507	506	-	494	467	-
Stage 2	-	-	-	-	-	-	401	469	-	383	487	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.7	36.2	45.4
HCM LOS			E	E

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	225	1056	-	-	993	-	-	162
HCM Lane V/C Ratio	0.503	0.003	-	-	0.041	-	-	0.468
HCM Control Delay (s)	36.2	8.4	0	-	8.8	0	-	45.4
HCM Lane LOS	E	A	A	-	A	A	-	E
HCM 95th %tile Q(veh)	2.6	0	-	-	0.1	-	-	2.2

Intersection	
Int Delay, s/veh	8.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↰	↱		↕	
Traffic Vol, veh/h	10	497	8	37	439	2	65	39	53	0	17	6
Future Vol, veh/h	10	497	8	37	439	2	65	39	53	0	17	6
Conflicting Peds, #/hr	3	0	0	0	0	3	2	0	0	0	0	2
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	135	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	1	1	1	0	0	0	0	0	0
Mvmt Flow	11	558	9	42	493	2	73	44	60	0	19	7

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	498	0	0	567	0	0	1178	1167	563	1218	1170	499
Stage 1	-	-	-	-	-	-	585	585	-	581	581	-
Stage 2	-	-	-	-	-	-	593	582	-	637	589	-
Critical Hdwy	4.12	-	-	4.11	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.218	-	-	2.209	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1066	-	-	1010	-	-	169	195	530	159	195	576
Stage 1	-	-	-	-	-	-	501	501	-	503	503	-
Stage 2	-	-	-	-	-	-	496	502	-	469	499	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1063	-	-	1010	-	-	145	181	530	108	181	573
Mov Cap-2 Maneuver	-	-	-	-	-	-	145	181	-	108	181	-
Stage 1	-	-	-	-	-	-	493	493	-	494	473	-
Stage 2	-	-	-	-	-	-	443	472	-	374	492	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0.7	54.1	23.5
HCM LOS			F	C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	157	530	1063	-	-	1010	-	-	220
HCM Lane V/C Ratio	0.744	0.112	0.011	-	-	0.041	-	-	0.117
HCM Control Delay (s)	75.2	12.7	8.4	0	-	8.7	0	-	23.5
HCM Lane LOS	F	B	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	4.6	0.4	0	-	-	0.1	-	-	0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	27	33	130	28	6	49	883	176	31	482	45
Future Volume (veh/h)	45	27	33	130	28	6	49	883	176	31	482	45
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1881	1900	1881	1881	1900	1900	1900	1900
Adj Flow Rate, veh/h	49	29	11	141	30	4	53	960	168	34	524	-10
Adj No. of Lanes	0	1	0	0	1	0	1	2	0	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	1	1	1	1	1	1	0	0	0
Cap, veh/h	287	147	38	406	56	6	369	1157	202	73	775	347
Arrive On Green	0.17	0.18	0.18	0.17	0.18	0.18	0.21	0.38	0.38	0.04	0.21	0.00
Sat Flow, veh/h	677	817	211	1188	313	35	1792	3042	532	1810	3610	1615
Grp Volume(v), veh/h	89	0	0	175	0	0	53	564	564	34	524	-10
Grp Sat Flow(s),veh/h/ln	1704	0	0	1536	0	0	1792	1787	1786	1810	1805	1615
Q Serve(g_s), s	0.0	0.0	0.0	2.0	0.0	0.0	0.8	9.7	9.7	0.6	4.5	0.0
Cycle Q Clear(g_c), s	1.4	0.0	0.0	3.5	0.0	0.0	0.8	9.7	9.7	0.6	4.5	0.0
Prop In Lane	0.55		0.12	0.81		0.02	1.00		0.30	1.00		1.00
Lane Grp Cap(c), veh/h	447	0	0	446	0	0	369	680	680	73	775	347
V/C Ratio(X)	0.20	0.00	0.00	0.39	0.00	0.00	0.14	0.83	0.83	0.46	0.68	-0.03
Avail Cap(c_a), veh/h	1657	0	0	1592	0	0	424	1347	1347	428	2721	1217
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	12.1	0.0	0.0	12.9	0.0	0.0	11.0	9.5	9.5	15.9	12.2	0.0
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.2	0.0	0.0	0.1	1.0	1.0	1.7	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.0	0.0	1.6	0.0	0.0	0.4	4.9	4.9	0.3	2.2	0.0
LnGrp Delay(d),s/veh	12.2	0.0	0.0	13.1	0.0	0.0	11.1	10.5	10.5	17.6	12.6	0.0
LnGrp LOS	B			B			B	B	B	B	B	
Approach Vol, veh/h		89			175			1181			548	
Approach Delay, s/veh		12.2			13.1			10.5			13.1	
Approach LOS		B			B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	11.5	11.8		10.6	5.9	17.4		10.6
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	8.0	25.5		33.0	8.0	25.5		33.0
Max Q Clear Time (g_c+I1), s	2.8	6.5		5.5	2.6	11.7		3.4
Green Ext Time (p_c), s	0.0	0.6		0.3	0.0	1.1		0.3

Intersection Summary	
HCM 2010 Ctrl Delay	11.5
HCM 2010 LOS	B

Intersection	
Intersection Delay, s/veh	52.8
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	184	0	97	0	0	0	153	969	0	0	398	201
Future Vol, veh/h	184	0	97	0	0	0	153	969	0	0	398	201
Peak Hour Factor	0.89	0.92	0.89	0.92	0.92	0.92	0.89	0.89	0.92	0.92	0.89	0.89
Heavy Vehicles, %	1	2	1	2	2	2	1	1	2	2	1	1
Mvmt Flow	207	0	109	0	0	0	172	1089	0	0	447	226
Number of Lanes	1	0	1	1	1	1	1	2	0	0	2	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	2	3	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	3	2	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	3	3	2
HCM Control Delay	22.8	0	78.5	18.6
HCM LOS	C	-	F	C

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%
Vol Thru, %	0%	100%	100%	0%	0%	100%	100%	100%	100%	100%	0%
Vol Right, %	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	153	485	485	184	97	0	0	0	199	199	201
LT Vol	153	0	0	184	0	0	0	0	0	0	0
Through Vol	0	485	485	0	0	0	0	0	199	199	0
RT Vol	0	0	0	0	97	0	0	0	0	0	201
Lane Flow Rate	172	544	544	207	109	0	0	0	224	224	226
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.4	1.19	0.923	0.582	0.271	0	0	0	0.532	0.532	0.386
Departure Headway (Hd)	8.381	7.868	6.103	10.454	9.234	11.236	11.236	11.236	8.956	8.956	6.465
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	428	463	588	347	391	0	0	0	405	405	560
Service Time	6.171	5.656	3.891	8.154	6.934	8.936	8.936	8.936	6.656	6.656	4.165
HCM Lane V/C Ratio	0.402	1.175	0.925	0.597	0.279	0	0	0	0.553	0.553	0.404
HCM Control Delay	16.7	131.4	45.2	26.7	15.3	13.9	13.9	13.9	21.4	21.4	13.2
HCM Lane LOS	C	F	E	D	C	N	N	N	C	C	B
HCM 95th-tile Q	1.9	20.6	11.7	3.5	1.1	0	0	0	3	3	1.8

Intersection	
Int Delay, s/veh	9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	43	127	16	25	103	0	12	39	20	0	27	45
Future Vol, veh/h	43	127	16	25	103	0	12	39	20	0	27	45
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	74	74	74	74	74	74	74	74	74	74	74	74
Heavy Vehicles, %	3	3	3	2	2	2	3	3	3	8	8	8
Mvmt Flow	58	172	22	34	139	0	16	53	27	0	36	61

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	235	179	67	263	196	67	97	0	0	80	0	0
Stage 1	67	67	-	99	99	-	-	-	-	-	-	-
Stage 2	168	112	-	164	97	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.12	6.52	6.22	4.13	-	-	4.18	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.518	4.018	3.318	2.227	-	-	2.272	-	-
Pot Cap-1 Maneuver	717	713	994	690	699	997	1490	-	-	1481	-	-
Stage 1	941	837	-	907	813	-	-	-	-	-	-	-
Stage 2	832	801	-	838	815	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	601	705	994	544	691	997	1490	-	-	1481	-	-
Mov Cap-2 Maneuver	601	705	-	544	691	-	-	-	-	-	-	-
Stage 1	931	837	-	897	804	-	-	-	-	-	-	-
Stage 2	680	792	-	652	815	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	13.1	12.4	1.3	0
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1490	-	-	695	656	1481	-	-
HCM Lane V/C Ratio	0.011	-	-	0.362	0.264	-	-	-
HCM Control Delay (s)	7.4	0	-	13.1	12.4	0	-	-
HCM Lane LOS	A	A	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	1.7	1.1	0	-	-

Intersection	
Int Delay, s/veh	2.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	116	369	136	4	2	92
Future Vol, veh/h	116	369	136	4	2	92
Conflicting Peds, #/hr	0	0	0	0	0	1
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	2	1	1	4	4
Mvmt Flow	121	384	142	4	2	96

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	146	0	-	0	770	145
Stage 1	-	-	-	-	144	-
Stage 2	-	-	-	-	626	-
Critical Hdwy	4.12	-	-	-	6.44	6.24
Critical Hdwy Stg 1	-	-	-	-	5.44	-
Critical Hdwy Stg 2	-	-	-	-	5.44	-
Follow-up Hdwy	2.218	-	-	-	3.536	3.336
Pot Cap-1 Maneuver	1436	-	-	-	366	897
Stage 1	-	-	-	-	878	-
Stage 2	-	-	-	-	529	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	1436	-	-	-	327	896
Mov Cap-2 Maneuver	-	-	-	-	327	-
Stage 1	-	-	-	-	784	-
Stage 2	-	-	-	-	529	-

Approach	EB	WB	SB
HCM Control Delay, s	1.9	0	9.7
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1436	-	-	-	864
HCM Lane V/C Ratio	0.084	-	-	-	0.113
HCM Control Delay (s)	7.7	0	-	-	9.7
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0.3	-	-	-	0.4

Background Conditions

AM Peak Hour

PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱	↰	↑↑		↰		↱	↰	↑	↱
Traffic Volume (veh/h)	0	1362	197	100	1287	0	184	0	46	76	4	96
Future Volume (veh/h)	0	1362	197	100	1287	0	184	0	46	76	4	96
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1863	1863	1863	0	1863	0	1863	1792	1792	1792
Adj Flow Rate, veh/h	0	1621	0	119	1532	0	219	0	41	90	5	95
Adj No. of Lanes	0	2	1	1	2	0	1	0	1	1	1	1
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	0	2	2	2	2	0	2	0	2	6	6	6
Cap, veh/h	0	2173	987	141	2674	0	0	0	0	143	150	127
Arrive On Green	0.00	0.61	0.00	0.08	0.76	0.00	0.00	0.00	0.00	0.08	0.08	0.08
Sat Flow, veh/h	0	3632	1583	1774	3632	0		0		1707	1792	1524
Grp Volume(v), veh/h	0	1621	0	119	1532	0		0.0		90	5	95
Grp Sat Flow(s),veh/h/ln	0	1770	1583	1774	1770	0				1707	1792	1524
Q Serve(g_s), s	0.0	21.1	0.0	4.3	12.1	0.0				3.3	0.2	3.9
Cycle Q Clear(g_c), s	0.0	21.1	0.0	4.3	12.1	0.0				3.3	0.2	3.9
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2173	987	141	2674	0				143	150	127
V/C Ratio(X)	0.00	0.75	0.00	0.84	0.57	0.00				0.63	0.03	0.75
Avail Cap(c_a), veh/h	0	2434	1104	536	2674	0				645	677	576
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	1.00	1.00	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	8.9	0.0	29.3	3.4	0.0				28.6	27.2	28.9
Incr Delay (d2), s/veh	0.0	1.3	0.0	5.2	0.4	0.0				1.7	0.0	3.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	10.5	0.0	2.3	5.9	0.0				1.6	0.1	1.8
LnGrp Delay(d),s/veh	0.0	10.2	0.0	34.5	3.8	0.0				30.3	27.2	32.2
LnGrp LOS		B		C	A					C	C	C
Approach Vol, veh/h		1621			1651						190	
Approach Delay, s/veh		10.2			6.0						31.2	
Approach LOS		B			A						C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs			3	4		6		8
Phs Duration (G+Y+Rc), s			9.1	44.8		10.6		54.0
Change Period (Y+Rc), s			3.5	4.6		4.6		4.6
Max Green Setting (Gmax), s			20.0	45.0		25.0		45.0
Max Q Clear Time (g_c+I1), s			6.3	23.1		5.9		14.1
Green Ext Time (p_c), s			0.1	17.2		0.3		29.7

Intersection Summary	
HCM 2010 Ctrl Delay	9.3
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	507	973	2	5	714	135	2	1	1	350	4	666
Future Volume (veh/h)	507	973	2	5	714	135	2	1	1	350	4	666
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1827	1827	1900	1900	1900	1900	1881	1881	1881
Adj Flow Rate, veh/h	563	1081	2	6	793	141	2	1	0	389	4	464
Adj No. of Lanes	1	2	0	1	2	0	0	1	0	1	1	1
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	4	4	4	0	0	0	1	1	1
Cap, veh/h	220	1960	4	11	1246	222	285	132	0	513	582	494
Arrive On Green	0.12	0.54	0.55	0.01	0.42	0.43	0.31	0.31	0.00	0.31	0.31	0.31
Sat Flow, veh/h	1774	3624	7	1740	2946	524	729	426	0	1424	1881	1599
Grp Volume(v), veh/h	563	528	555	6	467	467	3	0	0	389	4	464
Grp Sat Flow(s),veh/h/ln	1774	1770	1862	1740	1736	1734	1155	0	0	1424	1881	1599
Q Serve(g_s), s	12.4	19.5	19.5	0.3	21.3	21.2	0.0	0.0	0.0	25.8	0.1	28.2
Cycle Q Clear(g_c), s	12.4	19.5	19.5	0.3	21.3	21.2	0.1	0.0	0.0	25.9	0.1	28.2
Prop In Lane	1.00		0.00	1.00		0.30	0.67		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	220	957	1007	11	734	733	417	0	0	513	582	494
V/C Ratio(X)	2.56	0.55	0.55	0.56	0.64	0.64	0.01	0.00	0.00	0.76	0.01	0.94
Avail Cap(c_a), veh/h	220	957	1007	216	734	733	517	0	0	639	749	636
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.14	0.14	0.14	0.09	0.09	0.09	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.8	15.0	15.0	49.6	22.8	22.7	23.9	0.0	0.0	32.8	23.9	33.6
Incr Delay (d2), s/veh	703.5	0.3	0.3	1.5	0.4	0.4	0.0	0.0	0.0	3.0	0.0	17.2
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	49.0	9.6	10.1	0.2	10.2	10.2	0.1	0.0	0.0	10.6	0.1	14.7
LnGrp Delay(d),s/veh	747.3	15.3	15.3	51.1	23.2	23.1	23.9	0.0	0.0	35.8	23.9	50.8
LnGrp LOS	F	B	B	D	C	C	C			D	C	D
Approach Vol, veh/h		1646			940			3			857	
Approach Delay, s/veh		265.7			23.3			23.9			43.9	
Approach LOS		F			C			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	14.6	59.3		36.1	16.4	47.5		36.1
Change Period (Y+Rc), s	4.0	4.6		4.6	4.0	4.6		4.6
Max Green Setting (Gmax), s	12.4	34.0		40.4	12.4	24.4		40.4
Max Q Clear Time (g_c+I1), s	14.3	21.5		30.2	14.4	23.3		2.1
Green Ext Time (p_c), s	0.0	6.7		1.3	0.0	0.9		1.5

Intersection Summary	
HCM 2010 Ctrl Delay	144.2
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	145	171	999	21	230	10	557	493	2	10	409	65
Future Volume (veh/h)	145	171	999	21	230	10	557	493	2	10	409	65
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1792	1792	1900	1881	1881	1900	1863	1863	1900
Adj Flow Rate, veh/h	163	192	0	24	258	9	626	554	1	11	460	73
Adj No. of Lanes	1	1	1	1	1	0	2	1	0	1	2	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	6	6	6	1	1	1	2	2	2
Cap, veh/h	196	556	484	24	349	12	455	765	1	7	859	136
Arrive On Green	0.11	0.30	0.00	0.01	0.20	0.21	0.13	0.41	0.41	0.00	0.28	0.29
Sat Flow, veh/h	1774	1863	1583	1707	1721	60	3476	1877	3	1774	3063	483
Grp Volume(v), veh/h	163	192	0	24	0	267	626	0	555	11	265	268
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1707	0	1782	1738	0	1881	1774	1770	1776
Q Serve(g_s), s	6.5	5.8	0.0	1.0	0.0	10.2	9.5	0.0	18.0	0.3	9.2	9.3
Cycle Q Clear(g_c), s	6.5	5.8	0.0	1.0	0.0	10.2	9.5	0.0	18.0	0.3	9.2	9.3
Prop In Lane	1.00		1.00	1.00		0.03	1.00		0.00	1.00		0.27
Lane Grp Cap(c), veh/h	196	556	484	24	0	361	455	0	766	7	496	498
V/C Ratio(X)	0.83	0.35	0.00	0.99	0.00	0.74	1.38	0.00	0.72	1.52	0.53	0.54
Avail Cap(c_a), veh/h	477	757	655	459	0	724	455	0	766	354	719	722
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.6	19.9	0.0	35.8	0.0	27.1	31.5	0.0	18.1	36.1	22.1	22.1
Incr Delay (d2), s/veh	8.9	0.4	0.0	48.3	0.0	3.6	182.5	0.0	4.2	283.4	1.1	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	85.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	3.1	0.0	0.8	0.0	5.3	16.0	0.0	10.1	0.7	4.6	4.7
LnGrp Delay(d),s/veh	40.5	20.3	0.0	84.1	0.0	30.7	214.1	0.0	22.3	404.6	23.2	23.2
LnGrp LOS	D	C		F		C	F		C	F	C	C
Approach Vol, veh/h		355			291			1181			544	
Approach Delay, s/veh		29.6			35.1			123.9			30.9	
Approach LOS		C			D			F			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.5	25.4	13.0	19.7	5.3	34.6	6.0	26.7
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	10.0	30.0	20.0	30.0	15.0	30.0	20.0	30.0
Max Q Clear Time (g_c+I1), s	11.5	11.3	8.5	12.2	2.3	20.0	3.0	7.8
Green Ext Time (p_c), s	0.0	9.5	0.3	3.0	0.0	6.2	0.0	3.3

Intersection Summary	
HCM 2010 Ctrl Delay	77.6
HCM 2010 LOS	E

Intersection	
Intersection Delay, s/veh	11.2
Intersection LOS	B

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	12	303	58	3	182	29
Future Vol, veh/h	12	303	58	3	182	29
Peak Hour Factor	0.77	0.77	0.77	0.77	0.77	0.77
Heavy Vehicles, %	4	4	3	3	2	2
Mvmt Flow	16	394	75	4	236	38
Number of Lanes	1	0	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	1	0
HCM Control Delay	11.4	9	11.5
HCM LOS	B	A	B

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	0%	4%	86%
Vol Thru, %	95%	0%	14%
Vol Right, %	5%	96%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	61	315	211
LT Vol	0	12	182
Through Vol	58	0	29
RT Vol	3	303	0
Lane Flow Rate	79	409	274
Geometry Grp	1	1	1
Degree of Util (X)	0.114	0.489	0.389
Departure Headway (Hd)	5.2	4.305	5.114
Convergence, Y/N	Yes	Yes	Yes
Cap	681	835	699
Service Time	3.291	2.347	3.192
HCM Lane V/C Ratio	0.116	0.49	0.392
HCM Control Delay	9	11.4	11.5
HCM Lane LOS	A	B	B
HCM 95th-tile Q	0.4	2.7	1.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	94	75	426	31	46	47	1027	214	162	1236	46
Future Volume (veh/h)	22	94	75	426	31	46	47	1027	214	162	1236	46
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1810	1810	1900	1863	1863	1863	1881	1881	1881	1863	1863	1863
Adj Flow Rate, veh/h	25	108	54	490	36	0	54	1180	0	186	1421	0
Adj No. of Lanes	1	1	0	1	1	1	1	2	1	1	2	1
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	5	5	5	2	2	2	1	1	1	2	2	2
Cap, veh/h	35	130	65	405	599	519	65	1110	506	211	1393	632
Arrive On Green	0.02	0.11	0.12	0.23	0.32	0.00	0.04	0.31	0.00	0.12	0.39	0.00
Sat Flow, veh/h	1723	1138	569	1774	1863	1583	1792	3574	1599	1774	3539	1583
Grp Volume(v), veh/h	25	0	162	490	36	0	54	1180	0	186	1421	0
Grp Sat Flow(s),veh/h/ln	1723	0	1707	1774	1863	1583	1792	1787	1599	1774	1770	1583
Q Serve(g_s), s	1.3	0.0	8.1	20.0	1.2	0.0	2.6	27.2	0.0	9.0	34.5	0.0
Cycle Q Clear(g_c), s	1.3	0.0	8.1	20.0	1.2	0.0	2.6	27.2	0.0	9.0	34.5	0.0
Prop In Lane	1.00		0.33	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	35	0	195	405	599	519	65	1110	506	211	1393	632
V/C Ratio(X)	0.71	0.00	0.83	1.21	0.06	0.00	0.84	1.06	0.00	0.88	1.02	0.00
Avail Cap(c_a), veh/h	197	0	594	405	861	741	102	1110	506	304	1393	632
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	42.7	0.0	37.9	33.8	20.6	0.0	42.0	30.2	0.0	38.0	26.6	0.0
Incr Delay (d2), s/veh	9.6	0.0	3.5	115.6	0.0	0.0	15.6	45.5	0.0	14.2	29.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.0	4.0	22.7	0.6	0.0	1.6	20.3	0.0	5.3	22.3	0.0
LnGrp Delay(d),s/veh	52.3	0.0	41.5	149.4	20.6	0.0	57.6	75.7	0.0	52.2	55.8	0.0
LnGrp LOS	D		D	F	C		E	F		D	F	
Approach Vol, veh/h		187			526			1234			1607	
Approach Delay, s/veh		42.9			140.6			74.9			55.4	
Approach LOS		D			F			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.2	39.5	6.8	33.2	15.4	32.2	25.0	15.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.5	35.0	10.5	41.0	15.5	25.0	20.5	31.0
Max Q Clear Time (g_c+I1), s	4.6	36.5	3.3	3.2	11.0	29.2	22.0	10.1
Green Ext Time (p_c), s	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.2

Intersection Summary	
HCM 2010 Ctrl Delay	74.1
HCM 2010 LOS	E

Notes

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

Intersection	
Int Delay, s/veh	4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	3	389	16	13	447	15	30	45	7	30	9	13
Future Vol, veh/h	3	389	16	13	447	15	30	45	7	30	9	13
Conflicting Peds, #/hr	0	0	1	1	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	3	3	3	3	3	3	2	2	2	4	4	4
Mvmt Flow	3	442	18	15	508	17	34	51	8	34	10	15

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	525	0	0	461	0	0	1017	1013	452	1034	1014	517
Stage 1	-	-	-	-	-	-	458	458	-	547	547	-
Stage 2	-	-	-	-	-	-	559	555	-	487	467	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.12	6.52	6.22	7.14	6.54	6.24
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.14	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.14	5.54	-
Follow-up Hdwy	2.227	-	-	2.227	-	-	3.518	4.018	3.318	3.536	4.036	3.336
Pot Cap-1 Maneuver	1037	-	-	1095	-	-	216	239	608	209	237	554
Stage 1	-	-	-	-	-	-	583	567	-	518	514	-
Stage 2	-	-	-	-	-	-	513	513	-	558	558	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1037	-	-	1094	-	-	199	233	607	168	231	554
Mov Cap-2 Maneuver	-	-	-	-	-	-	199	233	-	168	231	-
Stage 1	-	-	-	-	-	-	580	564	-	516	504	-
Stage 2	-	-	-	-	-	-	480	503	-	499	555	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.2	30.7	27.8
HCM LOS			D	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	231	1037	-	-	1094	-	-	216
HCM Lane V/C Ratio	0.403	0.003	-	-	0.014	-	-	0.274
HCM Control Delay (s)	30.7	8.5	0	-	8.3	0	-	27.8
HCM Lane LOS	D	A	A	-	A	A	-	D
HCM 95th %tile Q(veh)	1.8	0	-	-	0	-	-	1.1

Intersection	
Int Delay, s/veh	2.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↰	↱		↕	
Traffic Vol, veh/h	5	321	91	90	446	0	17	9	45	7	11	0
Future Vol, veh/h	5	321	91	90	446	0	17	9	45	7	11	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	135	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	84	84	84	84	84	84	84	84	84	84	84
Heavy Vehicles, %	3	3	3	2	2	2	2	2	2	0	0	0
Mvmt Flow	6	382	108	107	531	0	20	11	54	8	13	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	531	0	0	490	0	0	1200	1193	436	1226	1247	531
Stage 1	-	-	-	-	-	-	448	448	-	745	745	-
Stage 2	-	-	-	-	-	-	752	745	-	481	502	-
Critical Hdwy	4.13	-	-	4.12	-	-	7.12	6.52	6.22	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.1	5.5	-
Follow-up Hdwy	2.227	-	-	2.218	-	-	3.518	4.018	3.318	3.5	4	3.3
Pot Cap-1 Maneuver	1031	-	-	1073	-	-	162	187	620	157	175	552
Stage 1	-	-	-	-	-	-	590	573	-	409	424	-
Stage 2	-	-	-	-	-	-	402	421	-	570	545	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1031	-	-	1073	-	-	134	159	620	121	149	552
Mov Cap-2 Maneuver	-	-	-	-	-	-	134	159	-	121	149	-
Stage 1	-	-	-	-	-	-	585	568	-	406	364	-
Stage 2	-	-	-	-	-	-	333	362	-	507	541	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	1.5	20.9	36.1
HCM LOS			C	E

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	142	620	1031	-	-	1073	-	-	137
HCM Lane V/C Ratio	0.218	0.086	0.006	-	-	0.1	-	-	0.156
HCM Control Delay (s)	37.3	11.4	8.5	0	-	8.7	0	-	36.1
HCM Lane LOS	E	B	A	A	-	A	A	-	E
HCM 95th %tile Q(veh)	0.8	0.3	0	-	-	0.3	-	-	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	65	78	118	190	70	35	122	1076	119	74	1343	149
Future Volume (veh/h)	65	78	118	190	70	35	122	1076	119	74	1343	149
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.98	0.99		0.98	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1881	1900	1900	1863	1900	1881	1881	1900	1863	1863	1863
Adj Flow Rate, veh/h	83	100	122	244	90	41	156	1379	126	95	1722	122
Adj No. of Lanes	0	1	0	0	1	0	1	2	0	1	2	1
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Percent Heavy Veh, %	1	1	1	2	2	2	1	1	1	2	2	2
Cap, veh/h	193	232	243	365	118	50	178	1096	100	176	1172	519
Arrive On Green	0.37	0.37	0.38	0.37	0.37	0.38	0.10	0.33	0.34	0.10	0.33	0.33
Sat Flow, veh/h	356	626	654	772	318	134	1792	3310	301	1774	3539	1567
Grp Volume(v), veh/h	305	0	0	375	0	0	156	741	764	95	1722	122
Grp Sat Flow(s),veh/h/ln	1636	0	0	1224	0	0	1792	1787	1824	1774	1770	1567
Q Serve(g_s), s	0.0	0.0	0.0	11.1	0.0	0.0	6.5	25.0	25.0	3.8	25.0	4.3
Cycle Q Clear(g_c), s	10.4	0.0	0.0	21.5	0.0	0.0	6.5	25.0	25.0	3.8	25.0	4.3
Prop In Lane	0.27		0.40	0.65		0.11	1.00		0.16	1.00		1.00
Lane Grp Cap(c), veh/h	667	0	0	533	0	0	178	592	604	176	1172	519
V/C Ratio(X)	0.46	0.00	0.00	0.70	0.00	0.00	0.88	1.25	1.26	0.54	1.47	0.24
Avail Cap(c_a), veh/h	759	0	0	610	0	0	178	592	604	176	1172	519
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.1	0.0	0.0	22.0	0.0	0.0	33.6	25.3	25.2	32.4	25.3	18.3
Incr Delay (d2), s/veh	0.2	0.0	0.0	2.3	0.0	0.0	34.4	127.3	131.9	1.8	216.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.9	0.0	0.0	7.4	0.0	0.0	4.9	33.1	34.5	2.0	47.2	1.8
LnGrp Delay(d),s/veh	18.3	0.0	0.0	24.3	0.0	0.0	67.9	152.6	157.1	34.2	241.3	18.4
LnGrp LOS	B			C			E	F	F	C	F	B
Approach Vol, veh/h		305			375			1661			1939	
Approach Delay, s/veh		18.3			24.3			146.7			217.2	
Approach LOS		B			C			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	12.5	30.0		33.0	12.5	30.0		33.0
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	8.0	25.5		33.0	8.0	25.5		33.0
Max Q Clear Time (g_c+I1), s	8.5	27.0		23.5	5.8	27.0		12.4
Green Ext Time (p_c), s	0.0	0.0		0.9	0.0	0.0		1.1

Intersection Summary		
HCM 2010 Ctrl Delay		158.7
HCM 2010 LOS		F

Intersection	
Int Delay, s/veh	7.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	39	62	1	2	180	0	0	21	0	0	102	60
Future Vol, veh/h	39	62	1	2	180	0	0	21	0	0	102	60
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	1	1	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	82	82	82	82	82	82	82	82	82	82	82	82
Heavy Vehicles, %	12	12	12	0	0	0	10	10	10	10	10	10
Mvmt Flow	48	76	1	2	220	0	0	26	0	0	124	73

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	297	188	161	226	224	27	197	0	0	27	0	0
Stage 1	161	161	-	27	27	-	-	-	-	-	-	-
Stage 2	136	27	-	199	197	-	-	-	-	-	-	-
Critical Hdwy	7.22	6.62	6.32	7.1	6.5	6.2	4.2	-	-	4.2	-	-
Critical Hdwy Stg 1	6.22	5.62	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.22	5.62	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.608	4.108	3.408	3.5	4	3.3	2.29	-	-	2.29	-	-
Pot Cap-1 Maneuver	636	689	858	734	678	1054	1329	-	-	1536	-	-
Stage 1	818	746	-	996	877	-	-	-	-	-	-	-
Stage 2	844	853	-	807	742	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	476	688	858	671	677	1053	1329	-	-	1535	-	-
Mov Cap-2 Maneuver	476	688	-	671	677	-	-	-	-	-	-	-
Stage 1	818	746	-	995	876	-	-	-	-	-	-	-
Stage 2	633	852	-	724	742	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12.7	12.9	0	0
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1329	-	-	589	677	1535	-	-
HCM Lane V/C Ratio	-	-	-	0.211	0.328	-	-	-
HCM Control Delay (s)	0	-	-	12.7	12.9	0	-	-
HCM Lane LOS	A	-	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.8	1.4	0	-	-

Intersection	
Int Delay, s/veh	2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	17	131	504	0	1	95
Future Vol, veh/h	17	131	504	0	1	95
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	3	3	0	0	8	8
Mvmt Flow	20	152	586	0	1	110

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	586	0	-	0	778	586
Stage 1	-	-	-	-	586	-
Stage 2	-	-	-	-	192	-
Critical Hdwy	4.13	-	-	-	6.48	6.28
Critical Hdwy Stg 1	-	-	-	-	5.48	-
Critical Hdwy Stg 2	-	-	-	-	5.48	-
Follow-up Hdwy	2.227	-	-	-	3.572	3.372
Pot Cap-1 Maneuver	984	-	-	-	357	499
Stage 1	-	-	-	-	545	-
Stage 2	-	-	-	-	826	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	984	-	-	-	349	499
Mov Cap-2 Maneuver	-	-	-	-	349	-
Stage 1	-	-	-	-	533	-
Stage 2	-	-	-	-	826	-

Approach	EB	WB	SB
HCM Control Delay, s	1	0	14.3
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	984	-	-	-	497
HCM Lane V/C Ratio	0.02	-	-	-	0.225
HCM Control Delay (s)	8.7	0	-	-	14.3
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱	↰	↑↑		↰		↱	↰	↑	↱
Traffic Volume (veh/h)	0	1316	153	71	1688	0	270	0	107	103	0	149
Future Volume (veh/h)	0	1316	153	71	1688	0	270	0	107	103	0	149
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1881	1881	1881	1881	0	1881	0	1881	1810	1810	1810
Adj Flow Rate, veh/h	0	1385	0	75	1777	0	284	0	100	108	0	140
Adj No. of Lanes	0	2	1	1	2	0	1	0	1	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	1	1	1	1	0	1	0	1	5	5	5
Cap, veh/h	0	2241	1002	97	2628	0	0	0	0	211	222	189
Arrive On Green	0.00	0.63	0.00	0.05	0.74	0.00	0.00	0.00	0.00	0.12	0.00	0.12
Sat Flow, veh/h	0	3668	1599	1792	3668	0		0		1723	1810	1538
Grp Volume(v), veh/h	0	1385	0	75	1777	0		0.0		108	0	140
Grp Sat Flow(s),veh/h/ln	0	1787	1599	1792	1787	0				1723	1810	1538
Q Serve(g_s), s	0.0	15.3	0.0	2.7	16.9	0.0				3.8	0.0	5.7
Cycle Q Clear(g_c), s	0.0	15.3	0.0	2.7	16.9	0.0				3.8	0.0	5.7
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2241	1002	97	2628	0				211	222	189
V/C Ratio(X)	0.00	0.62	0.00	0.77	0.68	0.00				0.51	0.00	0.74
Avail Cap(c_a), veh/h	0	2487	1112	554	2628	0				666	699	594
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	7.4	0.0	30.2	4.5	0.0				26.6	0.0	27.4
Incr Delay (d2), s/veh	0.0	0.5	0.0	4.8	0.8	0.0				0.7	0.0	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	7.5	0.0	1.4	8.4	0.0				1.8	0.0	2.5
LnGrp Delay(d),s/veh	0.0	7.9	0.0	35.0	5.3	0.0				27.3	0.0	29.6
LnGrp LOS		A		D	A					C		C
Approach Vol, veh/h		1385			1852						248	
Approach Delay, s/veh		7.9			6.5						28.6	
Approach LOS		A			A						C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs			3	4		6		8
Phs Duration (G+Y+Rc), s			7.0	45.2		12.5		52.2
Change Period (Y+Rc), s			3.5	4.6		4.6		4.6
Max Green Setting (Gmax), s			20.0	45.0		25.0		45.0
Max Q Clear Time (g_c+I1), s			4.7	17.3		7.7		18.9
Green Ext Time (p_c), s			0.1	23.3		0.3		25.1

Intersection Summary	
HCM 2010 Ctrl Delay	8.6
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	713	803	1	2	1153	209	5	1	8	162	5	601
Future Volume (veh/h)	713	803	1	2	1153	209	5	1	8	162	5	601
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1900	1881	1881	1900	1900	1900	1900	1845	1845	1845
Adj Flow Rate, veh/h	751	845	1	2	1214	212	5	1	7	171	5	372
Adj No. of Lanes	1	2	0	1	2	0	0	1	0	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	1	1	1	0	0	0	3	3	3
Cap, veh/h	222	2205	3	4	1462	254	168	50	196	439	487	407
Arrive On Green	0.12	0.60	0.60	0.00	0.48	0.48	0.26	0.26	0.26	0.26	0.26	0.26
Sat Flow, veh/h	1792	3663	4	1792	3046	528	448	188	742	1382	1845	1541
Grp Volume(v), veh/h	751	412	434	2	709	717	13	0	0	171	5	372
Grp Sat Flow(s),veh/h/ln	1792	1787	1880	1792	1787	1787	1378	0	0	1382	1845	1541
Q Serve(g_s), s	12.4	11.9	11.9	0.1	34.2	34.8	0.0	0.0	0.0	9.7	0.2	23.4
Cycle Q Clear(g_c), s	12.4	11.9	11.9	0.1	34.2	34.8	0.6	0.0	0.0	10.2	0.2	23.4
Prop In Lane	1.00		0.00	1.00		0.30	0.38		0.54	1.00		1.00
Lane Grp Cap(c), veh/h	222	1076	1132	4	858	858	405	0	0	439	487	407
V/C Ratio(X)	3.38	0.38	0.38	0.52	0.83	0.84	0.03	0.00	0.00	0.39	0.01	0.92
Avail Cap(c_a), veh/h	222	1076	1132	222	858	858	591	0	0	632	745	623
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.50	0.50	0.50	0.09	0.09	0.09	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.8	10.3	10.3	49.8	22.4	22.6	27.4	0.0	0.0	30.8	27.2	35.7
Incr Delay (d2), s/veh	1076.9	0.5	0.5	3.5	0.9	0.9	0.0	0.0	0.0	0.2	0.0	9.9
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	72.6	6.0	6.3	0.1	17.0	17.4	0.3	0.0	0.0	4.0	0.1	11.1
LnGrp Delay(d),s/veh	1120.7	10.8	10.8	53.4	23.3	23.5	27.4	0.0	0.0	31.0	27.2	45.6
LnGrp LOS	F	B	B	D	C	C	C			C	C	D
Approach Vol, veh/h		1597			1428			13			548	
Approach Delay, s/veh		532.8			23.4			27.4			40.9	
Approach LOS		F			C			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	14.2	64.8		31.0	16.4	52.6		31.0
Change Period (Y+Rc), s	4.0	4.6		4.6	4.0	4.6		4.6
Max Green Setting (Gmax), s	12.4	34.0		40.4	12.4	24.4		40.4
Max Q Clear Time (g_c+I1), s	12.1	13.9		25.4	14.4	36.8		2.6
Green Ext Time (p_c), s	0.0	10.2		1.0	0.0	0.0		1.0

Intersection Summary	
HCM 2010 Ctrl Delay	252.9
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	99	193	677	8	259	7	967	605	7	7	533	141
Future Volume (veh/h)	99	193	677	8	259	7	967	605	7	7	533	141
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1881	1900	1900	1900	1881	1881	1900	1900	1900	1900
Adj Flow Rate, veh/h	103	201	0	8	270	5	1007	630	6	7	555	147
Adj No. of Lanes	1	1	1	1	1	0	2	1	0	1	2	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	1	1	1	0	0	0	1	1	1	0	0	0
Cap, veh/h	136	518	440	15	387	7	494	843	8	13	901	238
Arrive On Green	0.08	0.28	0.00	0.01	0.21	0.21	0.14	0.45	0.45	0.01	0.32	0.32
Sat Flow, veh/h	1792	1881	1599	1810	1859	34	3476	1860	18	1810	2827	746
Grp Volume(v), veh/h	103	201	0	8	0	275	1007	0	636	7	354	348
Grp Sat Flow(s),veh/h/ln	1792	1881	1599	1810	0	1894	1738	0	1878	1810	1805	1768
Q Serve(g_s), s	4.0	6.1	0.0	0.3	0.0	9.5	10.0	0.0	19.7	0.3	11.7	11.8
Cycle Q Clear(g_c), s	4.0	6.1	0.0	0.3	0.0	9.5	10.0	0.0	19.7	0.3	11.7	11.8
Prop In Lane	1.00		1.00	1.00		0.02	1.00		0.01	1.00		0.42
Lane Grp Cap(c), veh/h	136	518	440	15	0	394	494	0	851	13	575	563
V/C Ratio(X)	0.76	0.39	0.00	0.54	0.00	0.70	2.04	0.00	0.75	0.53	0.62	0.62
Avail Cap(c_a), veh/h	509	802	682	514	0	807	494	0	851	386	769	754
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.9	20.7	0.0	34.8	0.0	25.8	30.2	0.0	15.9	34.8	20.3	20.4
Incr Delay (d2), s/veh	8.4	0.6	0.0	10.7	0.0	2.7	474.7	0.0	4.4	11.8	1.3	1.3
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	2.3	3.2	0.0	0.2	0.0	5.3	37.3	0.0	11.1	0.2	6.0	5.9
LnGrp Delay(d),s/veh	40.3	21.3	0.0	45.4	0.0	28.5	504.9	0.0	20.3	46.6	21.6	21.7
LnGrp LOS	D	C		D		C	F		C	D	C	C
Approach Vol, veh/h		304			283			1643			709	
Approach Delay, s/veh		27.7			29.0			317.3			21.9	
Approach LOS		C			C			F			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.5	26.9	9.8	19.1	5.0	36.4	5.1	23.9
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	10.0	30.0	20.0	30.0	15.0	30.0	20.0	30.0
Max Q Clear Time (g_c+I1), s	12.0	13.8	6.0	11.5	2.3	21.7	2.3	8.1
Green Ext Time (p_c), s	0.0	8.7	0.2	3.2	0.0	6.2	0.0	3.4

Intersection Summary	
HCM 2010 Ctrl Delay	188.3
HCM 2010 LOS	F

Intersection	
Intersection Delay, s/veh	9.1
Intersection LOS	A

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	6	213	45	5	170	37
Future Vol, veh/h	6	213	45	5	170	37
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles, %	0	0	2	2	1	1
Mvmt Flow	7	242	51	6	193	42
Number of Lanes	1	0	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	1	0
HCM Control Delay	8.6	8.1	9.8
HCM LOS	A	A	A

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	0%	3%	82%
Vol Thru, %	90%	0%	18%
Vol Right, %	10%	97%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	50	219	207
LT Vol	0	6	170
Through Vol	45	0	37
RT Vol	5	213	0
Lane Flow Rate	57	249	235
Geometry Grp	1	1	1
Degree of Util (X)	0.074	0.278	0.305
Departure Headway (Hd)	4.676	4.025	4.67
Convergence, Y/N	Yes	Yes	Yes
Cap	765	893	769
Service Time	2.712	2.043	2.701
HCM Lane V/C Ratio	0.075	0.279	0.306
HCM Control Delay	8.1	8.6	9.8
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.2	1.1	1.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	18	12	27	207	42	218	57	1369	368	67	1158	46
Future Volume (veh/h)	18	12	27	207	42	218	57	1369	368	67	1158	46
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1776	1776	1900	1881	1881	1881	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	20	13	-1	233	47	0	64	1538	0	75	1301	0
Adj No. of Lanes	1	1	0	1	1	1	1	2	1	1	2	1
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	7	7	7	1	1	1	2	2	2	2	2	2
Cap, veh/h	40	127	0	280	385	327	96	1479	662	105	1495	669
Arrive On Green	0.02	0.07	0.00	0.16	0.20	0.00	0.05	0.42	0.00	0.06	0.42	0.00
Sat Flow, veh/h	1691	1776	0	1792	1881	1599	1774	3539	1583	1774	3539	1583
Grp Volume(v), veh/h	20	12	0	233	47	0	64	1538	0	75	1301	0
Grp Sat Flow(s),veh/h/ln	1691	1776	0	1792	1881	1599	1774	1770	1583	1774	1770	1583
Q Serve(g_s), s	0.7	0.4	0.0	7.7	1.2	0.0	2.2	25.5	0.0	2.5	20.5	0.0
Cycle Q Clear(g_c), s	0.7	0.4	0.0	7.7	1.2	0.0	2.2	25.5	0.0	2.5	20.5	0.0
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	40	127	0	280	385	327	96	1479	662	105	1495	669
V/C Ratio(X)	0.50	0.09	0.00	0.83	0.12	0.00	0.67	1.04	0.00	0.72	0.87	0.00
Avail Cap(c_a), veh/h	568	887	0	602	940	799	305	1479	662	305	1495	669
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	29.4	26.5	0.0	25.0	19.8	0.0	28.3	17.8	0.0	28.2	16.1	0.0
Incr Delay (d2), s/veh	3.6	0.1	0.0	2.4	0.1	0.0	2.9	34.5	0.0	3.4	5.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.2	0.0	4.0	0.6	0.0	1.1	19.4	0.0	1.3	11.1	0.0
LnGrp Delay(d),s/veh	33.0	26.6	0.0	27.4	19.8	0.0	31.2	52.3	0.0	31.6	21.7	0.0
LnGrp LOS	C	C		C	B		C	F		C	C	
Approach Vol, veh/h		32			280			1602			1376	
Approach Delay, s/veh		30.6			26.1			51.5			22.2	
Approach LOS		C			C			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.8	30.3	5.9	17.0	8.1	30.0	14.1	8.9
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	10.5	25.5	20.5	30.5	10.5	25.5	20.5	30.5
Max Q Clear Time (g_c+I1), s	4.2	22.5	2.7	3.2	4.5	27.5	9.7	2.4
Green Ext Time (p_c), s	0.0	1.9	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	36.9
HCM 2010 LOS	D

Notes

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

Intersection	
Int Delay, s/veh	2.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	3	400	39	12	352	13	12	25	6	9	27	5
Future Vol, veh/h	3	400	39	12	352	13	12	25	6	9	27	5
Conflicting Peds, #/hr	1	0	2	2	0	1	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	1	1	1	0	0	0	5	5	5
Mvmt Flow	3	440	43	13	387	14	13	27	7	10	30	5

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	402	0	0	485	0	0	908	898	464	906	912	395
Stage 1	-	-	-	-	-	-	470	470	-	421	421	-
Stage 2	-	-	-	-	-	-	438	428	-	485	491	-
Critical Hdwy	4.12	-	-	4.11	-	-	7.1	6.5	6.2	7.15	6.55	6.25
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.15	5.55	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.15	5.55	-
Follow-up Hdwy	2.218	-	-	2.209	-	-	3.5	4	3.3	3.545	4.045	3.345
Pot Cap-1 Maneuver	1157	-	-	1083	-	-	258	281	602	254	271	648
Stage 1	-	-	-	-	-	-	578	563	-	604	584	-
Stage 2	-	-	-	-	-	-	601	588	-	558	543	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1156	-	-	1081	-	-	230	275	601	228	265	647
Mov Cap-2 Maneuver	-	-	-	-	-	-	230	275	-	228	265	-
Stage 1	-	-	-	-	-	-	575	560	-	601	574	-
Stage 2	-	-	-	-	-	-	556	578	-	523	540	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.3	20.4	20.6
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	281	1156	-	-	1081	-	-	275
HCM Lane V/C Ratio	0.168	0.003	-	-	0.012	-	-	0.164
HCM Control Delay (s)	20.4	8.1	0	-	8.4	0	-	20.6
HCM Lane LOS	C	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0.6	0	-	-	0	-	-	0.6

Intersection	
Int Delay, s/veh	3.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↰	↱		↕	
Traffic Vol, veh/h	2	376	8	36	324	2	65	21	64	0	3	0
Future Vol, veh/h	2	376	8	36	324	2	65	21	64	0	3	0
Conflicting Peds, #/hr	3	0	0	0	0	3	2	0	0	0	0	2
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	135	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	1	1	1	0	0	0	0	0	0
Mvmt Flow	2	422	9	40	364	2	73	24	72	0	3	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	369	0	0	431	0	0	880	880	427	927	883	370
Stage 1	-	-	-	-	-	-	431	431	-	448	448	-
Stage 2	-	-	-	-	-	-	449	449	-	479	435	-
Critical Hdwy	4.12	-	-	4.11	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.218	-	-	2.209	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1190	-	-	1134	-	-	270	288	632	251	287	680
Stage 1	-	-	-	-	-	-	607	586	-	594	576	-
Stage 2	-	-	-	-	-	-	593	576	-	571	584	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1187	-	-	1134	-	-	258	274	632	200	273	677
Mov Cap-2 Maneuver	-	-	-	-	-	-	258	274	-	200	273	-
Stage 1	-	-	-	-	-	-	606	585	-	591	549	-
Stage 2	-	-	-	-	-	-	562	549	-	485	583	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.8	20.1	18.4
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	262	632	1187	-	-	1134	-	-	273
HCM Lane V/C Ratio	0.369	0.114	0.002	-	-	0.036	-	-	0.012
HCM Control Delay (s)	26.6	11.4	8	0	-	8.3	0	-	18.4
HCM Lane LOS	D	B	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	1.6	0.4	0	-	-	0.1	-	-	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	27	33	68	28	6	49	1604	110	31	1325	45
Future Volume (veh/h)	45	27	33	68	28	6	49	1604	110	31	1325	45
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.99	0.99		0.99	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
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1881	1900	1881	1881	1900	1900	1900	1900
Adj Flow Rate, veh/h	49	29	11	74	30	4	53	1743	97	34	1440	-10
Adj No. of Lanes	0	1	0	0	1	0	1	2	0	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	1	1	1	1	1	1	0	0	0
Cap, veh/h	213	92	26	257	71	7	232	1857	103	70	1617	723
Arrive On Green	0.11	0.12	0.12	0.11	0.12	0.12	0.13	0.54	0.54	0.04	0.45	0.00
Sat Flow, veh/h	725	738	206	992	571	60	1792	3444	190	1810	3610	1615
Grp Volume(v), veh/h	89	0	0	108	0	0	53	898	942	34	1440	-10
Grp Sat Flow(s),veh/h/ln	1669	0	0	1623	0	0	1792	1787	1847	1810	1805	1615
Q Serve(g_s), s	0.0	0.0	0.0	0.6	0.0	0.0	1.2	21.1	21.7	0.8	16.6	0.0
Cycle Q Clear(g_c), s	2.1	0.0	0.0	2.6	0.0	0.0	1.2	21.1	21.7	0.8	16.6	0.0
Prop In Lane	0.55		0.12	0.69		0.04	1.00		0.10	1.00		1.00
Lane Grp Cap(c), veh/h	313	0	0	318	0	0	232	964	996	70	1617	723
V/C Ratio(X)	0.28	0.00	0.00	0.34	0.00	0.00	0.23	0.93	0.95	0.49	0.89	-0.01
Avail Cap(c_a), veh/h	1229	0	0	1215	0	0	316	1005	1039	319	2029	908
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	18.4	0.0	0.0	18.6	0.0	0.0	17.7	9.7	9.8	21.4	11.5	0.0
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.2	0.0	0.0	0.2	14.1	15.8	2.0	3.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	0.0	0.0	1.3	0.0	0.0	0.6	14.0	15.1	0.5	9.1	0.0
LnGrp Delay(d),s/veh	18.6	0.0	0.0	18.9	0.0	0.0	17.9	23.8	25.6	23.3	15.4	0.0
LnGrp LOS	B			B			B	C	C	C	B	
Approach Vol, veh/h		89			108			1893			1464	
Approach Delay, s/veh		18.6			18.9			24.5			15.7	
Approach LOS		B			B			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	10.4	24.8		10.2	6.2	29.0		10.2
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	8.0	25.5		33.0	8.0	25.5		33.0
Max Q Clear Time (g_c+I1), s	3.2	18.6		4.6	2.8	23.7		4.1
Green Ext Time (p_c), s	0.0	1.7		0.2	0.0	0.7		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	20.6
HCM 2010 LOS	C

Intersection	
Int Delay, s/veh	8.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	44	113	1	0	74	0	0	40	0	0	24	14
Future Vol, veh/h	44	113	1	0	74	0	0	40	0	0	24	14
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	74	74	74	74	74	74	74	74	74	74	74	74
Heavy Vehicles, %	3	3	3	2	2	2	3	3	3	8	8	8
Mvmt Flow	59	153	1	0	100	0	0	54	0	0	32	19

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	146	96	42	173	105	54	51	0	0	54	0	0
Stage 1	42	42	-	54	54	-	-	-	-	-	-	-
Stage 2	104	54	-	119	51	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.12	6.52	6.22	4.13	-	-	4.18	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.518	4.018	3.318	2.227	-	-	2.272	-	-
Pot Cap-1 Maneuver	820	792	1026	790	785	1013	1549	-	-	1514	-	-
Stage 1	970	858	-	958	850	-	-	-	-	-	-	-
Stage 2	899	848	-	885	852	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	740	792	1026	672	785	1013	1549	-	-	1514	-	-
Mov Cap-2 Maneuver	740	792	-	672	785	-	-	-	-	-	-	-
Stage 1	970	858	-	958	850	-	-	-	-	-	-	-
Stage 2	793	848	-	727	852	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11.4	10.3	0	0
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1549	-	-	778	785	1514	-	-
HCM Lane V/C Ratio	-	-	-	0.274	0.127	-	-	-
HCM Control Delay (s)	0	-	-	11.4	10.3	0	-	-
HCM Lane LOS	A	-	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	1.1	0.4	0	-	-

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	34	436	163	1	0	25
Future Vol, veh/h	34	436	163	1	0	25
Conflicting Peds, #/hr	0	0	0	0	0	1
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	2	1	1	4	4
Mvmt Flow	35	454	170	1	0	26

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	171	0	-	0	695	172
Stage 1	-	-	-	-	171	-
Stage 2	-	-	-	-	524	-
Critical Hdwy	4.12	-	-	-	6.44	6.24
Critical Hdwy Stg 1	-	-	-	-	5.44	-
Critical Hdwy Stg 2	-	-	-	-	5.44	-
Follow-up Hdwy	2.218	-	-	-	3.536	3.336
Pot Cap-1 Maneuver	1406	-	-	-	405	866
Stage 1	-	-	-	-	854	-
Stage 2	-	-	-	-	590	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	1406	-	-	-	392	865
Mov Cap-2 Maneuver	-	-	-	-	392	-
Stage 1	-	-	-	-	826	-
Stage 2	-	-	-	-	590	-

Approach	EB	WB	SB
HCM Control Delay, s	0.6	0	9.3
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1406	-	-	-	865
HCM Lane V/C Ratio	0.025	-	-	-	0.03
HCM Control Delay (s)	7.6	0	-	-	9.3
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	-	0.1

Background with Plan Conditions

AM Peak Hour

PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱	↰	↑↑		↰		↱	↰	↑	↱
Traffic Volume (veh/h)	0	1444	205	113	1436	0	198	0	56	76	4	96
Future Volume (veh/h)	0	1444	205	113	1436	0	198	0	56	76	4	96
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1863	1863	1863	0	1863	0	1863	1792	1792	1792
Adj Flow Rate, veh/h	0	1719	0	135	1710	0	236	0	53	90	5	95
Adj No. of Lanes	0	2	1	1	2	0	1	0	1	1	1	1
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	0	2	2	2	2	0	2	0	2	6	6	6
Cap, veh/h	0	2140	972	161	2678	0	0	0	0	142	149	127
Arrive On Green	0.00	0.60	0.00	0.09	0.76	0.00	0.00	0.00	0.00	0.08	0.08	0.08
Sat Flow, veh/h	0	3632	1583	1774	3632	0		0		1707	1792	1524
Grp Volume(v), veh/h	0	1719	0	135	1710	0		0.0		90	5	95
Grp Sat Flow(s),veh/h/ln	0	1770	1583	1774	1770	0				1707	1792	1524
Q Serve(g_s), s	0.0	24.3	0.0	4.9	14.8	0.0				3.3	0.2	4.0
Cycle Q Clear(g_c), s	0.0	24.3	0.0	4.9	14.8	0.0				3.3	0.2	4.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2140	972	161	2678	0				142	149	127
V/C Ratio(X)	0.00	0.80	0.00	0.84	0.64	0.00				0.63	0.03	0.75
Avail Cap(c_a), veh/h	0	2416	1096	532	2678	0				640	673	572
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	1.00	1.00	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	9.9	0.0	29.1	3.7	0.0				28.8	27.4	29.1
Incr Delay (d2), s/veh	0.0	2.0	0.0	4.5	0.6	0.0				1.7	0.0	3.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	12.3	0.0	2.6	7.1	0.0				1.6	0.1	1.8
LnGrp Delay(d),s/veh	0.0	11.9	0.0	33.6	4.3	0.0				30.6	27.4	32.4
LnGrp LOS		B		C	A					C	C	C
Approach Vol, veh/h		1719			1845						190	
Approach Delay, s/veh		11.9			6.5						31.4	
Approach LOS		B			A						C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs			3	4		6		8
Phs Duration (G+Y+Rc), s			9.9	44.5		10.6		54.4
Change Period (Y+Rc), s			3.5	4.6		4.6		4.6
Max Green Setting (Gmax), s			20.0	45.0		25.0		45.0
Max Q Clear Time (g_c+I1), s			6.9	26.3		6.0		16.8
Green Ext Time (p_c), s			0.1	13.6		0.3		27.6

Intersection Summary	
HCM 2010 Ctrl Delay	10.2
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	517	1050	7	41	855	164	17	23	53	366	16	672
Future Volume (veh/h)	517	1050	7	41	855	164	17	23	53	366	16	672
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1827	1827	1900	1900	1900	1900	1881	1881	1881
Adj Flow Rate, veh/h	574	1167	8	46	950	173	19	26	58	407	18	471
Adj No. of Lanes	1	2	0	1	2	0	0	1	0	1	1	1
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	4	4	4	0	0	0	1	1	1
Cap, veh/h	220	1809	12	58	1208	220	106	151	277	508	603	512
Arrive On Green	0.12	0.50	0.51	0.03	0.41	0.42	0.32	0.32	0.33	0.32	0.32	0.32
Sat Flow, veh/h	1774	3603	25	1740	2934	534	199	472	865	1321	1881	1599
Grp Volume(v), veh/h	574	573	602	46	562	561	103	0	0	407	18	471
Grp Sat Flow(s),veh/h/ln	1774	1770	1858	1740	1736	1733	1536	0	0	1321	1881	1599
Q Serve(g_s), s	12.4	23.8	23.9	2.6	28.2	28.2	0.0	0.0	0.0	24.6	0.7	28.4
Cycle Q Clear(g_c), s	12.4	23.8	23.9	2.6	28.2	28.2	4.3	0.0	0.0	28.9	0.7	28.4
Prop In Lane	1.00		0.01	1.00		0.31	0.18		0.56	1.00		1.00
Lane Grp Cap(c), veh/h	220	888	933	58	714	713	535	0	0	508	603	512
V/C Ratio(X)	2.61	0.65	0.65	0.79	0.79	0.79	0.19	0.00	0.00	0.80	0.03	0.92
Avail Cap(c_a), veh/h	220	888	933	216	714	713	649	0	0	610	749	636
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	0.09	0.09	0.09	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.8	18.3	18.3	48.0	25.6	25.5	24.4	0.0	0.0	32.5	23.3	32.7
Incr Delay (d2), s/veh	725.4	0.3	0.3	0.8	0.8	0.8	0.1	0.0	0.0	5.2	0.0	14.8
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	50.4	11.7	12.3	1.3	13.6	13.6	2.1	0.0	0.0	11.6	0.3	14.5
LnGrp Delay(d),s/veh	769.2	18.7	18.6	48.8	26.4	26.4	24.5	0.0	0.0	37.8	23.3	47.5
LnGrp LOS	F	B	B	D	C	C	C			D	C	D
Approach Vol, veh/h		1749			1169			103			896	
Approach Delay, s/veh		265.0			27.3			24.5			42.6	
Approach LOS		F			C			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	7.3	55.4		37.2	16.4	46.4		37.2
Change Period (Y+Rc), s	4.0	4.6		4.6	4.0	4.6		4.6
Max Green Setting (Gmax), s	12.4	34.0		40.4	12.4	24.4		40.4
Max Q Clear Time (g_c+I1), s	14.6	25.9		30.9	14.4	30.2		6.3
Green Ext Time (p_c), s	0.0	5.6		1.8	0.0	0.0		2.2

Intersection Summary	
HCM 2010 Ctrl Delay	136.8
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	186	223	1084	45	288	49	693	532	10	31	439	80
Future Volume (veh/h)	186	223	1084	45	288	49	693	532	10	31	439	80
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1792	1792	1900	1881	1881	1900	1863	1863	1900
Adj Flow Rate, veh/h	209	251	0	51	324	53	779	598	10	35	493	90
Adj No. of Lanes	1	1	1	1	1	0	2	1	0	1	2	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	6	6	6	1	1	1	2	2	2
Cap, veh/h	241	667	577	54	381	62	388	654	11	37	789	143
Arrive On Green	0.14	0.36	0.00	0.03	0.25	0.26	0.11	0.35	0.36	0.02	0.26	0.27
Sat Flow, veh/h	1774	1863	1583	1707	1502	246	3476	1845	31	1774	2992	543
Grp Volume(v), veh/h	209	251	0	51	0	377	779	0	608	35	291	292
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1707	0	1748	1738	0	1876	1774	1770	1765
Q Serve(g_s), s	9.8	8.5	0.0	2.5	0.0	17.5	9.5	0.0	26.4	1.7	12.3	12.4
Cycle Q Clear(g_c), s	9.8	8.5	0.0	2.5	0.0	17.5	9.5	0.0	26.4	1.7	12.3	12.4
Prop In Lane	1.00		1.00	1.00		0.14	1.00		0.02	1.00		0.31
Lane Grp Cap(c), veh/h	241	667	577	54	0	444	388	0	665	37	467	466
V/C Ratio(X)	0.87	0.38	0.00	0.95	0.00	0.85	2.01	0.00	0.91	0.96	0.62	0.63
Avail Cap(c_a), veh/h	406	667	577	391	0	605	388	0	665	302	613	612
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.0	20.3	0.0	41.2	0.0	30.2	37.8	0.0	26.2	41.7	27.6	27.6
Incr Delay (d2), s/veh	9.9	0.4	0.0	23.6	0.0	8.9	463.2	0.0	17.9	33.0	1.6	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	5.5	4.5	0.0	1.5	0.0	9.5	29.5	0.0	16.8	1.2	6.2	6.3
LnGrp Delay(d),s/veh	45.9	20.7	0.0	64.8	0.0	39.1	501.1	0.0	44.1	74.7	29.3	29.3
LnGrp LOS	D	C		E		D	F		D	E	C	C
Approach Vol, veh/h		460			428			1387			618	
Approach Delay, s/veh		32.2			42.2			300.8			31.8	
Approach LOS		C			D			F			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.5	27.5	16.6	26.6	6.8	35.2	7.7	35.5
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	10.0	30.0	20.0	30.0	15.0	30.0	20.0	30.0
Max Q Clear Time (g_c+I1), s	11.5	14.4	11.8	19.5	3.7	28.4	4.5	10.5
Green Ext Time (p_c), s	0.0	8.5	0.3	2.7	0.0	1.3	0.0	4.5

Intersection Summary	
HCM 2010 Ctrl Delay	162.3
HCM 2010 LOS	F

Intersection	
Intersection Delay, s/veh	17.2
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	10	20	13	10	394	10	88	5	246	46	0
Future Vol, veh/h	0	10	20	13	10	394	10	88	5	246	46	0
Peak Hour Factor	0.25	0.25	0.25	0.77	0.25	0.77	0.25	0.77	0.77	0.77	0.77	0.25
Heavy Vehicles, %	0	0	0	4	0	4	0	3	3	2	2	0
Mvmt Flow	0	0	0	17	0	512	0	114	6	319	60	0
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	0	18.9	10.4	17
HCM LOS	-	C	B	C

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	10%	0%	3%	84%
Vol Thru, %	85%	33%	2%	16%
Vol Right, %	5%	67%	94%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	103	30	417	292
LT Vol	10	0	13	246
Through Vol	88	10	10	46
RT Vol	5	20	394	0
Lane Flow Rate	121	0	529	379
Geometry Grp	1	1	1	1
Degree of Util (X)	0.199	0	0.71	0.6
Departure Headway (Hd)	5.918	5.819	4.837	5.693
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	605	0	745	633
Service Time	3.972	3.895	2.88	3.732
HCM Lane V/C Ratio	0.2	0	0.71	0.599
HCM Control Delay	10.4	8.9	18.9	17
HCM Lane LOS	B	N	C	C
HCM 95th-tile Q	0.7	0	6	4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	94	75	460	31	123	47	1076	233	205	1325	46
Future Volume (veh/h)	22	94	75	460	31	123	47	1076	233	205	1325	46
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1810	1810	1900	1863	1863	1863	1881	1881	1881	1863	1863	1863
Adj Flow Rate, veh/h	25	108	54	529	36	0	54	1237	0	236	1523	0
Adj No. of Lanes	1	1	0	1	1	1	1	2	1	1	2	1
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	5	5	5	2	2	2	1	1	1	2	2	2
Cap, veh/h	35	130	65	405	599	519	65	1008	460	262	1393	632
Arrive On Green	0.02	0.11	0.12	0.23	0.32	0.00	0.04	0.28	0.00	0.15	0.39	0.00
Sat Flow, veh/h	1723	1138	569	1774	1863	1583	1792	3574	1599	1774	3539	1583
Grp Volume(v), veh/h	25	0	162	529	36	0	54	1237	0	236	1523	0
Grp Sat Flow(s),veh/h/ln	1723	0	1707	1774	1863	1583	1792	1787	1599	1774	1770	1583
Q Serve(g_s), s	1.3	0.0	8.1	20.0	1.2	0.0	2.6	24.7	0.0	11.5	34.5	0.0
Cycle Q Clear(g_c), s	1.3	0.0	8.1	20.0	1.2	0.0	2.6	24.7	0.0	11.5	34.5	0.0
Prop In Lane	1.00		0.33	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	35	0	195	405	599	519	65	1008	460	262	1393	632
V/C Ratio(X)	0.71	0.00	0.83	1.31	0.06	0.00	0.84	1.23	0.00	0.90	1.09	0.00
Avail Cap(c_a), veh/h	197	0	594	405	861	741	102	1008	460	304	1393	632
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	42.7	0.0	37.9	33.8	20.6	0.0	42.0	31.5	0.0	36.7	26.6	0.0
Incr Delay (d2), s/veh	9.6	0.0	3.5	154.9	0.0	0.0	15.6	111.0	0.0	24.0	53.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.0	4.0	27.1	0.6	0.0	1.6	27.6	0.0	7.4	27.0	0.0
LnGrp Delay(d),s/veh	52.3	0.0	41.5	188.7	20.6	0.0	57.6	142.5	0.0	60.8	80.3	0.0
LnGrp LOS	D		D	F	C		E	F		E	F	
Approach Vol, veh/h		187			565			1291			1759	
Approach Delay, s/veh		42.9			178.0			138.9			77.7	
Approach LOS		D			F			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.2	39.5	6.8	33.2	17.9	29.7	25.0	15.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.5	35.0	10.5	41.0	15.5	25.0	20.5	31.0
Max Q Clear Time (g_c+I1), s	4.6	36.5	3.3	3.2	13.5	26.7	22.0	10.1
Green Ext Time (p_c), s	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.2

Intersection Summary	
HCM 2010 Ctrl Delay	111.7
HCM 2010 LOS	F

Notes

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

Intersection	
Int Delay, s/veh	14

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	3	468	16	38	563	18	30	57	21	36	31	13
Future Vol, veh/h	3	468	16	38	563	18	30	57	21	36	31	13
Conflicting Peds, #/hr	0	0	1	1	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	3	3	3	3	3	3	2	2	2	4	4	4
Mvmt Flow	3	532	18	43	640	20	34	65	24	41	35	15

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	660	0	0	551	0	0	1309	1294	542	1328	1293	650
Stage 1	-	-	-	-	-	-	548	548	-	736	736	-
Stage 2	-	-	-	-	-	-	761	746	-	592	557	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.12	6.52	6.22	7.14	6.54	6.24
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.14	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.14	5.54	-
Follow-up Hdwy	2.227	-	-	2.227	-	-	3.518	4.018	3.318	3.536	4.036	3.336
Pot Cap-1 Maneuver	923	-	-	1014	-	-	136	163	540	131	161	466
Stage 1	-	-	-	-	-	-	521	517	-	408	422	-
Stage 2	-	-	-	-	-	-	398	421	-	489	509	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	923	-	-	1013	-	-	102	151	539	79	149	466
Mov Cap-2 Maneuver	-	-	-	-	-	-	102	151	-	79	149	-
Stage 1	-	-	-	-	-	-	518	514	-	406	394	-
Stage 2	-	-	-	-	-	-	327	393	-	406	506	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.5	87.7	102.8
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	152	923	-	-	1013	-	-	116
HCM Lane V/C Ratio	0.807	0.004	-	-	0.043	-	-	0.784
HCM Control Delay (s)	87.7	8.9	0	-	8.7	0	-	102.8
HCM Lane LOS	F	A	A	-	A	A	-	F
HCM 95th %tile Q(veh)	5.2	0	-	-	0.1	-	-	4.5

Intersection	
Int Delay, s/veh	7.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↰	↱		↕	
Traffic Vol, veh/h	8	416	91	115	584	0	17	17	59	7	26	6
Future Vol, veh/h	8	416	91	115	584	0	17	17	59	7	26	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	135	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	84	84	84	84	84	84	84	84	84	84	84
Heavy Vehicles, %	3	3	3	2	2	2	2	2	2	0	0	0
Mvmt Flow	10	495	108	137	695	0	20	20	70	8	31	7

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	695	0	0	603	0	0	1557	1538	549	1583	1592	695
Stage 1	-	-	-	-	-	-	569	569	-	969	969	-
Stage 2	-	-	-	-	-	-	988	969	-	614	623	-
Critical Hdwy	4.13	-	-	4.12	-	-	7.12	6.52	6.22	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.1	5.5	-
Follow-up Hdwy	2.227	-	-	2.218	-	-	3.518	4.018	3.318	3.5	4	3.3
Pot Cap-1 Maneuver	896	-	-	975	-	-	92	116	535	89	108	446
Stage 1	-	-	-	-	-	-	507	506	-	307	334	-
Stage 2	-	-	-	-	-	-	297	332	-	483	481	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	896	-	-	975	-	-	53	88	535	52	82	446
Mov Cap-2 Maneuver	-	-	-	-	-	-	53	88	-	52	82	-
Stage 1	-	-	-	-	-	-	498	497	-	302	258	-
Stage 2	-	-	-	-	-	-	198	256	-	396	473	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	1.5	53	91.4
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	66	535	896	-	-	975	-	-	84
HCM Lane V/C Ratio	0.613	0.131	0.011	-	-	0.14	-	-	0.553
HCM Control Delay (s)	122.9	12.7	9.1	0	-	9.3	0	-	91.4
HCM Lane LOS	F	B	A	A	-	A	A	-	F
HCM 95th %tile Q(veh)	2.6	0.5	0	-	-	0.5	-	-	2.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	65	78	118	277	70	35	122	1144	167	74	1466	149
Future Volume (veh/h)	65	78	118	277	70	35	122	1144	167	74	1466	149
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.98	0.99		0.98	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1881	1900	1900	1863	1900	1881	1881	1900	1863	1863	1863
Adj Flow Rate, veh/h	83	100	122	355	90	41	156	1467	187	95	1879	122
Adj No. of Lanes	0	1	0	0	1	0	1	2	0	1	2	1
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Percent Heavy Veh, %	1	1	1	2	2	2	1	1	1	2	2	2
Cap, veh/h	215	259	278	426	88	40	168	997	126	166	1106	489
Arrive On Green	0.41	0.41	0.41	0.41	0.41	0.41	0.09	0.31	0.32	0.09	0.31	0.31
Sat Flow, veh/h	388	638	684	857	217	99	1792	3190	402	1774	3539	1566
Grp Volume(v), veh/h	305	0	0	486	0	0	156	815	839	95	1879	122
Grp Sat Flow(s),veh/h/ln	1710	0	0	1173	0	0	1792	1787	1805	1774	1770	1566
Q Serve(g_s), s	0.0	0.0	0.0	22.3	0.0	0.0	6.9	25.0	25.0	4.1	25.0	4.6
Cycle Q Clear(g_c), s	10.2	0.0	0.0	32.5	0.0	0.0	6.9	25.0	25.0	4.1	25.0	4.6
Prop In Lane	0.27		0.40	0.73		0.08	1.00		0.22	1.00		1.00
Lane Grp Cap(c), veh/h	752	0	0	554	0	0	168	558	564	166	1106	489
V/C Ratio(X)	0.41	0.00	0.00	0.88	0.00	0.00	0.93	1.46	1.49	0.57	1.70	0.25
Avail Cap(c_a), veh/h	752	0	0	554	0	0	168	558	564	166	1106	489
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.0	0.0	0.0	24.8	0.0	0.0	36.0	27.5	27.4	34.7	27.5	20.5
Incr Delay (d2), s/veh	0.1	0.0	0.0	14.2	0.0	0.0	48.4	216.2	229.0	3.0	318.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.8	0.0	0.0	12.9	0.0	0.0	5.7	45.8	48.3	2.1	61.0	2.0
LnGrp Delay(d),s/veh	17.2	0.0	0.0	39.0	0.0	0.0	84.4	243.7	256.4	37.7	345.9	20.6
LnGrp LOS	B			D			F	F	F	D	F	C
Approach Vol, veh/h		305			486			1810			2096	
Approach Delay, s/veh		17.2			39.0			235.9			313.0	
Approach LOS		B			D			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	12.5	30.0		37.5	12.5	30.0		37.5
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	8.0	25.5		33.0	8.0	25.5		33.0
Max Q Clear Time (g_c+I1), s	8.9	27.0		34.5	6.1	27.0		12.2
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	0.0		1.4

Intersection Summary		
HCM 2010 Ctrl Delay		235.7
HCM 2010 LOS		F

Intersection	
Int Delay, s/veh	10.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	65	104	8	13	203	0	12	24	20	0	103	74
Future Vol, veh/h	65	104	8	13	203	0	12	24	20	0	103	74
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	1	1	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	82	82	82	82	82	82	82	82	82	82	82	82
Heavy Vehicles, %	12	12	12	0	0	0	10	10	10	10	10	10
Mvmt Flow	79	127	10	16	248	0	15	29	24	0	126	90

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	366	255	171	312	288	42	216	0	0	54	0	0
Stage 1	171	171	-	72	72	-	-	-	-	-	-	-
Stage 2	195	84	-	240	216	-	-	-	-	-	-	-
Critical Hdwy	7.22	6.62	6.32	7.1	6.5	6.2	4.2	-	-	4.2	-	-
Critical Hdwy Stg 1	6.22	5.62	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.22	5.62	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.608	4.108	3.408	3.5	4	3.3	2.29	-	-	2.29	-	-
Pot Cap-1 Maneuver	572	632	847	644	625	1034	1308	-	-	1502	-	-
Stage 1	808	739	-	943	839	-	-	-	-	-	-	-
Stage 2	784	806	-	768	728	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	390	624	847	532	617	1033	1308	-	-	1501	-	-
Mov Cap-2 Maneuver	390	624	-	532	617	-	-	-	-	-	-	-
Stage 1	798	739	-	931	828	-	-	-	-	-	-	-
Stage 2	543	796	-	629	728	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	16.9	15.3	1.7	0
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1308	-	-	516	611	1501	-	-
HCM Lane V/C Ratio	0.011	-	-	0.418	0.431	-	-	-
HCM Control Delay (s)	7.8	0	-	16.9	15.3	0	-	-
HCM Lane LOS	A	A	-	C	C	A	-	-
HCM 95th %tile Q(veh)	0	-	-	2	2.2	0	-	-

Intersection	
Int Delay, s/veh	3.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	55	147	513	1	3	163
Future Vol, veh/h	55	147	513	1	3	163
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	3	3	0	0	8	8
Mvmt Flow	64	171	597	1	3	190

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	598	0	-	0	897	598
Stage 1	-	-	-	-	598	-
Stage 2	-	-	-	-	299	-
Critical Hdwy	4.13	-	-	-	6.48	6.28
Critical Hdwy Stg 1	-	-	-	-	5.48	-
Critical Hdwy Stg 2	-	-	-	-	5.48	-
Follow-up Hdwy	2.227	-	-	-	3.572	3.372
Pot Cap-1 Maneuver	974	-	-	-	303	491
Stage 1	-	-	-	-	538	-
Stage 2	-	-	-	-	739	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	974	-	-	-	281	491
Mov Cap-2 Maneuver	-	-	-	-	281	-
Stage 1	-	-	-	-	499	-
Stage 2	-	-	-	-	739	-

Approach	EB	WB	SB
HCM Control Delay, s	2.4	0	17.3
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	974	-	-	-	484
HCM Lane V/C Ratio	0.066	-	-	-	0.399
HCM Control Delay (s)	9	0	-	-	17.3
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0.2	-	-	-	1.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱	↰	↑↑		↰		↱	↰	↑	↱
Traffic Volume (veh/h)	0	1501	171	100	1834	0	284	0	117	103	0	149
Future Volume (veh/h)	0	1501	171	100	1834	0	284	0	117	103	0	149
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1881	1881	1881	1881	0	1881	0	1881	1810	1810	1810
Adj Flow Rate, veh/h	0	1580	0	105	1931	0	299	0	110	108	0	140
Adj No. of Lanes	0	2	1	1	2	0	1	0	1	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	1	1	1	1	0	1	0	1	5	5	5
Cap, veh/h	0	2176	973	137	2638	0	0	0	0	210	221	188
Arrive On Green	0.00	0.61	0.00	0.08	0.74	0.00	0.00	0.00	0.00	0.12	0.00	0.12
Sat Flow, veh/h	0	3668	1599	1792	3668	0		0		1723	1810	1538
Grp Volume(v), veh/h	0	1580	0	105	1931	0		0.0		108	0	140
Grp Sat Flow(s),veh/h/ln	0	1787	1599	1792	1787	0				1723	1810	1538
Q Serve(g_s), s	0.0	20.4	0.0	3.8	20.3	0.0				3.9	0.0	5.8
Cycle Q Clear(g_c), s	0.0	20.4	0.0	3.8	20.3	0.0				3.9	0.0	5.8
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2176	973	137	2638	0				210	221	188
V/C Ratio(X)	0.00	0.73	0.00	0.77	0.73	0.00				0.51	0.00	0.75
Avail Cap(c_a), veh/h	0	2443	1093	544	2638	0				654	687	584
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	9.0	0.0	29.8	4.9	0.0				27.1	0.0	27.9
Incr Delay (d2), s/veh	0.0	1.1	0.0	3.4	1.2	0.0				0.7	0.0	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	10.2	0.0	2.0	10.1	0.0				1.9	0.0	2.6
LnGrp Delay(d),s/veh	0.0	10.1	0.0	33.2	6.1	0.0				27.8	0.0	30.1
LnGrp LOS		B		C	A					C		C
Approach Vol, veh/h		1580			2036						248	
Approach Delay, s/veh		10.1			7.5						29.1	
Approach LOS		B			A						C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs			3	4		6		8
Phs Duration (G+Y+Rc), s			8.5	44.7		12.6		53.2
Change Period (Y+Rc), s			3.5	4.6		4.6		4.6
Max Green Setting (Gmax), s			20.0	45.0		25.0		45.0
Max Q Clear Time (g_c+I1), s			5.8	22.4		7.8		22.3
Green Ext Time (p_c), s			0.1	17.7		0.3		22.4

Intersection Summary	
HCM 2010 Ctrl Delay	10.0
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	723	978	11	84	1301	238	20	23	59	198	32	615
Future Volume (veh/h)	723	978	11	84	1301	238	20	23	59	198	32	615
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1900	1881	1881	1900	1900	1900	1900	1845	1845	1845
Adj Flow Rate, veh/h	761	1029	12	88	1369	243	21	24	61	208	34	386
Adj No. of Lanes	1	2	0	1	2	0	0	1	0	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	1	1	1	0	0	0	3	3	3
Cap, veh/h	222	1912	22	112	1420	249	101	124	246	436	511	427
Arrive On Green	0.12	0.53	0.53	0.06	0.47	0.47	0.27	0.28	0.28	0.28	0.28	0.28
Sat Flow, veh/h	1792	3619	42	1792	3041	533	209	446	888	1290	1845	1541
Grp Volume(v), veh/h	761	508	533	88	797	815	106	0	0	208	34	386
Grp Sat Flow(s),veh/h/ln	1792	1787	1874	1792	1787	1786	1543	0	0	1290	1845	1541
Q Serve(g_s), s	12.4	18.7	18.7	4.8	42.9	44.7	0.0	0.0	0.0	8.5	1.4	24.2
Cycle Q Clear(g_c), s	12.4	18.7	18.7	4.8	42.9	44.7	4.8	0.0	0.0	13.2	1.4	24.2
Prop In Lane	1.00		0.02	1.00		0.30	0.20		0.58	1.00		1.00
Lane Grp Cap(c), veh/h	222	944	990	112	835	834	461	0	0	436	511	427
V/C Ratio(X)	3.43	0.54	0.54	0.78	0.96	0.98	0.23	0.00	0.00	0.48	0.07	0.90
Avail Cap(c_a), veh/h	222	944	990	222	835	834	648	0	0	600	745	623
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.17	0.17	0.17	0.09	0.09	0.09	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.8	15.5	15.5	46.2	25.6	26.1	27.9	0.0	0.0	30.8	26.6	34.9
Incr Delay (d2), s/veh	1093.4	0.4	0.4	0.4	3.5	5.4	0.1	0.0	0.0	0.3	0.0	9.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	73.6	9.3	9.7	2.4	21.9	23.2	2.3	0.0	0.0	4.9	0.7	11.4
LnGrp Delay(d),s/veh	1137.2	15.9	15.9	46.6	29.2	31.5	28.0	0.0	0.0	31.1	26.6	44.6
LnGrp LOS	F	B	B	D	C	C	C			C	C	D
Approach Vol, veh/h		1802			1700			106			628	
Approach Delay, s/veh		489.5			31.2			28.0			39.2	
Approach LOS		F			C			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	10.3	57.4		32.3	16.4	51.3		32.3
Change Period (Y+Rc), s	4.0	4.6		4.6	4.0	4.6		4.6
Max Green Setting (Gmax), s	12.4	34.0		40.4	12.4	24.4		40.4
Max Q Clear Time (g_c+I1), s	16.8	20.7		26.2	14.4	46.7		6.8
Green Ext Time (p_c), s	0.0	9.3		1.5	0.0	0.0		1.7

Intersection Summary	
HCM 2010 Ctrl Delay	227.2
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	140	283	836	44	318	45	1137	644	25	55	600	174
Future Volume (veh/h)	140	283	836	44	318	45	1137	644	25	55	600	174
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1881	1900	1900	1900	1881	1881	1900	1900	1900	1900
Adj Flow Rate, veh/h	146	295	0	46	331	45	1184	671	25	57	625	181
Adj No. of Lanes	1	1	1	1	1	0	2	1	0	1	2	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	1	1	1	0	0	0	1	1	1	0	0	0
Cap, veh/h	184	618	525	59	422	57	415	691	26	73	842	243
Arrive On Green	0.10	0.33	0.00	0.03	0.26	0.26	0.12	0.38	0.38	0.04	0.30	0.30
Sat Flow, veh/h	1792	1881	1599	1810	1638	223	3476	1802	67	1810	2764	799
Grp Volume(v), veh/h	146	295	0	46	0	376	1184	0	696	57	408	398
Grp Sat Flow(s),veh/h/ln	1792	1881	1599	1810	0	1861	1738	0	1869	1810	1805	1759
Q Serve(g_s), s	6.7	10.5	0.0	2.1	0.0	15.7	10.0	0.0	30.6	2.6	17.0	17.0
Cycle Q Clear(g_c), s	6.7	10.5	0.0	2.1	0.0	15.7	10.0	0.0	30.6	2.6	17.0	17.0
Prop In Lane	1.00		1.00	1.00		0.12	1.00		0.04	1.00		0.45
Lane Grp Cap(c), veh/h	184	618	525	59	0	480	415	0	717	73	550	536
V/C Ratio(X)	0.79	0.48	0.00	0.79	0.00	0.78	2.85	0.00	0.97	0.78	0.74	0.74
Avail Cap(c_a), veh/h	428	674	573	432	0	667	415	0	717	324	647	631
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.7	22.4	0.0	40.2	0.0	28.9	36.8	0.0	25.3	39.8	26.1	26.2
Incr Delay (d2), s/veh	7.4	0.7	0.0	8.3	0.0	4.6	839.4	0.0	26.7	6.4	4.1	4.3
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	3.7	5.5	0.0	1.2	0.0	8.7	53.2	0.0	21.0	1.4	9.0	8.8
LnGrp Delay(d),s/veh	44.1	23.1	0.0	48.5	0.0	33.5	876.2	0.0	52.0	46.2	30.3	30.4
LnGrp LOS	D	C		D		C	F		D	D	C	C
Approach Vol, veh/h		441			422			1880			863	
Approach Delay, s/veh		30.0			35.1			571.1			31.4	
Approach LOS		C			D			F			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.5	30.0	13.1	26.1	7.9	36.6	7.2	32.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	10.0	30.0	20.0	30.0	15.0	30.0	20.0	30.0
Max Q Clear Time (g_c+I1), s	12.0	19.0	8.7	17.7	4.6	32.6	4.1	12.5
Green Ext Time (p_c), s	0.0	6.4	0.3	3.9	0.0	0.0	0.0	4.6

Intersection Summary	
HCM 2010 Ctrl Delay	313.0
HCM 2010 LOS	F

Intersection	
Intersection Delay, s/veh	13.2
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	10	20	9	10	316	10	75	7	288	75	0
Future Vol, veh/h	0	10	20	9	10	316	10	75	7	288	75	0
Peak Hour Factor	0.25	0.25	0.25	0.88	0.25	0.88	0.25	0.88	0.88	0.88	0.88	0.25
Heavy Vehicles, %	0	0	0	0	0	0	0	2	2	1	1	0
Mvmt Flow	0	0	0	10	0	359	0	85	8	327	85	0
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	0	11.9	9.3	15.3
HCM LOS	-	B	A	C

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	11%	0%	3%	79%
Vol Thru, %	82%	33%	3%	21%
Vol Right, %	8%	67%	94%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	92	30	335	363
LT Vol	10	0	9	288
Through Vol	75	10	10	75
RT Vol	7	20	316	0
Lane Flow Rate	93	0	369	412
Geometry Grp	1	1	1	1
Degree of Util (X)	0.14	0	0.473	0.591
Departure Headway (Hd)	5.407	5.419	4.608	5.155
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	665	0	772	705
Service Time	3.42	3.451	2.704	3.155
HCM Lane V/C Ratio	0.14	0	0.478	0.584
HCM Control Delay	9.3	8.5	11.9	15.3
HCM Lane LOS	A	N	B	C
HCM 95th-tile Q	0.5	0	2.6	3.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	18	12	27	240	42	294	57	1481	410	163	1245	46
Future Volume (veh/h)	18	12	27	240	42	294	57	1481	410	163	1245	46
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1776	1776	1900	1881	1881	1881	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	20	13	-1	270	47	0	64	1664	0	183	1399	0
Adj No. of Lanes	1	1	0	1	1	1	1	2	1	1	2	1
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	7	7	7	1	1	1	2	2	2	2	2	2
Cap, veh/h	39	120	0	314	413	351	91	1310	586	223	1574	704
Arrive On Green	0.02	0.07	0.00	0.18	0.22	0.00	0.05	0.37	0.00	0.13	0.44	0.00
Sat Flow, veh/h	1691	1776	0	1792	1881	1599	1774	3539	1583	1774	3539	1583
Grp Volume(v), veh/h	20	12	0	270	47	0	64	1664	0	183	1399	0
Grp Sat Flow(s),veh/h/ln	1691	1776	0	1792	1881	1599	1774	1770	1583	1774	1770	1583
Q Serve(g_s), s	0.8	0.4	0.0	10.1	1.4	0.0	2.4	25.5	0.0	6.9	25.0	0.0
Cycle Q Clear(g_c), s	0.8	0.4	0.0	10.1	1.4	0.0	2.4	25.5	0.0	6.9	25.0	0.0
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	39	120	0	314	413	351	91	1310	586	223	1574	704
V/C Ratio(X)	0.51	0.10	0.00	0.86	0.11	0.00	0.70	1.27	0.00	0.82	0.89	0.00
Avail Cap(c_a), veh/h	503	786	0	533	833	708	270	1310	586	270	1574	704
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	33.3	30.1	0.0	27.6	21.5	0.0	32.2	21.7	0.0	29.4	17.6	0.0
Incr Delay (d2), s/veh	3.8	0.1	0.0	3.1	0.0	0.0	3.7	127.8	0.0	12.9	6.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.2	0.0	5.2	0.7	0.0	1.3	35.4	0.0	4.2	13.5	0.0
LnGrp Delay(d),s/veh	37.1	30.3	0.0	30.7	21.6	0.0	35.8	149.5	0.0	42.2	24.0	0.0
LnGrp LOS	D	C		C	C		D	F		D	C	
Approach Vol, veh/h		32			317			1728			1582	
Approach Delay, s/veh		34.5			29.3			145.3			26.1	
Approach LOS		C			C			F			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	35.1	6.1	19.6	13.2	30.0	16.6	9.2
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	10.5	25.5	20.5	30.5	10.5	25.5	20.5	30.5
Max Q Clear Time (g_c+I1), s	4.4	27.0	2.8	3.4	8.9	27.5	12.1	2.4
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	82.8
HCM 2010 LOS	F

Notes

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

Intersection	
Int Delay, s/veh	7.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	3	551	39	37	481	20	12	53	38	15	49	5
Future Vol, veh/h	3	551	39	37	481	20	12	53	38	15	49	5
Conflicting Peds, #/hr	1	0	2	2	0	1	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	1	1	1	0	0	0	5	5	5
Mvmt Flow	3	605	43	41	529	22	13	58	42	16	54	5

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	552	0	0	650	0	0	1287	1269	629	1306	1279	541
Stage 1	-	-	-	-	-	-	635	635	-	623	623	-
Stage 2	-	-	-	-	-	-	652	634	-	683	656	-
Critical Hdwy	4.12	-	-	4.11	-	-	7.1	6.5	6.2	7.15	6.55	6.25
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.15	5.55	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.15	5.55	-
Follow-up Hdwy	2.218	-	-	2.209	-	-	3.5	4	3.3	3.545	4.045	3.345
Pot Cap-1 Maneuver	1018	-	-	941	-	-	142	170	486	135	164	535
Stage 1	-	-	-	-	-	-	470	476	-	469	474	-
Stage 2	-	-	-	-	-	-	460	476	-	434	458	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1017	-	-	939	-	-	97	158	485	84	153	534
Mov Cap-2 Maneuver	-	-	-	-	-	-	97	158	-	84	153	-
Stage 1	-	-	-	-	-	-	467	473	-	466	444	-
Stage 2	-	-	-	-	-	-	375	446	-	346	455	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.6	47.6	60.6
HCM LOS			E	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	192	1017	-	-	939	-	-	136
HCM Lane V/C Ratio	0.59	0.003	-	-	0.043	-	-	0.558
HCM Control Delay (s)	47.6	8.6	0	-	9	0	-	60.6
HCM Lane LOS	E	A	A	-	A	A	-	F
HCM 95th %tile Q(veh)	3.2	0	-	-	0.1	-	-	2.8

Intersection	
Int Delay, s/veh	14.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↰	↱		↕	
Traffic Vol, veh/h	10	556	8	61	479	2	65	39	96	0	17	6
Future Vol, veh/h	10	556	8	61	479	2	65	39	96	0	17	6
Conflicting Peds, #/hr	3	0	0	0	0	3	2	0	0	0	0	2
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	135	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	1	1	1	0	0	0	0	0	0
Mvmt Flow	11	625	9	69	538	2	73	44	108	0	19	7

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	543	0	0	634	0	0	1344	1333	630	1408	1336	544
Stage 1	-	-	-	-	-	-	652	652	-	680	680	-
Stage 2	-	-	-	-	-	-	692	681	-	728	656	-
Critical Hdwy	4.12	-	-	4.11	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.218	-	-	2.209	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1026	-	-	954	-	-	130	155	485	118	155	543
Stage 1	-	-	-	-	-	-	460	467	-	444	454	-
Stage 2	-	-	-	-	-	-	437	453	-	418	465	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1023	-	-	954	-	-	104	136	485	63	136	540
Mov Cap-2 Maneuver	-	-	-	-	-	-	104	136	-	63	136	-
Stage 1	-	-	-	-	-	-	452	459	-	435	406	-
Stage 2	-	-	-	-	-	-	368	405	-	289	457	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	1	91.7	30.1
HCM LOS			F	D

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	114	485	1023	-	-	954	-	-	169
HCM Lane V/C Ratio	1.025	0.222	0.011	-	-	0.072	-	-	0.153
HCM Control Delay (s)	163	14.5	8.6	0	-	9.1	0	-	30.1
HCM Lane LOS	F	B	A	A	-	A	A	-	D
HCM 95th %tile Q(veh)	6.8	0.8	0	-	-	0.2	-	-	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	27	33	153	28	6	49	1757	219	31	1446	45
Future Volume (veh/h)	45	27	33	153	28	6	49	1757	219	31	1446	45
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1881	1900	1881	1881	1900	1900	1900	1900
Adj Flow Rate, veh/h	49	29	11	166	30	4	53	1910	215	34	1572	-10
Adj No. of Lanes	0	1	0	0	1	0	1	2	0	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	1	1	1	1	1	1	0	0	0
Cap, veh/h	252	137	39	360	48	6	134	1649	182	68	1700	760
Arrive On Green	0.18	0.19	0.19	0.18	0.19	0.19	0.07	0.51	0.51	0.04	0.47	0.00
Sat Flow, veh/h	762	738	212	1234	257	30	1792	3246	359	1810	3610	1615
Grp Volume(v), veh/h	89	0	0	200	0	0	53	1035	1090	34	1572	-10
Grp Sat Flow(s),veh/h/ln	1712	0	0	1522	0	0	1792	1787	1817	1810	1805	1615
Q Serve(g_s), s	0.0	0.0	0.0	3.9	0.0	0.0	1.4	25.5	25.5	0.9	20.5	0.0
Cycle Q Clear(g_c), s	2.1	0.0	0.0	6.1	0.0	0.0	1.4	25.5	25.5	0.9	20.5	0.0
Prop In Lane	0.55		0.12	0.83		0.02	1.00		0.20	1.00		1.00
Lane Grp Cap(c), veh/h	411	0	0	398	0	0	134	908	923	68	1700	760
V/C Ratio(X)	0.22	0.00	0.00	0.50	0.00	0.00	0.40	1.14	1.18	0.50	0.92	-0.01
Avail Cap(c_a), veh/h	1130	0	0	1074	0	0	286	908	923	288	1834	821
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	17.6	0.0	0.0	19.2	0.0	0.0	22.1	12.3	12.3	23.7	12.4	0.0
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.4	0.0	0.0	0.7	76.4	92.3	2.1	7.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	0.0	0.0	2.7	0.0	0.0	0.7	31.6	36.2	0.5	11.9	0.0
LnGrp Delay(d),s/veh	17.7	0.0	0.0	19.5	0.0	0.0	22.8	88.7	104.6	25.8	20.2	0.0
LnGrp LOS	B			B			C	F	F	C	C	
Approach Vol, veh/h		89			200			2178			1596	
Approach Delay, s/veh		17.7			19.5			95.1			20.5	
Approach LOS		B			B			F			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.3	28.1		13.8	6.4	30.0		13.8
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	8.0	25.5		33.0	8.0	25.5		33.0
Max Q Clear Time (g_c+I1), s	3.4	22.5		8.1	2.9	27.5		4.1
Green Ext Time (p_c), s	0.0	1.1		0.3	0.0	0.0		0.4

Intersection Summary	
HCM 2010 Ctrl Delay	60.4
HCM 2010 LOS	E

Intersection	
Int Delay, s/veh	10.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	70	154	16	25	127	0	12	43	20	0	28	45
Future Vol, veh/h	70	154	16	25	127	0	12	43	20	0	28	45
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	74	74	74	74	74	74	74	74	74	74	74	74
Heavy Vehicles, %	3	3	3	2	2	2	3	3	3	8	8	8
Mvmt Flow	95	208	22	34	172	0	16	58	27	0	38	61

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	259	186	69	288	203	72	99	0	0	85	0	0
Stage 1	69	69	-	104	104	-	-	-	-	-	-	-
Stage 2	190	117	-	184	99	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.12	6.52	6.22	4.13	-	-	4.18	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.518	4.018	3.318	2.227	-	-	2.272	-	-
Pot Cap-1 Maneuver	692	707	991	664	693	990	1488	-	-	1474	-	-
Stage 1	939	835	-	902	809	-	-	-	-	-	-	-
Stage 2	809	797	-	818	813	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	554	699	991	496	685	990	1488	-	-	1474	-	-
Mov Cap-2 Maneuver	554	699	-	496	685	-	-	-	-	-	-	-
Stage 1	929	835	-	892	800	-	-	-	-	-	-	-
Stage 2	628	788	-	601	813	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	15.6	13.2	1.2	0
HCM LOS	C	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1488	-	-	661	645	1474	-	-
HCM Lane V/C Ratio	0.011	-	-	0.491	0.318	-	-	-
HCM Control Delay (s)	7.4	0	-	15.6	13.2	0	-	-
HCM Lane LOS	A	A	-	C	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	2.7	1.4	0	-	-

Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	121	452	183	4	2	93
Future Vol, veh/h	121	452	183	4	2	93
Conflicting Peds, #/hr	0	0	0	0	0	1
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	2	1	1	4	4
Mvmt Flow	126	471	191	4	2	97

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	195	0	-	0	916	194
Stage 1	-	-	-	-	193	-
Stage 2	-	-	-	-	723	-
Critical Hdwy	4.12	-	-	-	6.44	6.24
Critical Hdwy Stg 1	-	-	-	-	5.44	-
Critical Hdwy Stg 2	-	-	-	-	5.44	-
Follow-up Hdwy	2.218	-	-	-	3.536	3.336
Pot Cap-1 Maneuver	1378	-	-	-	300	842
Stage 1	-	-	-	-	835	-
Stage 2	-	-	-	-	477	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1378	-	-	-	263	841
Mov Cap-2 Maneuver	-	-	-	-	263	-
Stage 1	-	-	-	-	731	-
Stage 2	-	-	-	-	477	-

Approach	EB	WB	SB
HCM Control Delay, s	1.7	0	10.1
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1378	-	-	-	804
HCM Lane V/C Ratio	0.091	-	-	-	0.123
HCM Control Delay (s)	7.9	0	-	-	10.1
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.3	-	-	-	0.4

Cumulative Conditions

AM Peak Hour

PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱	↰	↑↑		↰		↱	↰	↑	↱
Traffic Volume (veh/h)	0	1504	197	100	1400	0	184	0	46	76	4	96
Future Volume (veh/h)	0	1504	197	100	1400	0	184	0	46	76	4	96
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1863	1863	1863	0	1863	0	1863	1792	1792	1792
Adj Flow Rate, veh/h	0	1790	0	119	1667	0	219	0	41	90	5	95
Adj No. of Lanes	0	2	1	1	2	0	1	0	1	1	1	1
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	0	2	2	2	2	0	2	0	2	6	6	6
Cap, veh/h	0	2177	989	141	2676	0	0	0	0	142	150	127
Arrive On Green	0.00	0.62	0.00	0.08	0.76	0.00	0.00	0.00	0.00	0.08	0.08	0.08
Sat Flow, veh/h	0	3632	1583	1774	3632	0		0		1707	1792	1524
Grp Volume(v), veh/h	0	1790	0	119	1667	0		0.0		90	5	95
Grp Sat Flow(s),veh/h/ln	0	1770	1583	1774	1770	0				1707	1792	1524
Q Serve(g_s), s	0.0	25.5	0.0	4.3	14.1	0.0				3.3	0.2	4.0
Cycle Q Clear(g_c), s	0.0	25.5	0.0	4.3	14.1	0.0				3.3	0.2	4.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2177	989	141	2676	0				142	150	127
V/C Ratio(X)	0.00	0.82	0.00	0.84	0.62	0.00				0.63	0.03	0.75
Avail Cap(c_a), veh/h	0	2423	1099	533	2676	0				642	674	573
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	1.00	1.00	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	9.7	0.0	29.5	3.6	0.0				28.8	27.3	29.1
Incr Delay (d2), s/veh	0.0	2.4	0.0	5.2	0.5	0.0				1.7	0.0	3.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	12.9	0.0	2.3	6.9	0.0				1.6	0.1	1.8
LnGrp Delay(d),s/veh	0.0	12.1	0.0	34.6	4.2	0.0				30.5	27.4	32.3
LnGrp LOS		B		C	A					C	C	C
Approach Vol, veh/h		1790			1786						190	
Approach Delay, s/veh		12.1			6.2						31.3	
Approach LOS		B			A						C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs			3	4		6		8
Phs Duration (G+Y+Rc), s			9.2	45.1		10.6		54.2
Change Period (Y+Rc), s			3.5	4.6		4.6		4.6
Max Green Setting (Gmax), s			20.0	45.0		25.0		45.0
Max Q Clear Time (g_c+I1), s			6.3	27.5		6.0		16.1
Green Ext Time (p_c), s			0.1	12.9		0.3		28.3

Intersection Summary	
HCM 2010 Ctrl Delay	10.3
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	532	1089	2	5	901	177	2	1	1	319	4	579
Future Volume (veh/h)	532	1089	2	5	901	177	2	1	1	319	4	579
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1827	1827	1900	1900	1900	1900	1881	1881	1881
Adj Flow Rate, veh/h	591	1210	2	6	1001	188	2	1	0	354	4	367
Adj No. of Lanes	1	2	0	1	2	0	0	1	0	1	1	1
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	4	4	4	0	0	0	1	1	1
Cap, veh/h	220	2112	3	11	1357	254	268	123	0	453	503	427
Arrive On Green	0.12	0.58	0.59	0.01	0.46	0.47	0.27	0.27	0.00	0.27	0.27	0.27
Sat Flow, veh/h	1774	3625	6	1740	2919	547	778	460	0	1424	1881	1599
Grp Volume(v), veh/h	591	591	621	6	595	594	3	0	0	354	4	367
Grp Sat Flow(s),veh/h/ln	1774	1770	1862	1740	1736	1730	1239	0	0	1424	1881	1599
Q Serve(g_s), s	12.4	20.9	20.9	0.3	27.9	28.0	0.0	0.0	0.0	24.1	0.2	21.8
Cycle Q Clear(g_c), s	12.4	20.9	20.9	0.3	27.9	28.0	0.1	0.0	0.0	24.2	0.2	21.8
Prop In Lane	1.00		0.00	1.00		0.32	0.67		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	220	1031	1085	11	807	804	391	0	0	453	503	427
V/C Ratio(X)	2.69	0.57	0.57	0.56	0.74	0.74	0.01	0.00	0.00	0.78	0.01	0.86
Avail Cap(c_a), veh/h	220	1031	1085	216	807	804	550	0	0	639	749	636
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	0.09	0.09	0.09	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.8	13.1	13.1	49.6	21.8	21.7	26.9	0.0	0.0	35.7	26.9	34.8
Incr Delay (d2), s/veh	760.1	0.2	0.2	1.5	0.6	0.6	0.0	0.0	0.0	2.5	0.0	5.2
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	52.5	10.2	10.8	0.2	13.5	13.5	0.1	0.0	0.0	9.9	0.1	10.2
LnGrp Delay(d),s/veh	803.9	13.3	13.3	51.1	22.3	22.3	26.9	0.0	0.0	38.2	26.9	40.1
LnGrp LOS	F	B	B	D	C	C	C			D	C	D
Approach Vol, veh/h		1803			1195			3			725	
Approach Delay, s/veh		272.4			22.5			26.9			39.1	
Approach LOS		F			C			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	14.6	63.5		31.9	16.4	51.7		31.9
Change Period (Y+Rc), s	4.0	4.6		4.6	4.0	4.6		4.6
Max Green Setting (Gmax), s	12.4	34.0		40.4	12.4	24.4		40.4
Max Q Clear Time (g_c+I1), s	12.3	22.9		26.2	14.4	30.0		2.1
Green Ext Time (p_c), s	0.0	7.3		1.1	0.0	0.0		1.2

Intersection Summary	
HCM 2010 Ctrl Delay	146.7
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	161	224	1016	80	375	36	676	650	2	5	502	32
Future Volume (veh/h)	161	224	1016	80	375	36	676	650	2	5	502	32
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1792	1792	1900	1881	1881	1900	1863	1863	1900
Adj Flow Rate, veh/h	181	252	0	90	421	38	760	730	1	6	564	36
Adj No. of Lanes	1	1	1	1	1	0	2	1	0	1	2	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	6	6	6	1	1	1	2	2	2
Cap, veh/h	211	650	561	105	471	43	378	677	1	2	852	54
Arrive On Green	0.12	0.35	0.00	0.06	0.29	0.30	0.11	0.36	0.37	0.00	0.25	0.26
Sat Flow, veh/h	1774	1863	1583	1707	1620	146	3476	1878	3	1774	3378	215
Grp Volume(v), veh/h	181	252	0	90	0	459	760	0	731	6	295	305
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1707	0	1766	1738	0	1881	1774	1770	1824
Q Serve(g_s), s	8.7	8.9	0.0	4.6	0.0	21.7	9.5	0.0	31.5	0.1	13.1	13.1
Cycle Q Clear(g_c), s	8.7	8.9	0.0	4.6	0.0	21.7	9.5	0.0	31.5	0.1	13.1	13.1
Prop In Lane	1.00		1.00	1.00		0.08	1.00		0.00	1.00		0.12
Lane Grp Cap(c), veh/h	211	650	561	105	0	514	378	0	678	2	446	460
V/C Ratio(X)	0.86	0.39	0.00	0.86	0.00	0.89	2.01	0.00	1.08	2.95	0.66	0.66
Avail Cap(c_a), veh/h	396	650	561	381	0	597	378	0	678	295	598	616
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.7	21.4	0.0	40.6	0.0	29.7	38.9	0.0	27.9	43.6	29.3	29.3
Incr Delay (d2), s/veh	9.5	0.5	0.0	7.6	0.0	14.8	463.9	0.0	57.5	975.7	2.0	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	586.1	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.8	4.6	0.0	2.4	0.0	12.7	28.9	0.0	27.0	0.6	6.6	6.9
LnGrp Delay(d),s/veh	47.3	21.9	0.0	48.2	0.0	44.5	502.8	0.0	85.4	1605.4	31.3	31.3
LnGrp LOS	D	C		D		D	F		F	F	C	C
Approach Vol, veh/h		433			549			1491			606	
Approach Delay, s/veh		32.5			45.1			298.2			46.9	
Approach LOS		C			D			F			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.5	27.0	15.4	30.4	5.0	36.5	10.3	35.5
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	10.0	30.0	20.0	30.0	15.0	30.0	20.0	30.0
Max Q Clear Time (g_c+I1), s	11.5	15.1	10.7	23.7	2.1	33.5	6.6	10.9
Green Ext Time (p_c), s	0.0	7.4	0.3	2.1	0.0	0.0	0.0	5.3

Intersection Summary	
HCM 2010 Ctrl Delay	166.2
HCM 2010 LOS	F

Intersection	
Intersection Delay, s/veh	24
Intersection LOS	C

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	51	427	164	3	222	16
Future Vol, veh/h	51	427	164	3	222	16
Peak Hour Factor	0.77	0.77	0.77	0.77	0.77	0.77
Heavy Vehicles, %	4	4	3	3	2	2
Mvmt Flow	66	555	213	4	288	21
Number of Lanes	1	0	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	1	0
HCM Control Delay	31.7	13	16.2
HCM LOS	D	B	C

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	0%	11%	93%
Vol Thru, %	98%	0%	7%
Vol Right, %	2%	89%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	167	478	238
LT Vol	0	51	222
Through Vol	164	0	16
RT Vol	3	427	0
Lane Flow Rate	217	621	309
Geometry Grp	1	1	1
Degree of Util (X)	0.374	0.866	0.533
Departure Headway (Hd)	6.212	5.021	6.213
Convergence, Y/N	Yes	Yes	Yes
Cap	575	720	578
Service Time	4.29	3.082	4.283
HCM Lane V/C Ratio	0.377	0.863	0.535
HCM Control Delay	13	31.7	16.2
HCM Lane LOS	B	D	C
HCM 95th-tile Q	1.7	10.4	3.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	94	75	432	31	178	47	1170	271	162	1405	46
Future Volume (veh/h)	22	94	75	432	31	178	47	1170	271	162	1405	46
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1810	1810	1900	1863	1863	1863	1881	1881	1881	1863	1863	1863
Adj Flow Rate, veh/h	25	108	54	497	36	0	54	1345	0	186	1615	0
Adj No. of Lanes	1	1	0	1	1	1	1	2	1	1	2	1
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	5	5	5	2	2	2	1	1	1	2	2	2
Cap, veh/h	35	130	65	405	599	519	65	1110	506	211	1393	632
Arrive On Green	0.02	0.11	0.12	0.23	0.32	0.00	0.04	0.31	0.00	0.12	0.39	0.00
Sat Flow, veh/h	1723	1138	569	1774	1863	1583	1792	3574	1599	1774	3539	1583
Grp Volume(v), veh/h	25	0	162	497	36	0	54	1345	0	186	1615	0
Grp Sat Flow(s),veh/h/ln	1723	0	1707	1774	1863	1583	1792	1787	1599	1774	1770	1583
Q Serve(g_s), s	1.3	0.0	8.1	20.0	1.2	0.0	2.6	27.2	0.0	9.0	34.5	0.0
Cycle Q Clear(g_c), s	1.3	0.0	8.1	20.0	1.2	0.0	2.6	27.2	0.0	9.0	34.5	0.0
Prop In Lane	1.00		0.33	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	35	0	195	405	599	519	65	1110	506	211	1393	632
V/C Ratio(X)	0.71	0.00	0.83	1.23	0.06	0.00	0.84	1.21	0.00	0.88	1.16	0.00
Avail Cap(c_a), veh/h	197	0	594	405	861	741	102	1110	506	304	1393	632
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	42.7	0.0	37.9	33.8	20.6	0.0	42.0	30.2	0.0	38.0	26.6	0.0
Incr Delay (d2), s/veh	9.6	0.0	3.5	122.5	0.0	0.0	15.6	103.9	0.0	14.2	80.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.0	4.0	23.4	0.6	0.0	1.6	29.3	0.0	5.3	32.1	0.0
LnGrp Delay(d),s/veh	52.3	0.0	41.5	156.3	20.6	0.0	57.6	134.1	0.0	52.2	106.6	0.0
LnGrp LOS	D		D	F	C		E	F		D	F	
Approach Vol, veh/h		187			533			1399			1801	
Approach Delay, s/veh		42.9			147.1			131.1			101.0	
Approach LOS		D			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.2	39.5	6.8	33.2	15.4	32.2	25.0	15.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.5	35.0	10.5	41.0	15.5	25.0	20.5	31.0
Max Q Clear Time (g_c+I1), s	4.6	36.5	3.3	3.2	11.0	29.2	22.0	10.1
Green Ext Time (p_c), s	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.2

Intersection Summary	
HCM 2010 Ctrl Delay	115.3
HCM 2010 LOS	F

Notes

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

Intersection	
Int Delay, s/veh	9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	3	446	16	39	559	121	30	45	7	30	9	39
Future Vol, veh/h	3	446	16	39	559	121	30	45	7	30	9	39
Conflicting Peds, #/hr	0	0	1	1	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	3	3	3	3	3	3	2	2	2	4	4	4
Mvmt Flow	3	507	18	44	635	138	34	51	8	34	10	44

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	773	0	0	526	0	0	1342	1384	517	1344	1324	704
Stage 1	-	-	-	-	-	-	523	523	-	792	792	-
Stage 2	-	-	-	-	-	-	819	861	-	552	532	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.12	6.52	6.22	7.14	6.54	6.24
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.14	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.14	5.54	-
Follow-up Hdwy	2.227	-	-	2.227	-	-	3.518	4.018	3.318	3.536	4.036	3.336
Pot Cap-1 Maneuver	838	-	-	1036	-	-	129	143	558	128	154	434
Stage 1	-	-	-	-	-	-	537	530	-	379	398	-
Stage 2	-	-	-	-	-	-	369	372	-	514	522	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	838	-	-	1035	-	-	103	131	557	83	141	434
Mov Cap-2 Maneuver	-	-	-	-	-	-	103	131	-	83	141	-
Stage 1	-	-	-	-	-	-	534	527	-	377	367	-
Stage 2	-	-	-	-	-	-	297	343	-	455	519	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.5	87.2	58.1
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	127	838	-	-	1035	-	-	151
HCM Lane V/C Ratio	0.734	0.004	-	-	0.043	-	-	0.587
HCM Control Delay (s)	87.2	9.3	0	-	8.6	0	-	58.1
HCM Lane LOS	F	A	A	-	A	A	-	F
HCM 95th %tile Q(veh)	4.2	0	-	-	0.1	-	-	3.1

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	5	378	91	90	690	0	17	9	45	7	11	0
Future Vol, veh/h	5	378	91	90	690	0	17	9	45	7	11	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	135	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	84	84	84	84	84	84	84	84	84	84	84
Heavy Vehicles, %	3	3	3	2	2	2	2	2	2	0	0	0
Mvmt Flow	6	450	108	107	821	0	20	11	54	8	13	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	821	0	0	558	0	0	1558	1551	504	1584	1605	821
Stage 1	-	-	-	-	-	-	516	516	-	1035	1035	-
Stage 2	-	-	-	-	-	-	1042	1035	-	549	570	-
Critical Hdwy	4.13	-	-	4.12	-	-	7.12	6.52	6.22	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.1	5.5	-
Follow-up Hdwy	2.227	-	-	2.218	-	-	3.518	4.018	3.318	3.5	4	3.3
Pot Cap-1 Maneuver	804	-	-	1013	-	-	91	114	568	89	106	378
Stage 1	-	-	-	-	-	-	542	534	-	282	312	-
Stage 2	-	-	-	-	-	-	277	309	-	524	509	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	804	-	-	1013	-	-	68	91	568	62	84	378
Mov Cap-2 Maneuver	-	-	-	-	-	-	68	91	-	62	84	-
Stage 1	-	-	-	-	-	-	536	528	-	279	251	-
Stage 2	-	-	-	-	-	-	212	249	-	460	503	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	1	38.1	72.4
HCM LOS			E	F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	75	568	804	-	-	1013	-	-	74
HCM Lane V/C Ratio	0.413	0.094	0.007	-	-	0.106	-	-	0.29
HCM Control Delay (s)	83.3	12	9.5	0	-	9	0	-	72.4
HCM Lane LOS	F	B	A	A	-	A	A	-	F
HCM 95th %tile Q(veh)	1.6	0.3	0	-	-	0.4	-	-	1.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	65	78	118	190	70	35	122	1276	119	74	1518	149
Future Volume (veh/h)	65	78	118	190	70	35	122	1276	119	74	1518	149
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.98	0.99		0.98	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1881	1900	1900	1863	1900	1881	1881	1900	1863	1863	1863
Adj Flow Rate, veh/h	83	100	122	244	90	41	156	1636	126	95	1946	122
Adj No. of Lanes	0	1	0	0	1	0	1	2	0	1	2	1
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Percent Heavy Veh, %	1	1	1	2	2	2	1	1	1	2	2	2
Cap, veh/h	193	232	243	365	118	50	178	1113	85	176	1172	519
Arrive On Green	0.37	0.37	0.38	0.37	0.37	0.38	0.10	0.33	0.34	0.10	0.33	0.33
Sat Flow, veh/h	356	626	654	772	318	134	1792	3363	257	1774	3539	1567
Grp Volume(v), veh/h	305	0	0	375	0	0	156	862	900	95	1946	122
Grp Sat Flow(s),veh/h/ln	1636	0	0	1224	0	0	1792	1787	1833	1774	1770	1567
Q Serve(g_s), s	0.0	0.0	0.0	11.1	0.0	0.0	6.5	25.0	25.0	3.8	25.0	4.3
Cycle Q Clear(g_c), s	10.4	0.0	0.0	21.5	0.0	0.0	6.5	25.0	25.0	3.8	25.0	4.3
Prop In Lane	0.27		0.40	0.65		0.11	1.00		0.14	1.00		1.00
Lane Grp Cap(c), veh/h	667	0	0	533	0	0	178	592	607	176	1172	519
V/C Ratio(X)	0.46	0.00	0.00	0.70	0.00	0.00	0.88	1.46	1.48	0.54	1.66	0.24
Avail Cap(c_a), veh/h	759	0	0	610	0	0	178	592	607	176	1172	519
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.1	0.0	0.0	22.0	0.0	0.0	33.6	25.3	25.2	32.4	25.3	18.3
Incr Delay (d2), s/veh	0.2	0.0	0.0	2.3	0.0	0.0	34.4	215.2	226.0	1.8	301.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.9	0.0	0.0	7.4	0.0	0.0	4.9	47.5	50.6	2.0	61.1	1.8
LnGrp Delay(d),s/veh	18.3	0.0	0.0	24.3	0.0	0.0	67.9	240.5	251.2	34.2	326.5	18.4
LnGrp LOS	B			C			E	F	F	C	F	B
Approach Vol, veh/h		305			375			1918			2163	
Approach Delay, s/veh		18.3			24.3			231.5			296.3	
Approach LOS		B			C			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	12.5	30.0		33.0	12.5	30.0		33.0
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	8.0	25.5		33.0	8.0	25.5		33.0
Max Q Clear Time (g_c+I1), s	8.5	27.0		23.5	5.8	27.0		12.4
Green Ext Time (p_c), s	0.0	0.0		0.9	0.0	0.0		1.1

Intersection Summary		
HCM 2010 Ctrl Delay		230.9
HCM 2010 LOS		F

Intersection	
Int Delay, s/veh	11.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	55	85	1	2	289	0	0	21	0	0	0	0
Future Vol, veh/h	55	85	1	2	289	0	0	21	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	1	1	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	82	82	82	82	82	82	82	82	82	82	82	82
Heavy Vehicles, %	12	12	12	0	0	0	10	10	10	10	10	10
Mvmt Flow	67	104	1	2	352	0	0	26	0	0	0	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	203	28	1	81	28	27	1	0	0	27	0	0
Stage 1	1	1	-	27	27	-	-	-	-	-	-	-
Stage 2	202	27	-	54	1	-	-	-	-	-	-	-
Critical Hdwy	7.22	6.62	6.32	7.1	6.5	6.2	4.2	-	-	4.2	-	-
Critical Hdwy Stg 1	6.22	5.62	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.22	5.62	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.608	4.108	3.408	3.5	4	3.3	2.29	-	-	2.29	-	-
Pot Cap-1 Maneuver	734	846	1055	912	869	1054	1571	-	-	1536	-	-
Stage 1	997	875	-	996	877	-	-	-	-	-	-	-
Stage 2	777	853	-	963	899	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	501	845	1055	824	868	1053	1571	-	-	1535	-	-
Mov Cap-2 Maneuver	501	845	-	824	868	-	-	-	-	-	-	-
Stage 1	997	875	-	995	876	-	-	-	-	-	-	-
Stage 2	464	852	-	848	899	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12.3	12	0	0
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1571	-	-	667	868	1535	-	-
HCM Lane V/C Ratio	-	-	-	0.258	0.409	-	-	-
HCM Control Delay (s)	0	-	-	12.3	12	0	-	-
HCM Lane LOS	A	-	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	1	2	0	-	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	17	131	604	0	1	11
Future Vol, veh/h	17	131	604	0	1	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	3	3	0	0	8	8
Mvmt Flow	20	152	702	0	1	13

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	702	0	-	0	894	702
Stage 1	-	-	-	-	702	-
Stage 2	-	-	-	-	192	-
Critical Hdwy	4.13	-	-	-	6.48	6.28
Critical Hdwy Stg 1	-	-	-	-	5.48	-
Critical Hdwy Stg 2	-	-	-	-	5.48	-
Follow-up Hdwy	2.227	-	-	-	3.572	3.372
Pot Cap-1 Maneuver	891	-	-	-	304	428
Stage 1	-	-	-	-	481	-
Stage 2	-	-	-	-	826	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	891	-	-	-	296	428
Mov Cap-2 Maneuver	-	-	-	-	296	-
Stage 1	-	-	-	-	469	-
Stage 2	-	-	-	-	826	-

Approach	EB	WB	SB
HCM Control Delay, s	1	0	14
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	891	-	-	-	413
HCM Lane V/C Ratio	0.022	-	-	-	0.034
HCM Control Delay (s)	9.1	0	-	-	14
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱	↰	↑↑		↰		↱	↰	↑	↱
Traffic Volume (veh/h)	0	1443	153	71	1821	0	270	0	107	103	0	149
Future Volume (veh/h)	0	1443	153	71	1821	0	270	0	107	103	0	149
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1881	1881	1881	1881	0	1881	0	1881	1810	1810	1810
Adj Flow Rate, veh/h	0	1519	0	75	1917	0	284	0	100	108	0	140
Adj No. of Lanes	0	2	1	1	2	0	1	0	1	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	1	1	1	1	0	1	0	1	5	5	5
Cap, veh/h	0	2244	1004	97	2630	0	0	0	0	211	222	188
Arrive On Green	0.00	0.63	0.00	0.05	0.74	0.00	0.00	0.00	0.00	0.12	0.00	0.12
Sat Flow, veh/h	0	3668	1599	1792	3668	0		0		1723	1810	1538
Grp Volume(v), veh/h	0	1519	0	75	1917	0		0.0		108	0	140
Grp Sat Flow(s),veh/h/ln	0	1787	1599	1792	1787	0				1723	1810	1538
Q Serve(g_s), s	0.0	17.9	0.0	2.7	19.8	0.0				3.8	0.0	5.7
Cycle Q Clear(g_c), s	0.0	17.9	0.0	2.7	19.8	0.0				3.8	0.0	5.7
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2244	1004	97	2630	0				211	222	188
V/C Ratio(X)	0.00	0.68	0.00	0.77	0.73	0.00				0.51	0.00	0.74
Avail Cap(c_a), veh/h	0	2476	1108	552	2630	0				663	696	592
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	7.8	0.0	30.3	4.9	0.0				26.7	0.0	27.5
Incr Delay (d2), s/veh	0.0	0.8	0.0	4.8	1.1	0.0				0.7	0.0	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	8.9	0.0	1.5	9.7	0.0				1.8	0.0	2.5
LnGrp Delay(d),s/veh	0.0	8.6	0.0	35.2	6.0	0.0				27.4	0.0	29.7
LnGrp LOS		A		D	A					C		C
Approach Vol, veh/h		1519			1992						248	
Approach Delay, s/veh		8.6			7.1						28.7	
Approach LOS		A			A						C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs			3	4		6		8
Phs Duration (G+Y+Rc), s			7.0	45.4		12.6		52.4
Change Period (Y+Rc), s			3.5	4.6		4.6		4.6
Max Green Setting (Gmax), s			20.0	45.0		25.0		45.0
Max Q Clear Time (g_c+I1), s			4.7	19.9		7.7		21.8
Green Ext Time (p_c), s			0.1	20.9		0.3		22.7

Intersection Summary	
HCM 2010 Ctrl Delay	9.1
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	734	910	1	2	1359	247	5	1	8	125	5	513
Future Volume (veh/h)	734	910	1	2	1359	247	5	1	8	125	5	513
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	0.99		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1900	1881	1881	1900	1900	1900	1900	1845	1845	1845
Adj Flow Rate, veh/h	773	958	1	2	1431	252	5	1	7	132	5	279
Adj No. of Lanes	1	2	0	1	2	0	0	1	0	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	1	1	1	0	0	0	3	3	3
Cap, veh/h	222	2417	3	4	1638	284	142	45	160	359	380	317
Arrive On Green	0.12	0.66	0.66	0.00	0.54	0.54	0.20	0.21	0.21	0.21	0.21	0.21
Sat Flow, veh/h	1792	3664	4	1792	3046	528	448	216	774	1380	1845	1539
Grp Volume(v), veh/h	773	467	492	2	830	853	13	0	0	132	5	279
Grp Sat Flow(s),veh/h/ln	1792	1787	1881	1792	1787	1787	1438	0	0	1380	1845	1539
Q Serve(g_s), s	12.4	12.0	12.0	0.1	40.1	42.2	0.0	0.0	0.0	7.6	0.2	17.6
Cycle Q Clear(g_c), s	12.4	12.0	12.0	0.1	40.1	42.2	0.6	0.0	0.0	8.2	0.2	17.6
Prop In Lane	1.00		0.00	1.00		0.30	0.38		0.54	1.00		1.00
Lane Grp Cap(c), veh/h	222	1179	1240	4	961	961	338	0	0	359	380	317
V/C Ratio(X)	3.48	0.40	0.40	0.52	0.86	0.89	0.04	0.00	0.00	0.37	0.01	0.88
Avail Cap(c_a), veh/h	222	1179	1240	222	961	961	611	0	0	632	745	622
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.36	0.36	0.36	0.09	0.09	0.09	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.8	7.8	7.8	49.8	19.9	20.4	31.8	0.0	0.0	34.7	31.6	38.5
Incr Delay (d2), s/veh	1119.9	0.4	0.3	3.5	1.0	1.3	0.0	0.0	0.0	0.2	0.0	3.1
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	75.2	6.0	6.3	0.1	19.9	21.0	0.3	0.0	0.0	3.2	0.1	7.7
LnGrp Delay(d),s/veh	1163.7	8.2	8.2	53.4	21.0	21.7	31.9	0.0	0.0	34.9	31.6	41.6
LnGrp LOS	F	A	A	D	C	C	C			C	C	D
Approach Vol, veh/h		1732			1685			13			416	
Approach Delay, s/veh		523.9			21.4			31.9			39.4	
Approach LOS		F			C			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	14.2	70.6		25.2	16.4	58.4		25.2
Change Period (Y+Rc), s	4.0	4.6		4.6	4.0	4.6		4.6
Max Green Setting (Gmax), s	12.4	34.0		40.4	12.4	24.4		40.4
Max Q Clear Time (g_c+I1), s	12.1	14.0		19.6	14.4	44.2		2.6
Green Ext Time (p_c), s	0.0	12.4		0.7	0.0	0.0		0.8

Intersection Summary	
HCM 2010 Ctrl Delay	249.7
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	116	239	684	65	427	39	1082	753	7	7	632	101
Future Volume (veh/h)	116	239	684	65	427	39	1082	753	7	7	632	101
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1881	1900	1900	1900	1881	1881	1900	1900	1900	1900
Adj Flow Rate, veh/h	121	249	0	68	445	39	1127	784	6	7	658	105
Adj No. of Lanes	1	1	1	1	1	0	2	1	0	1	2	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	1	1	1	0	0	0	1	1	1	0	0	0
Cap, veh/h	156	642	545	88	522	46	409	729	6	13	875	139
Arrive On Green	0.09	0.34	0.00	0.05	0.30	0.30	0.12	0.39	0.39	0.01	0.28	0.28
Sat Flow, veh/h	1792	1881	1599	1810	1722	151	3476	1864	14	1810	3120	497
Grp Volume(v), veh/h	121	249	0	68	0	484	1127	0	790	7	380	383
Grp Sat Flow(s),veh/h/ln	1792	1881	1599	1810	0	1873	1738	0	1879	1810	1805	1812
Q Serve(g_s), s	5.6	8.5	0.0	3.2	0.0	20.6	10.0	0.0	33.2	0.3	16.3	16.3
Cycle Q Clear(g_c), s	5.6	8.5	0.0	3.2	0.0	20.6	10.0	0.0	33.2	0.3	16.3	16.3
Prop In Lane	1.00		1.00	1.00		0.08	1.00		0.01	1.00		0.27
Lane Grp Cap(c), veh/h	156	642	545	88	0	567	409	0	735	13	506	508
V/C Ratio(X)	0.78	0.39	0.00	0.77	0.00	0.85	2.75	0.00	1.08	0.54	0.75	0.75
Avail Cap(c_a), veh/h	422	665	565	426	0	662	409	0	735	320	638	641
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.0	21.2	0.0	39.9	0.0	27.8	37.4	0.0	25.8	42.0	27.8	27.9
Incr Delay (d2), s/veh	8.1	0.5	0.0	5.3	0.0	9.7	795.4	0.0	55.3	12.3	4.2	4.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	4.5	0.0	1.7	0.0	12.1	50.0	0.0	28.2	0.2	8.7	8.8
LnGrp Delay(d),s/veh	46.0	21.7	0.0	45.2	0.0	37.5	832.8	0.0	81.1	54.3	32.0	32.1
LnGrp LOS	D	C		D		D	F		F	D	C	C
Approach Vol, veh/h		370			552			1917			770	
Approach Delay, s/veh		29.7			38.4			523.1			32.2	
Approach LOS		C			D			F			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.5	28.3	11.9	30.2	5.1	37.7	8.6	33.4
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	10.0	30.0	20.0	30.0	15.0	30.0	20.0	30.0
Max Q Clear Time (g_c+I1), s	12.0	18.3	7.6	22.6	2.3	35.2	5.2	10.5
Green Ext Time (p_c), s	0.0	5.5	0.2	3.1	0.0	0.0	0.0	5.5

Intersection Summary	
HCM 2010 Ctrl Delay	293.6
HCM 2010 LOS	F

Intersection	
Intersection Delay, s/veh	13
Intersection LOS	B

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	54	357	158	5	200	21
Future Vol, veh/h	54	357	158	5	200	21
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles, %	0	0	2	2	1	1
Mvmt Flow	61	406	180	6	227	24
Number of Lanes	1	0	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	1	0
HCM Control Delay	14.4	10.7	12.1
HCM LOS	B	B	B

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	0%	13%	90%
Vol Thru, %	97%	0%	10%
Vol Right, %	3%	87%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	163	411	221
LT Vol	0	54	200
Through Vol	158	0	21
RT Vol	5	357	0
Lane Flow Rate	185	467	251
Geometry Grp	1	1	1
Degree of Util (X)	0.282	0.601	0.388
Departure Headway (Hd)	5.486	4.634	5.559
Convergence, Y/N	Yes	Yes	Yes
Cap	654	785	648
Service Time	3.524	2.634	3.593
HCM Lane V/C Ratio	0.283	0.595	0.387
HCM Control Delay	10.7	14.4	12.1
HCM Lane LOS	B	B	B
HCM 95th-tile Q	1.2	4.1	1.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	18	12	27	218	42	363	57	1487	407	67	1322	46
Future Volume (veh/h)	18	12	27	218	42	363	57	1487	407	67	1322	46
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1776	1776	1900	1881	1881	1881	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	20	13	-1	245	47	0	64	1671	0	75	1485	0
Adj No. of Lanes	1	1	0	1	1	1	1	2	1	1	2	1
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	7	7	7	1	1	1	2	2	2	2	2	2
Cap, veh/h	40	127	0	293	397	338	96	1466	656	104	1482	663
Arrive On Green	0.02	0.07	0.00	0.16	0.21	0.00	0.05	0.41	0.00	0.06	0.42	0.00
Sat Flow, veh/h	1691	1776	0	1792	1881	1599	1774	3539	1583	1774	3539	1583
Grp Volume(v), veh/h	20	12	0	245	47	0	64	1671	0	75	1485	0
Grp Sat Flow(s),veh/h/ln	1691	1776	0	1792	1881	1599	1774	1770	1583	1774	1770	1583
Q Serve(g_s), s	0.7	0.4	0.0	8.2	1.2	0.0	2.2	25.5	0.0	2.6	25.8	0.0
Cycle Q Clear(g_c), s	0.7	0.4	0.0	8.2	1.2	0.0	2.2	25.5	0.0	2.6	25.8	0.0
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	40	127	0	293	397	338	96	1466	656	104	1482	663
V/C Ratio(X)	0.50	0.09	0.00	0.84	0.12	0.00	0.67	1.14	0.00	0.72	1.00	0.00
Avail Cap(c_a), veh/h	563	880	0	597	932	792	303	1466	656	303	1482	663
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	29.7	26.7	0.0	25.0	19.6	0.0	28.6	18.0	0.0	28.5	17.9	0.0
Incr Delay (d2), s/veh	3.6	0.1	0.0	2.5	0.0	0.0	3.0	71.8	0.0	3.5	23.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.2	0.0	4.2	0.6	0.0	1.1	26.8	0.0	1.4	17.3	0.0
LnGrp Delay(d),s/veh	33.3	26.8	0.0	27.4	19.7	0.0	31.5	89.8	0.0	31.9	41.7	0.0
LnGrp LOS	C	C		C	B		C	F		C	F	
Approach Vol, veh/h		32			292			1735			1560	
Approach Delay, s/veh		30.9			26.2			87.6			41.2	
Approach LOS		C			C			F			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.8	30.3	5.9	17.5	8.1	30.0	14.6	8.9
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	10.5	25.5	20.5	30.5	10.5	25.5	20.5	30.5
Max Q Clear Time (g_c+I1), s	4.2	27.8	2.7	3.2	4.6	27.5	10.2	2.4
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	62.2
HCM 2010 LOS	E

Notes

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

Intersection	
Int Delay, s/veh	3.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	3	439	39	44	477	126	12	25	6	9	27	37
Future Vol, veh/h	3	439	39	44	477	126	12	25	6	9	27	37
Conflicting Peds, #/hr	1	0	2	2	0	1	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	1	1	1	0	0	0	5	5	5
Mvmt Flow	3	482	43	48	524	138	13	27	7	10	30	41

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	663	0	0	527	0	0	1237	1271	506	1217	1223	594
Stage 1	-	-	-	-	-	-	512	512	-	690	690	-
Stage 2	-	-	-	-	-	-	725	759	-	527	533	-
Critical Hdwy	4.12	-	-	4.11	-	-	7.1	6.5	6.2	7.15	6.55	6.25
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.15	5.55	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.15	5.55	-
Follow-up Hdwy	2.218	-	-	2.209	-	-	3.5	4	3.3	3.545	4.045	3.345
Pot Cap-1 Maneuver	926	-	-	1045	-	-	154	169	570	155	177	499
Stage 1	-	-	-	-	-	-	548	540	-	431	442	-
Stage 2	-	-	-	-	-	-	420	418	-	529	520	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	925	-	-	1043	-	-	114	155	569	124	162	499
Mov Cap-2 Maneuver	-	-	-	-	-	-	114	155	-	124	162	-
Stage 1	-	-	-	-	-	-	544	536	-	428	408	-
Stage 2	-	-	-	-	-	-	331	386	-	494	516	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.6	38.1	28.4
HCM LOS			E	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	155	925	-	-	1043	-	-	233
HCM Lane V/C Ratio	0.305	0.004	-	-	0.046	-	-	0.344
HCM Control Delay (s)	38.1	8.9	0	-	8.6	0	-	28.4
HCM Lane LOS	E	A	A	-	A	A	-	D
HCM 95th %tile Q(veh)	1.2	0	-	-	0.1	-	-	1.5

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	2	415	8	36	593	2	65	21	64	0	3	0
Future Vol, veh/h	2	415	8	36	593	2	65	21	64	0	3	0
Conflicting Peds, #/hr	3	0	0	0	0	3	2	0	0	0	0	2
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	135	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	1	1	1	0	0	0	0	0	0
Mvmt Flow	2	466	9	40	666	2	73	24	72	0	3	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	671	0	0	475	0	0	1226	1226	471	1273	1229	672
Stage 1	-	-	-	-	-	-	475	475	-	750	750	-
Stage 2	-	-	-	-	-	-	751	751	-	523	479	-
Critical Hdwy	4.12	-	-	4.11	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.218	-	-	2.209	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	919	-	-	1092	-	-	157	180	597	146	179	459
Stage 1	-	-	-	-	-	-	574	561	-	407	422	-
Stage 2	-	-	-	-	-	-	406	421	-	541	558	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	916	-	-	1092	-	-	147	168	597	109	168	457
Mov Cap-2 Maneuver	-	-	-	-	-	-	147	168	-	109	168	-
Stage 1	-	-	-	-	-	-	572	559	-	405	396	-
Stage 2	-	-	-	-	-	-	378	395	-	454	556	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.5	41.1	26.9
HCM LOS			E	D

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	152	597	916	-	-	1092	-	-	168
HCM Lane V/C Ratio	0.636	0.12	0.002	-	-	0.037	-	-	0.02
HCM Control Delay (s)	62.9	11.9	8.9	0	-	8.4	0	-	26.9
HCM Lane LOS	F	B	A	A	-	A	A	-	D
HCM 95th %tile Q(veh)	3.5	0.4	0	-	-	0.1	-	-	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	27	33	68	28	6	49	1761	110	31	1499	45
Future Volume (veh/h)	45	27	33	68	28	6	49	1761	110	31	1499	45
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.99	0.99		0.99	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
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1881	1900	1881	1881	1900	1900	1900	1900
Adj Flow Rate, veh/h	49	29	11	74	30	4	53	1914	97	34	1629	-10
Adj No. of Lanes	0	1	0	0	1	0	1	2	0	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	1	1	1	1	1	1	0	0	0
Cap, veh/h	210	90	25	253	70	7	169	1900	95	69	1777	795
Arrive On Green	0.11	0.12	0.12	0.11	0.12	0.12	0.09	0.55	0.55	0.04	0.49	0.00
Sat Flow, veh/h	729	736	207	997	568	60	1792	3463	174	1810	3610	1615
Grp Volume(v), veh/h	89	0	0	108	0	0	53	980	1031	34	1629	-10
Grp Sat Flow(s),veh/h/ln	1672	0	0	1625	0	0	1792	1787	1850	1810	1805	1615
Q Serve(g_s), s	0.0	0.0	0.0	0.6	0.0	0.0	1.3	25.5	25.5	0.9	19.4	0.0
Cycle Q Clear(g_c), s	2.1	0.0	0.0	2.7	0.0	0.0	1.3	25.5	25.5	0.9	19.4	0.0
Prop In Lane	0.55		0.12	0.69		0.04	1.00		0.09	1.00		1.00
Lane Grp Cap(c), veh/h	307	0	0	313	0	0	169	980	1015	69	1777	795
V/C Ratio(X)	0.29	0.00	0.00	0.35	0.00	0.00	0.31	1.00	1.02	0.49	0.92	-0.01
Avail Cap(c_a), veh/h	1200	0	0	1186	0	0	308	980	1015	311	1980	886
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	18.9	0.0	0.0	19.2	0.0	0.0	19.6	10.5	10.5	21.9	10.9	0.0
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.2	0.0	0.0	0.4	28.6	32.3	2.0	6.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	0.0	0.0	1.3	0.0	0.0	0.7	20.0	21.8	0.5	11.1	0.0
LnGrp Delay(d),s/veh	19.1	0.0	0.0	19.4	0.0	0.0	20.0	39.0	42.8	23.9	17.3	0.0
LnGrp LOS	B			B			C	D	F	C	B	
Approach Vol, veh/h		89			108			2064			1653	
Approach Delay, s/veh		19.1			19.4			40.4			17.6	
Approach LOS		B			B			D			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.9	27.4		10.2	6.3	30.0		10.2
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	8.0	25.5		33.0	8.0	25.5		33.0
Max Q Clear Time (g_c+I1), s	3.3	21.4		4.7	2.9	27.5		4.1
Green Ext Time (p_c), s	0.0	1.5		0.2	0.0	0.0		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	29.7
HCM 2010 LOS	C

Intersection	
Int Delay, s/veh	10.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	60	126	1	0	161	0	0	40	0	0	0	0
Future Vol, veh/h	60	126	1	0	161	0	0	40	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	74	74	74	74	74	74	74	74	74	74	74	74
Heavy Vehicles, %	3	3	3	2	2	2	3	3	3	8	8	8
Mvmt Flow	81	170	1	0	218	0	0	54	0	0	0	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	164	55	1	141	55	54	1	0	0	54	0	0
Stage 1	1	1	-	54	54	-	-	-	-	-	-	-
Stage 2	163	54	-	87	1	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.12	6.52	6.22	4.13	-	-	4.18	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.518	4.018	3.318	2.227	-	-	2.272	-	-
Pot Cap-1 Maneuver	798	834	1081	829	836	1013	1615	-	-	1514	-	-
Stage 1	1019	893	-	958	850	-	-	-	-	-	-	-
Stage 2	837	848	-	921	895	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	638	834	1081	698	836	1013	1615	-	-	1514	-	-
Mov Cap-2 Maneuver	638	834	-	698	836	-	-	-	-	-	-	-
Stage 1	1019	893	-	958	850	-	-	-	-	-	-	-
Stage 2	623	848	-	744	895	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12.1	10.8	0	0
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1615	-	-	760	836	1514	-	-
HCM Lane V/C Ratio	-	-	-	0.333	0.26	-	-	-
HCM Control Delay (s)	0	-	-	12.1	10.8	0	-	-
HCM Lane LOS	A	-	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	1.5	1	0	-	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	34	436	263	1	0	1
Future Vol, veh/h	34	436	263	1	0	1
Conflicting Peds, #/hr	0	0	0	0	0	1
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	2	1	1	4	4
Mvmt Flow	35	454	274	1	0	1

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	275	0	-	0	799	276
Stage 1	-	-	-	-	275	-
Stage 2	-	-	-	-	524	-
Critical Hdwy	4.12	-	-	-	6.44	6.24
Critical Hdwy Stg 1	-	-	-	-	5.44	-
Critical Hdwy Stg 2	-	-	-	-	5.44	-
Follow-up Hdwy	2.218	-	-	-	3.536	3.336
Pot Cap-1 Maneuver	1288	-	-	-	352	758
Stage 1	-	-	-	-	767	-
Stage 2	-	-	-	-	590	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	1288	-	-	-	339	757
Mov Cap-2 Maneuver	-	-	-	-	339	-
Stage 1	-	-	-	-	739	-
Stage 2	-	-	-	-	590	-

Approach	EB	WB	SB
HCM Control Delay, s	0.6	0	9.8
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1288	-	-	-	757
HCM Lane V/C Ratio	0.027	-	-	-	0.001
HCM Control Delay (s)	7.9	0	-	-	9.8
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	-	0

Cumulative with Plan Conditions

AM Peak Hour

PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱	↰	↑↑		↰		↱	↰	↑	↱
Traffic Volume (veh/h)	0	1586	205	113	1549	0	198	0	56	76	4	96
Future Volume (veh/h)	0	1586	205	113	1549	0	198	0	56	76	4	96
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1863	1863	1863	0	1863	0	1863	1792	1792	1792
Adj Flow Rate, veh/h	0	1888	0	135	1844	0	236	0	53	90	5	95
Adj No. of Lanes	0	2	1	1	2	0	1	0	1	1	1	1
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	0	2	2	2	2	0	2	0	2	6	6	6
Cap, veh/h	0	2142	973	161	2680	0	0	0	0	142	149	127
Arrive On Green	0.00	0.61	0.00	0.09	0.76	0.00	0.00	0.00	0.00	0.08	0.08	0.08
Sat Flow, veh/h	0	3632	1583	1774	3632	0		0		1707	1792	1524
Grp Volume(v), veh/h	0	1888	0	135	1844	0		0.0		90	5	95
Grp Sat Flow(s),veh/h/ln	0	1770	1583	1774	1770	0				1707	1792	1524
Q Serve(g_s), s	0.0	29.4	0.0	4.9	17.2	0.0				3.3	0.2	4.0
Cycle Q Clear(g_c), s	0.0	29.4	0.0	4.9	17.2	0.0				3.3	0.2	4.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2142	973	161	2680	0				142	149	127
V/C Ratio(X)	0.00	0.88	0.00	0.84	0.69	0.00				0.63	0.03	0.75
Avail Cap(c_a), veh/h	0	2410	1093	530	2680	0				639	671	570
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	1.00	1.00	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	10.9	0.0	29.2	4.0	0.0				28.9	27.5	29.2
Incr Delay (d2), s/veh	0.0	4.1	0.0	4.5	0.8	0.0				1.7	0.0	3.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	15.4	0.0	2.6	8.5	0.0				1.6	0.1	1.8
LnGrp Delay(d),s/veh	0.0	14.9	0.0	33.7	4.9	0.0				30.7	27.5	32.5
LnGrp LOS		B		C	A					C	C	C
Approach Vol, veh/h		1888			1979						190	
Approach Delay, s/veh		14.9			6.8						31.5	
Approach LOS		B			A						C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs			3	4		6		8
Phs Duration (G+Y+Rc), s			9.9	44.7		10.6		54.6
Change Period (Y+Rc), s			3.5	4.6		4.6		4.6
Max Green Setting (Gmax), s			20.0	45.0		25.0		45.0
Max Q Clear Time (g_c+I1), s			6.9	31.4		6.0		19.2
Green Ext Time (p_c), s			0.1	8.6		0.3		25.5

Intersection Summary	
HCM 2010 Ctrl Delay	11.8
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	542	1166	7	41	1049	206	17	23	53	333	16	580
Future Volume (veh/h)	542	1166	7	41	1049	206	17	23	53	333	16	580
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1827	1827	1900	1900	1900	1900	1881	1881	1881
Adj Flow Rate, veh/h	602	1296	8	46	1166	220	19	26	58	370	18	368
Adj No. of Lanes	1	2	0	1	2	0	0	1	0	1	1	1
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	4	4	4	0	0	0	1	1	1
Cap, veh/h	220	1907	12	58	1279	240	101	143	260	471	553	470
Arrive On Green	0.12	0.53	0.53	0.03	0.44	0.44	0.29	0.29	0.30	0.29	0.29	0.29
Sat Flow, veh/h	1774	3606	22	1740	2918	548	198	488	884	1321	1881	1599
Grp Volume(v), veh/h	602	636	668	46	691	695	103	0	0	370	18	368
Grp Sat Flow(s),veh/h/ln	1774	1770	1859	1740	1736	1730	1570	0	0	1321	1881	1599
Q Serve(g_s), s	12.4	26.4	26.4	2.6	37.1	37.7	0.0	0.0	0.0	21.9	0.7	21.1
Cycle Q Clear(g_c), s	12.4	26.4	26.4	2.6	37.1	37.7	4.5	0.0	0.0	26.4	0.7	21.1
Prop In Lane	1.00		0.01	1.00		0.32	0.18		0.56	1.00		1.00
Lane Grp Cap(c), veh/h	220	936	983	58	761	758	504	0	0	471	553	470
V/C Ratio(X)	2.74	0.68	0.68	0.79	0.91	0.92	0.20	0.00	0.00	0.79	0.03	0.78
Avail Cap(c_a), veh/h	220	936	983	216	761	758	661	0	0	608	749	636
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	0.09	0.09	0.09	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.8	17.3	17.3	48.0	26.2	26.3	26.4	0.0	0.0	33.9	25.2	32.4
Incr Delay (d2), s/veh	782.6	0.4	0.3	0.8	2.0	2.2	0.1	0.0	0.0	3.8	0.0	3.0
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	53.9	13.0	13.6	1.3	18.1	18.4	2.1	0.0	0.0	10.4	0.4	9.7
LnGrp Delay(d),s/veh	826.4	17.7	17.7	48.8	28.2	28.5	26.5	0.0	0.0	37.7	25.2	35.4
LnGrp LOS	F	B	B	D	C	C	C			D	C	D
Approach Vol, veh/h		1906			1432			103			756	
Approach Delay, s/veh		273.1			29.0			26.5			36.3	
Approach LOS		F			C			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	7.3	58.1		34.6	16.4	49.0		34.6
Change Period (Y+Rc), s	4.0	4.6		4.6	4.0	4.6		4.6
Max Green Setting (Gmax), s	12.4	34.0		40.4	12.4	24.4		40.4
Max Q Clear Time (g_c+I1), s	14.6	28.4		28.4	14.4	39.7		6.5
Green Ext Time (p_c), s	0.0	4.6		1.6	0.0	0.0		1.8

Intersection Summary	
HCM 2010 Ctrl Delay	141.1
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	202	276	1099	100	440	80	819	695	10	21	550	40
Future Volume (veh/h)	202	276	1099	100	440	80	819	695	10	21	550	40
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1792	1792	1900	1881	1881	1900	1863	1863	1900
Adj Flow Rate, veh/h	227	310	0	112	494	88	920	781	10	24	618	45
Adj No. of Lanes	1	1	1	1	1	0	2	1	0	1	2	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	6	6	6	1	1	1	2	2	2
Cap, veh/h	255	695	599	131	452	81	342	610	8	26	821	60
Arrive On Green	0.14	0.37	0.00	0.08	0.31	0.31	0.10	0.33	0.33	0.01	0.25	0.25
Sat Flow, veh/h	1774	1863	1583	1707	1481	264	3476	1853	24	1774	3345	243
Grp Volume(v), veh/h	227	310	0	112	0	582	920	0	791	24	327	336
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1707	0	1745	1738	0	1877	1774	1770	1819
Q Serve(g_s), s	12.1	12.1	0.0	6.3	0.0	29.5	9.5	0.0	31.8	1.3	16.5	16.5
Cycle Q Clear(g_c), s	12.1	12.1	0.0	6.3	0.0	29.5	9.5	0.0	31.8	1.3	16.5	16.5
Prop In Lane	1.00		1.00	1.00		0.15	1.00		0.01	1.00		0.13
Lane Grp Cap(c), veh/h	255	695	599	131	0	533	342	0	618	26	434	446
V/C Ratio(X)	0.89	0.45	0.00	0.86	0.00	1.09	2.69	0.00	1.28	0.93	0.75	0.75
Avail Cap(c_a), veh/h	358	695	599	345	0	533	342	0	618	266	540	556
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.6	22.8	0.0	44.1	0.0	33.5	43.6	0.0	32.4	47.6	33.7	33.7
Incr Delay (d2), s/veh	17.7	0.5	0.0	6.1	0.0	66.5	769.5	0.0	138.3	35.9	5.0	4.9
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	7.2	6.3	0.0	3.2	0.0	23.9	41.0	0.0	40.0	0.9	8.7	8.9
LnGrp Delay(d),s/veh	58.3	23.3	0.0	50.2	0.0	100.0	813.1	0.0	170.7	83.5	38.7	38.7
LnGrp LOS	E	C		D		F	F		F	F	D	D
Approach Vol, veh/h		537			694			1711			687	
Approach Delay, s/veh		38.1			92.0			516.1			40.3	
Approach LOS		D			F			F			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.5	28.7	18.9	34.5	6.4	36.8	12.4	41.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	10.0	30.0	20.0	30.0	15.0	30.0	20.0	30.0
Max Q Clear Time (g_c+I1), s	11.5	18.5	14.1	31.5	3.3	33.8	8.3	14.1
Green Ext Time (p_c), s	0.0	5.7	0.3	0.0	0.0	0.0	0.0	6.3

Intersection Summary	
HCM 2010 Ctrl Delay	274.2
HCM 2010 LOS	F

Intersection	
Intersection Delay, s/veh	82.4
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	10	20	60	10	519	10	201	5	283	30	0
Future Vol, veh/h	0	10	20	60	10	519	10	201	5	283	30	0
Peak Hour Factor	0.92	0.92	0.92	0.77	0.92	0.77	0.92	0.77	0.77	0.77	0.77	0.92
Heavy Vehicles, %	2	2	2	4	2	4	2	3	3	2	2	2
Mvmt Flow	0	11	22	78	11	674	11	261	6	368	39	0
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	11.5	136.6	18.8	29.8
HCM LOS	B	F	C	D

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	5%	0%	10%	90%
Vol Thru, %	93%	33%	2%	10%
Vol Right, %	2%	67%	88%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	216	30	589	313
LT Vol	10	0	60	283
Through Vol	201	10	10	30
RT Vol	5	20	519	0
Lane Flow Rate	278	33	763	406
Geometry Grp	1	1	1	1
Degree of Util (X)	0.532	0.067	1.228	0.755
Departure Headway (Hd)	7.527	7.949	5.797	7.389
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	482	453	633	492
Service Time	5.527	5.949	3.814	5.389
HCM Lane V/C Ratio	0.577	0.073	1.205	0.825
HCM Control Delay	18.8	11.5	136.6	29.8
HCM Lane LOS	C	B	F	D
HCM 95th-tile Q	3.1	0.2	27.9	6.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	94	75	454	31	267	47	1219	290	205	1506	46
Future Volume (veh/h)	22	94	75	454	31	267	47	1219	290	205	1506	46
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1810	1810	1900	1863	1863	1863	1881	1881	1881	1863	1863	1863
Adj Flow Rate, veh/h	25	108	54	522	36	0	54	1401	0	236	1731	0
Adj No. of Lanes	1	1	0	1	1	1	1	2	1	1	2	1
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	5	5	5	2	2	2	1	1	1	2	2	2
Cap, veh/h	35	130	65	405	599	519	65	1008	460	262	1393	632
Arrive On Green	0.02	0.11	0.12	0.23	0.32	0.00	0.04	0.28	0.00	0.15	0.39	0.00
Sat Flow, veh/h	1723	1138	569	1774	1863	1583	1792	3574	1599	1774	3539	1583
Grp Volume(v), veh/h	25	0	162	522	36	0	54	1401	0	236	1731	0
Grp Sat Flow(s),veh/h/ln	1723	0	1707	1774	1863	1583	1792	1787	1599	1774	1770	1583
Q Serve(g_s), s	1.3	0.0	8.1	20.0	1.2	0.0	2.6	24.7	0.0	11.5	34.5	0.0
Cycle Q Clear(g_c), s	1.3	0.0	8.1	20.0	1.2	0.0	2.6	24.7	0.0	11.5	34.5	0.0
Prop In Lane	1.00		0.33	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	35	0	195	405	599	519	65	1008	460	262	1393	632
V/C Ratio(X)	0.71	0.00	0.83	1.29	0.06	0.00	0.84	1.39	0.00	0.90	1.24	0.00
Avail Cap(c_a), veh/h	197	0	594	405	861	741	102	1008	460	304	1393	632
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	42.7	0.0	37.9	33.8	20.6	0.0	42.0	31.5	0.0	36.7	26.6	0.0
Incr Delay (d2), s/veh	9.6	0.0	3.5	147.7	0.0	0.0	15.6	181.5	0.0	24.0	115.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.0	4.0	26.3	0.6	0.0	1.6	37.5	0.0	7.4	39.0	0.0
LnGrp Delay(d),s/veh	52.3	0.0	41.5	181.5	20.6	0.0	57.6	213.0	0.0	60.8	141.9	0.0
LnGrp LOS	D		D	F	C		E	F		E	F	
Approach Vol, veh/h		187			558			1455			1967	
Approach Delay, s/veh		42.9			171.1			207.2			132.2	
Approach LOS		D			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.2	39.5	6.8	33.2	17.9	29.7	25.0	15.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.5	35.0	10.5	41.0	15.5	25.0	20.5	31.0
Max Q Clear Time (g_c+I1), s	4.6	36.5	3.3	3.2	13.5	26.7	22.0	10.1
Green Ext Time (p_c), s	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.2

Intersection Summary	
HCM 2010 Ctrl Delay	159.6
HCM 2010 LOS	F

Notes

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

Intersection	
Int Delay, s/veh	92.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	3	525	16	69	671	131	30	57	21	36	31	44
Future Vol, veh/h	3	525	16	69	671	131	30	57	21	36	31	44
Conflicting Peds, #/hr	0	0	1	1	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	3	3	3	3	3	3	2	2	2	4	4	4
Mvmt Flow	3	597	18	78	763	149	34	65	24	41	35	50

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	912	0	0	616	0	0	1649	1681	607	1651	1616	838
Stage 1	-	-	-	-	-	-	613	613	-	994	994	-
Stage 2	-	-	-	-	-	-	1036	1068	-	657	622	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.12	6.52	6.22	7.14	6.54	6.24
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.14	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.14	5.54	-
Follow-up Hdwy	2.227	-	-	2.227	-	-	3.518	4.018	3.318	3.536	4.036	3.336
Pot Cap-1 Maneuver	743	-	-	959	-	-	79	95	496	78	103	363
Stage 1	-	-	-	-	-	-	480	483	-	293	320	-
Stage 2	-	-	-	-	-	-	280	298	-	451	476	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	743	-	-	958	-	-	40	78	496	~ 20	85	363
Mov Cap-2 Maneuver	-	-	-	-	-	-	40	78	-	~ 20	85	-
Stage 1	-	-	-	-	-	-	477	480	-	291	265	-
Stage 2	-	-	-	-	-	-	174	247	-	369	473	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.7	$ 477.1	$ 891.5
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	71	743	-	-	958	-	-	49
HCM Lane V/C Ratio	1.729	0.005	-	-	0.082	-	-	2.574
HCM Control Delay (s)	$ 477.1	9.9	0	-	9.1	0	-	$ 891.5
HCM Lane LOS	F	A	A	-	A	A	-	F
HCM 95th %tile Q(veh)	10.7	0	-	-	0.3	-	-	13.2

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

Intersection	
Int Delay, s/veh	24.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↰	↱		↕	
Traffic Vol, veh/h	8	473	91	115	835	0	17	17	59	7	26	6
Future Vol, veh/h	8	473	91	115	835	0	17	17	59	7	26	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	135	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	84	84	84	84	84	84	84	84	84	84	84
Heavy Vehicles, %	3	3	3	2	2	2	2	2	2	0	0	0
Mvmt Flow	10	563	108	137	994	0	20	20	70	8	31	7

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	994	0	0	671	0	0	1924	1905	617	1950	1959	994
Stage 1	-	-	-	-	-	-	637	637	-	1268	1268	-
Stage 2	-	-	-	-	-	-	1287	1268	-	682	691	-
Critical Hdwy	4.13	-	-	4.12	-	-	7.12	6.52	6.22	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.1	5.5	-
Follow-up Hdwy	2.227	-	-	2.218	-	-	3.518	4.018	3.318	3.5	4	3.3
Pot Cap-1 Maneuver	692	-	-	919	-	-	51	69	490	49	64	300
Stage 1	-	-	-	-	-	-	465	471	-	209	242	-
Stage 2	-	-	-	-	-	-	202	240	-	443	449	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	692	-	-	919	-	-	~ 15	45	490	20	42	300
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 15	45	-	20	42	-
Stage 1	-	-	-	-	-	-	454	460	-	204	161	-
Stage 2	-	-	-	-	-	-	106	160	-	354	439	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	1.2	273.3	$ 366.6
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	23	490	692	-	-	919	-	-	39
HCM Lane V/C Ratio	1.76	0.143	0.014	-	-	0.149	-	-	1.19
HCM Control Delay (s)	$ 723.9	13.6	10.3	0	-	9.6	0	-	$ 366.6
HCM Lane LOS	F	B	B	A	-	A	A	-	F
HCM 95th %tile Q(veh)	5.1	0.5	0	-	-	0.5	-	-	4.7

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	65	78	118	277	70	35	122	1344	167	74	1641	149
Future Volume (veh/h)	65	78	118	277	70	35	122	1344	167	74	1641	149
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.98	0.99		0.98	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1881	1900	1900	1863	1900	1881	1881	1900	1863	1863	1863
Adj Flow Rate, veh/h	83	100	122	355	90	41	156	1723	187	95	2104	122
Adj No. of Lanes	0	1	0	0	1	0	1	2	0	1	2	1
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Percent Heavy Veh, %	1	1	1	2	2	2	1	1	1	2	2	2
Cap, veh/h	215	259	278	426	88	40	168	1017	108	166	1106	489
Arrive On Green	0.41	0.41	0.41	0.41	0.41	0.41	0.09	0.31	0.32	0.09	0.31	0.31
Sat Flow, veh/h	388	638	684	857	217	99	1792	3256	347	1774	3539	1566
Grp Volume(v), veh/h	305	0	0	486	0	0	156	932	978	95	2104	122
Grp Sat Flow(s),veh/h/ln	1710	0	0	1173	0	0	1792	1787	1815	1774	1770	1566
Q Serve(g_s), s	0.0	0.0	0.0	22.3	0.0	0.0	6.9	25.0	25.0	4.1	25.0	4.6
Cycle Q Clear(g_c), s	10.2	0.0	0.0	32.5	0.0	0.0	6.9	25.0	25.0	4.1	25.0	4.6
Prop In Lane	0.27		0.40	0.73		0.08	1.00		0.19	1.00		1.00
Lane Grp Cap(c), veh/h	752	0	0	554	0	0	168	558	567	166	1106	489
V/C Ratio(X)	0.41	0.00	0.00	0.88	0.00	0.00	0.93	1.67	1.72	0.57	1.90	0.25
Avail Cap(c_a), veh/h	752	0	0	554	0	0	168	558	567	166	1106	489
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.0	0.0	0.0	24.8	0.0	0.0	36.0	27.5	27.5	34.7	27.5	20.5
Incr Delay (d2), s/veh	0.1	0.0	0.0	14.2	0.0	0.0	48.4	308.6	333.3	3.0	409.5	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.8	0.0	0.0	12.9	0.0	0.0	5.7	60.1	65.0	2.1	75.0	2.0
LnGrp Delay(d),s/veh	17.2	0.0	0.0	39.0	0.0	0.0	84.4	336.1	360.8	37.7	437.0	20.6
LnGrp LOS	B			D			F	F	F	D	F	C
Approach Vol, veh/h		305			486			2066			2321	
Approach Delay, s/veh		17.2			39.0			328.8			398.7	
Approach LOS		B			D			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	12.5	30.0		37.5	12.5	30.0		37.5
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	8.0	25.5		33.0	8.0	25.5		33.0
Max Q Clear Time (g_c+I1), s	8.9	27.0		34.5	6.1	27.0		12.2
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	0.0		1.4

Intersection Summary		
HCM 2010 Ctrl Delay		314.6
HCM 2010 LOS		F

Intersection	
Int Delay, s/veh	13.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	81	124	8	13	335	0	12	24	20	0	0	0
Future Vol, veh/h	81	124	8	13	335	0	12	24	20	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	1	1	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	82	82	82	82	82	82	82	82	82	82	82	82
Heavy Vehicles, %	12	12	12	0	0	0	10	10	10	10	10	10
Mvmt Flow	99	151	10	16	409	0	15	29	24	0	0	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	277	85	1	154	73	42	1	0	0	54	0	0
Stage 1	1	1	-	72	72	-	-	-	-	-	-	-
Stage 2	276	84	-	82	1	-	-	-	-	-	-	-
Critical Hdwy	7.22	6.62	6.32	7.1	6.5	6.2	4.2	-	-	4.2	-	-
Critical Hdwy Stg 1	6.22	5.62	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.22	5.62	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.608	4.108	3.408	3.5	4	3.3	2.29	-	-	2.29	-	-
Pot Cap-1 Maneuver	656	786	1055	817	821	1034	1571	-	-	1502	-	-
Stage 1	997	875	-	943	839	-	-	-	-	-	-	-
Stage 2	709	806	-	931	899	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	394	777	1055	682	812	1033	1571	-	-	1501	-	-
Mov Cap-2 Maneuver	394	777	-	682	812	-	-	-	-	-	-	-
Stage 1	987	875	-	933	830	-	-	-	-	-	-	-
Stage 2	356	797	-	763	899	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	16.5	14.3	1.6	0
HCM LOS	C	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1571	-	-	571	806	1501	-	-
HCM Lane V/C Ratio	0.009	-	-	0.455	0.527	-	-	-
HCM Control Delay (s)	7.3	0	-	16.5	14.3	0	-	-
HCM Lane LOS	A	A	-	C	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	2.4	3.1	0	-	-

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	55	147	629	1	3	60
Future Vol, veh/h	55	147	629	1	3	60
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	3	3	0	0	8	8
Mvmt Flow	64	171	731	1	3	70

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	732	0	-	0	1031	732
Stage 1	-	-	-	-	732	-
Stage 2	-	-	-	-	299	-
Critical Hdwy	4.13	-	-	-	6.48	6.28
Critical Hdwy Stg 1	-	-	-	-	5.48	-
Critical Hdwy Stg 2	-	-	-	-	5.48	-
Follow-up Hdwy	2.227	-	-	-	3.572	3.372
Pot Cap-1 Maneuver	868	-	-	-	252	411
Stage 1	-	-	-	-	465	-
Stage 2	-	-	-	-	739	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	868	-	-	-	232	411
Mov Cap-2 Maneuver	-	-	-	-	232	-
Stage 1	-	-	-	-	427	-
Stage 2	-	-	-	-	739	-

Approach	EB	WB	SB
HCM Control Delay, s	2.6	0	16.1
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	868	-	-	-	396
HCM Lane V/C Ratio	0.074	-	-	-	0.185
HCM Control Delay (s)	9.5	0	-	-	16.1
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0.2	-	-	-	0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱	↰	↑↑		↰		↱	↰	↑	↱
Traffic Volume (veh/h)	0	1628	171	100	1967	0	284	0	117	103	0	149
Future Volume (veh/h)	0	1628	171	100	1967	0	284	0	117	103	0	149
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1881	1881	1881	1881	0	1881	0	1881	1810	1810	1810
Adj Flow Rate, veh/h	0	1714	0	105	2071	0	299	0	110	108	0	140
Adj No. of Lanes	0	2	1	1	2	0	1	0	1	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	1	1	1	1	0	1	0	1	5	5	5
Cap, veh/h	0	2177	974	137	2639	0	0	0	0	210	221	188
Arrive On Green	0.00	0.61	0.00	0.08	0.74	0.00	0.00	0.00	0.00	0.12	0.00	0.12
Sat Flow, veh/h	0	3668	1599	1792	3668	0		0		1723	1810	1538
Grp Volume(v), veh/h	0	1714	0	105	2071	0		0.0		108	0	140
Grp Sat Flow(s),veh/h/ln	0	1787	1599	1792	1787	0				1723	1810	1538
Q Serve(g_s), s	0.0	23.8	0.0	3.8	23.8	0.0				3.9	0.0	5.8
Cycle Q Clear(g_c), s	0.0	23.8	0.0	3.8	23.8	0.0				3.9	0.0	5.8
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2177	974	137	2639	0				210	221	188
V/C Ratio(X)	0.00	0.79	0.00	0.77	0.78	0.00				0.51	0.00	0.75
Avail Cap(c_a), veh/h	0	2439	1091	543	2639	0				653	686	583
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	9.7	0.0	29.9	5.4	0.0				27.1	0.0	28.0
Incr Delay (d2), s/veh	0.0	1.8	0.0	3.4	1.7	0.0				0.7	0.0	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	12.0	0.0	2.0	11.8	0.0				1.9	0.0	2.6
LnGrp Delay(d),s/veh	0.0	11.4	0.0	33.3	7.1	0.0				27.8	0.0	30.2
LnGrp LOS		B		C	A					C		C
Approach Vol, veh/h		1714			2176						248	
Approach Delay, s/veh		11.4			8.3						29.2	
Approach LOS		B			A						C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs			3	4		6		8
Phs Duration (G+Y+Rc), s			8.5	44.8		12.7		53.3
Change Period (Y+Rc), s			3.5	4.6		4.6		4.6
Max Green Setting (Gmax), s			20.0	45.0		25.0		45.0
Max Q Clear Time (g_c+I1), s			5.8	25.8		7.8		25.8
Green Ext Time (p_c), s			0.1	14.4		0.3		19.1

Intersection Summary	
HCM 2010 Ctrl Delay	10.9
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	744	1085	11	84	1523	276	20	23	59	157	32	516
Future Volume (veh/h)	744	1085	11	84	1523	276	20	23	59	157	32	516
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1900	1881	1881	1900	1900	1900	1900	1845	1845	1845
Adj Flow Rate, veh/h	783	1142	12	88	1603	283	21	24	61	165	34	282
Adj No. of Lanes	1	2	0	1	2	0	0	1	0	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	1	1	1	0	0	0	3	3	3
Cap, veh/h	222	2149	23	112	1622	279	84	102	193	348	391	326
Arrive On Green	0.12	0.59	0.59	0.06	0.53	0.53	0.21	0.21	0.21	0.21	0.21	0.21
Sat Flow, veh/h	1792	3623	38	1792	3050	525	194	479	912	1289	1845	1539
Grp Volume(v), veh/h	783	563	591	88	922	964	106	0	0	165	34	282
Grp Sat Flow(s),veh/h/ln	1792	1787	1874	1792	1787	1788	1585	0	0	1289	1845	1539
Q Serve(g_s), s	12.4	18.7	18.7	4.8	49.9	53.2	0.0	0.0	0.0	6.2	1.5	17.7
Cycle Q Clear(g_c), s	12.4	18.7	18.7	4.8	49.9	53.2	5.2	0.0	0.0	11.4	1.5	17.7
Prop In Lane	1.00		0.02	1.00		0.29	0.20		0.58	1.00		1.00
Lane Grp Cap(c), veh/h	222	1060	1112	112	950	951	370	0	0	348	391	326
V/C Ratio(X)	3.52	0.53	0.53	0.78	0.97	1.01	0.29	0.00	0.00	0.47	0.09	0.86
Avail Cap(c_a), veh/h	222	1060	1112	222	950	951	660	0	0	595	745	622
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	0.09	0.09	0.09	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.8	12.1	12.1	46.2	22.6	23.4	33.1	0.0	0.0	35.5	31.6	38.0
Incr Delay (d2), s/veh	1137.0	0.2	0.2	0.4	4.2	12.5	0.2	0.0	0.0	0.4	0.0	2.7
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	76.3	9.1	9.6	2.4	25.4	29.5	2.5	0.0	0.0	4.2	0.8	7.7
LnGrp Delay(d),s/veh	1180.8	12.3	12.3	46.6	26.8	35.9	33.3	0.0	0.0	35.8	31.7	40.7
LnGrp LOS	F	B	B	D	C	F	C			D	C	D
Approach Vol, veh/h		1937			1974			106			481	
Approach Delay, s/veh		484.6			32.2			33.3			38.4	
Approach LOS		F			C			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	10.3	63.9		25.8	16.4	57.8		25.8
Change Period (Y+Rc), s	4.0	4.6		4.6	4.0	4.6		4.6
Max Green Setting (Gmax), s	12.4	34.0		40.4	12.4	24.4		40.4
Max Q Clear Time (g_c+I1), s	16.8	20.7		19.7	14.4	55.2		7.2
Green Ext Time (p_c), s	0.0	10.5		1.3	0.0	0.0		1.4

Intersection Summary		
HCM 2010 Ctrl Delay	227.7	
HCM 2010 LOS	F	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	157	329	839	92	502	89	1267	805	25	43	741	119
Future Volume (veh/h)	157	329	839	92	502	89	1267	805	25	43	741	119
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1881	1900	1900	1900	1881	1881	1900	1900	1900	1900
Adj Flow Rate, veh/h	164	343	0	96	523	91	1320	839	25	45	772	124
Adj No. of Lanes	1	1	1	1	1	0	2	1	0	1	2	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	1	1	1	0	0	0	1	1	1	0	0	0
Cap, veh/h	200	673	572	123	495	86	364	644	19	58	877	141
Arrive On Green	0.11	0.36	0.00	0.07	0.31	0.31	0.10	0.35	0.35	0.03	0.28	0.28
Sat Flow, veh/h	1792	1881	1599	1810	1577	274	3476	1817	54	1810	3116	500
Grp Volume(v), veh/h	164	343	0	96	0	614	1320	0	864	45	447	449
Grp Sat Flow(s),veh/h/ln	1792	1881	1599	1810	0	1852	1738	0	1872	1810	1805	1812
Q Serve(g_s), s	8.6	13.7	0.0	5.0	0.0	30.0	10.0	0.0	33.9	2.4	22.6	22.6
Cycle Q Clear(g_c), s	8.6	13.7	0.0	5.0	0.0	30.0	10.0	0.0	33.9	2.4	22.6	22.6
Prop In Lane	1.00		1.00	1.00		0.15	1.00		0.03	1.00		0.28
Lane Grp Cap(c), veh/h	200	673	572	123	0	581	364	0	663	58	508	510
V/C Ratio(X)	0.82	0.51	0.00	0.78	0.00	1.06	3.63	0.00	1.30	0.78	0.88	0.88
Avail Cap(c_a), veh/h	375	673	572	379	0	581	364	0	663	284	566	568
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.5	24.1	0.0	43.9	0.0	32.8	42.8	0.0	30.9	45.9	32.8	32.8
Incr Delay (d2), s/veh	8.0	0.8	0.0	4.1	0.0	53.2	1190.7	0.0	147.1	8.2	14.1	14.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.7	7.2	0.0	2.6	0.0	23.8	64.9	0.0	44.4	1.3	13.2	13.2
LnGrp Delay(d),s/veh	49.5	24.9	0.0	48.0	0.0	86.0	1233.5	0.0	178.0	54.2	46.9	46.9
LnGrp LOS	D	C		D		F	F		F	D	D	D
Approach Vol, veh/h		507			710			2184			941	
Approach Delay, s/veh		32.8			80.9			815.9			47.3	
Approach LOS		C			F			F			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.5	31.4	15.2	34.5	7.5	38.4	11.0	38.7
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	10.0	30.0	20.0	30.0	15.0	30.0	20.0	30.0
Max Q Clear Time (g_c+I1), s	12.0	24.6	10.6	32.0	4.4	35.9	7.0	15.7
Green Ext Time (p_c), s	0.0	2.3	0.3	0.0	0.0	0.0	0.0	6.4

Intersection Summary	
HCM 2010 Ctrl Delay	437.7
HCM 2010 LOS	F

Intersection	
Intersection Delay, s/veh	38.2
Intersection LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	10	20	75	10	463	10	204	7	312	53	0
Future Vol, veh/h	0	10	20	75	10	463	10	204	7	312	53	0
Peak Hour Factor	0.92	0.92	0.92	0.88	0.92	0.88	0.92	0.88	0.88	0.88	0.88	0.92
Heavy Vehicles, %	2	2	2	0	2	0	2	2	2	1	1	2
Mvmt Flow	0	11	22	85	11	526	11	232	8	355	60	0
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	10.9	54.7	16.2	28.8
HCM LOS	B	F	C	D

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	5%	0%	14%	85%
Vol Thru, %	92%	33%	2%	15%
Vol Right, %	3%	67%	84%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	221	30	548	365
LT Vol	10	0	75	312
Through Vol	204	10	10	53
RT Vol	7	20	463	0
Lane Flow Rate	251	33	622	415
Geometry Grp	1	1	1	1
Degree of Util (X)	0.48	0.067	0.98	0.77
Departure Headway (Hd)	6.897	7.413	5.672	6.683
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	519	486	641	539
Service Time	4.974	5.413	3.721	4.749
HCM Lane V/C Ratio	0.484	0.068	0.97	0.77
HCM Control Delay	16.2	10.9	54.7	28.8
HCM Lane LOS	C	B	F	D
HCM 95th-tile Q	2.6	0.2	14.4	6.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	18	12	27	222	42	466	57	1599	449	163	1438	46
Future Volume (veh/h)	18	12	27	222	42	466	57	1599	449	163	1438	46
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1776	1776	1900	1881	1881	1881	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	20	13	-1	249	47	0	64	1797	0	183	1616	0
Adj No. of Lanes	1	1	0	1	1	1	1	2	1	1	2	1
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	7	7	7	1	1	1	2	2	2	2	2	2
Cap, veh/h	39	121	0	293	393	334	92	1332	596	224	1595	714
Arrive On Green	0.02	0.07	0.00	0.16	0.21	0.00	0.05	0.38	0.00	0.13	0.45	0.00
Sat Flow, veh/h	1691	1776	0	1792	1881	1599	1774	3539	1583	1774	3539	1583
Grp Volume(v), veh/h	20	12	0	249	47	0	64	1797	0	183	1616	0
Grp Sat Flow(s),veh/h/ln	1691	1776	0	1792	1881	1599	1774	1770	1583	1774	1770	1583
Q Serve(g_s), s	0.8	0.4	0.0	9.1	1.4	0.0	2.4	25.5	0.0	6.8	30.5	0.0
Cycle Q Clear(g_c), s	0.8	0.4	0.0	9.1	1.4	0.0	2.4	25.5	0.0	6.8	30.5	0.0
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	39	121	0	293	393	334	92	1332	596	224	1595	714
V/C Ratio(X)	0.51	0.10	0.00	0.85	0.12	0.00	0.70	1.35	0.00	0.82	1.01	0.00
Avail Cap(c_a), veh/h	512	799	0	542	847	720	275	1332	596	275	1595	714
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	32.7	29.6	0.0	27.5	21.7	0.0	31.6	21.1	0.0	28.9	18.6	0.0
Incr Delay (d2), s/veh	3.8	0.1	0.0	2.7	0.0	0.0	3.5	162.2	0.0	12.2	25.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.2	0.0	4.7	0.7	0.0	1.3	42.2	0.0	4.1	20.3	0.0
LnGrp Delay(d),s/veh	36.5	29.7	0.0	30.2	21.8	0.0	35.2	183.3	0.0	41.0	44.4	0.0
LnGrp LOS	D	C		C	C		D	F		D	F	
Approach Vol, veh/h		32			296			1861			1799	
Approach Delay, s/veh		34.0			28.8			178.2			44.1	
Approach LOS		C			C			F			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	35.0	6.1	18.7	13.0	30.0	15.6	9.1
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	10.5	25.5	20.5	30.5	10.5	25.5	20.5	30.5
Max Q Clear Time (g_c+I1), s	4.4	32.5	2.8	3.4	8.8	27.5	11.1	2.4
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	105.5
HCM 2010 LOS	F

Notes

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

Intersection	
Int Delay, s/veh	41

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	3	590	39	81	593	149	12	53	38	15	49	49
Future Vol, veh/h	3	590	39	81	593	149	12	53	38	15	49	49
Conflicting Peds, #/hr	1	0	2	2	0	1	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	1	1	1	0	0	0	5	5	5
Mvmt Flow	3	648	43	89	652	164	13	58	42	16	54	54

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	817	0	0	693	0	0	1644	1673	672	1639	1612	735
Stage 1	-	-	-	-	-	-	678	678	-	913	913	-
Stage 2	-	-	-	-	-	-	966	995	-	726	699	-
Critical Hdwy	4.12	-	-	4.11	-	-	7.1	6.5	6.2	7.15	6.55	6.25
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.15	5.55	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.15	5.55	-
Follow-up Hdwy	2.218	-	-	2.209	-	-	3.5	4	3.3	3.545	4.045	3.345
Pot Cap-1 Maneuver	811	-	-	907	-	-	81	97	459	79	103	415
Stage 1	-	-	-	-	-	-	445	455	-	324	348	-
Stage 2	-	-	-	-	-	-	309	325	-	411	437	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	810	-	-	905	-	-	29	78	458	24	83	415
Mov Cap-2 Maneuver	-	-	-	-	-	-	29	78	-	24	83	-
Stage 1	-	-	-	-	-	-	441	451	-	322	283	-
Stage 2	-	-	-	-	-	-	177	264	-	323	434	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.9	277.1	$ 347.5
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	88	810	-	-	905	-	-	85
HCM Lane V/C Ratio	1.286	0.004	-	-	0.098	-	-	1.461
HCM Control Delay (s)	277.1	9.5	0	-	9.4	0	-	$ 347.5
HCM Lane LOS	F	A	A	-	A	A	-	F
HCM 95th %tile Q(veh)	8.3	0	-	-	0.3	-	-	9.7

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

Intersection	
Int Delay, s/veh	40.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↰	↱		↕	
Traffic Vol, veh/h	10	595	8	61	763	2	65	39	96	0	17	6
Future Vol, veh/h	10	595	8	61	763	2	65	39	96	0	17	6
Conflicting Peds, #/hr	3	0	0	0	0	3	2	0	0	0	0	2
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	135	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	1	1	1	0	0	0	0	0	0
Mvmt Flow	11	669	9	69	857	2	73	44	108	0	19	7

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	862	0	0	678	0	0	1707	1696	674	1771	1699	863
Stage 1	-	-	-	-	-	-	696	696	-	999	999	-
Stage 2	-	-	-	-	-	-	1011	1000	-	772	700	-
Critical Hdwy	4.12	-	-	4.11	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.218	-	-	2.209	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	780	-	-	919	-	-	~ 73	94	458	66	93	357
Stage 1	-	-	-	-	-	-	435	446	-	296	324	-
Stage 2	-	-	-	-	-	-	291	324	-	395	444	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	778	-	-	919	-	-	~ 51	78	458	25	78	355
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 51	78	-	25	78	-
Stage 1	-	-	-	-	-	-	425	436	-	288	276	-
Stage 2	-	-	-	-	-	-	227	276	-	265	434	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0.7	$ 323.3	54.4
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	59	458	778	-	-	919	-	-	98
HCM Lane V/C Ratio	1.981	0.236	0.014	-	-	0.075	-	-	0.264
HCM Control Delay (s)	$ 607.7	15.3	9.7	0	-	9.2	0	-	54.4
HCM Lane LOS	F	C	A	A	-	A	A	-	F
HCM 95th %tile Q(veh)	11.2	0.9	0	-	-	0.2	-	-	1

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	27	33	153	28	6	49	1914	219	31	1620	45
Future Volume (veh/h)	45	27	33	153	28	6	49	1914	219	31	1620	45
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1881	1900	1881	1881	1900	1900	1900	1900
Adj Flow Rate, veh/h	49	29	11	166	30	4	53	2080	215	34	1761	-10
Adj No. of Lanes	0	1	0	0	1	0	1	2	0	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	1	1	1	1	1	1	0	0	0
Cap, veh/h	250	136	39	357	47	6	93	1636	166	94	1802	806
Arrive On Green	0.17	0.18	0.18	0.17	0.18	0.18	0.05	0.50	0.50	0.05	0.50	0.00
Sat Flow, veh/h	763	735	211	1236	256	30	1792	3276	333	1810	3610	1615
Grp Volume(v), veh/h	89	0	0	200	0	0	53	1118	1177	34	1761	-10
Grp Sat Flow(s),veh/h/ln	1709	0	0	1522	0	0	1792	1787	1822	1810	1805	1615
Q Serve(g_s), s	0.0	0.0	0.0	4.0	0.0	0.0	1.5	25.5	25.5	0.9	24.4	0.0
Cycle Q Clear(g_c), s	2.2	0.0	0.0	6.2	0.0	0.0	1.5	25.5	25.5	0.9	24.4	0.0
Prop In Lane	0.55		0.12	0.83		0.02	1.00		0.18	1.00		1.00
Lane Grp Cap(c), veh/h	408	0	0	395	0	0	93	892	910	94	1802	806
V/C Ratio(X)	0.22	0.00	0.00	0.51	0.00	0.00	0.57	1.25	1.29	0.36	0.98	-0.01
Avail Cap(c_a), veh/h	1111	0	0	1056	0	0	281	892	910	283	1802	806
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	18.0	0.0	0.0	19.5	0.0	0.0	23.7	12.8	12.8	23.4	12.5	0.0
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.4	0.0	0.0	2.1	123.1	140.4	0.9	16.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	0.0	0.0	2.7	0.0	0.0	0.8	42.9	48.1	0.5	16.0	0.0
LnGrp Delay(d),s/veh	18.1	0.0	0.0	19.9	0.0	0.0	25.7	135.9	153.2	24.3	28.5	0.0
LnGrp LOS	B			B			C	F	F	C	C	
Approach Vol, veh/h		89			200			2348			1785	
Approach Delay, s/veh		18.1			19.9			142.1			28.6	
Approach LOS		B			B			F			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	7.1	30.0		13.9	7.1	30.0		13.9
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	8.0	25.5		33.0	8.0	25.5		33.0
Max Q Clear Time (g_c+I1), s	3.5	26.4		8.2	2.9	27.5		4.2
Green Ext Time (p_c), s	0.0	0.0		0.3	0.0	0.0		0.4

Intersection Summary	
HCM 2010 Ctrl Delay	88.3
HCM 2010 LOS	F

Intersection	
Int Delay, s/veh	14.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	86	161	16	25	265	0	12	43	20	0	0	0
Future Vol, veh/h	86	161	16	25	265	0	12	43	20	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	74	74	74	74	74	74	74	74	74	74	74	74
Heavy Vehicles, %	3	3	3	2	2	2	3	3	3	8	8	8
Mvmt Flow	116	218	22	34	358	0	16	58	27	0	0	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	284	118	1	225	105	72	1	0	0	85	0	0
Stage 1	1	1	-	104	104	-	-	-	-	-	-	-
Stage 2	283	117	-	121	1	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.12	6.52	6.22	4.13	-	-	4.18	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.518	4.018	3.318	2.227	-	-	2.272	-	-
Pot Cap-1 Maneuver	666	770	1081	730	785	990	1615	-	-	1474	-	-
Stage 1	1019	893	-	902	809	-	-	-	-	-	-	-
Stage 2	722	797	-	883	895	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	422	762	1081	553	777	990	1615	-	-	1474	-	-
Mov Cap-2 Maneuver	422	762	-	553	777	-	-	-	-	-	-	-
Stage 1	1009	893	-	893	801	-	-	-	-	-	-	-
Stage 2	395	789	-	655	895	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	18.7	14.9	1.2	0
HCM LOS	C	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1615	-	-	612	751	1474	-	-
HCM Lane V/C Ratio	0.01	-	-	0.581	0.522	-	-	-
HCM Control Delay (s)	7.3	0	-	18.7	14.9	0	-	-
HCM Lane LOS	A	A	-	C	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	3.7	3.1	0	-	-

Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	121	452	302	4	2	65
Future Vol, veh/h	121	452	302	4	2	65
Conflicting Peds, #/hr	0	0	0	0	0	1
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	2	1	1	4	4
Mvmt Flow	126	471	315	4	2	68

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	319	0	-	0	1040	318
Stage 1	-	-	-	-	317	-
Stage 2	-	-	-	-	723	-
Critical Hdwy	4.12	-	-	-	6.44	6.24
Critical Hdwy Stg 1	-	-	-	-	5.44	-
Critical Hdwy Stg 2	-	-	-	-	5.44	-
Follow-up Hdwy	2.218	-	-	-	3.536	3.336
Pot Cap-1 Maneuver	1241	-	-	-	253	718
Stage 1	-	-	-	-	734	-
Stage 2	-	-	-	-	477	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1241	-	-	-	218	717
Mov Cap-2 Maneuver	-	-	-	-	218	-
Stage 1	-	-	-	-	633	-
Stage 2	-	-	-	-	477	-

Approach	EB	WB	SB
HCM Control Delay, s	1.7	0	11
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1241	-	-	-	671
HCM Lane V/C Ratio	0.102	-	-	-	0.104
HCM Control Delay (s)	8.2	0	-	-	11
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.3	-	-	-	0.3

Appendix F:
Signal Warrants

Existing with Plan Conditions

AM Peak Hour

PM Peak Hour

FEHR & PEERS

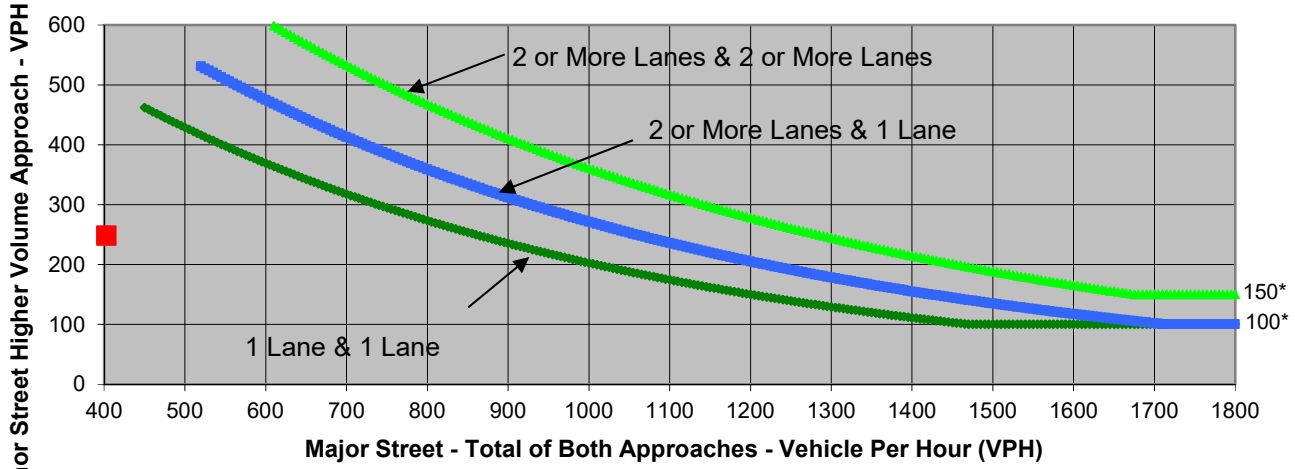
Major Street	Colonel Durham Street	Project	Campus Town Specific Plan
Minor Street	Malmedy Road	Scenario	Existing With Plan
		Peak Hour	AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	10	202	0	13
Through	88	46	10	10
Right	5	0	20	350
Total	103	248	30	373

Major Street Direction

	North/South
x	East/West



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Colonel Durham Street	Malmedy Road	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**403**	**248**	

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

FEHR PEERS

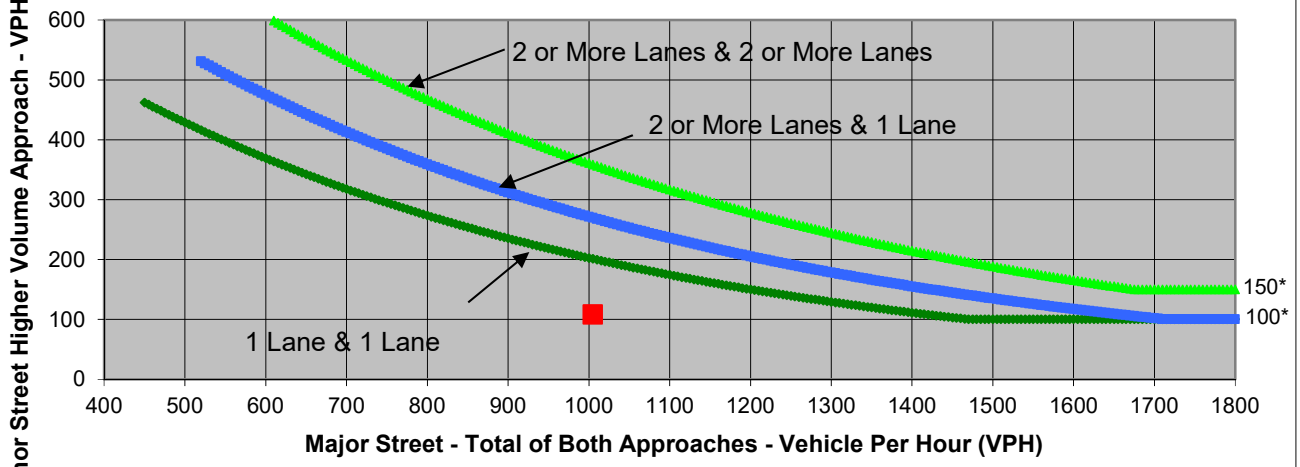
Major Street	Gigling Road	Project	Campus Town Specific Plan
Minor Street	Malmedy Road	Scenario	Existing With Plan
		Peak Hour	AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	30	36	3	38
Through	57	31	432	498
Right	21	13	16	18
Total	108	80	451	554

Major Street Direction

	North/South
x	East/West



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Gigling Road	Malmedy Road	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**1,005**	**108**	

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

FEHR PEERS

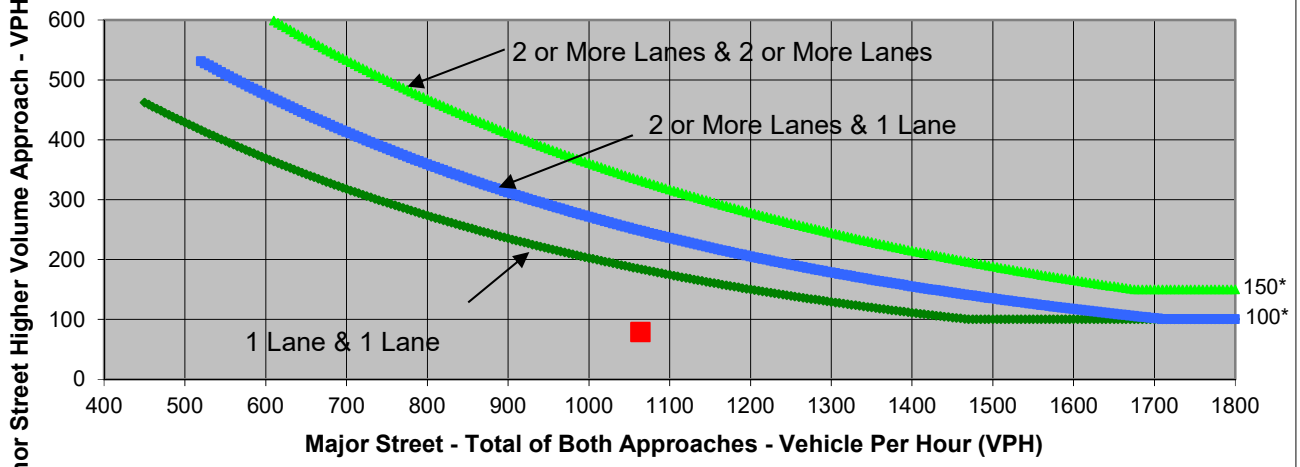
Major Street	Gigling Road	Project	Campus Town Specific Plan
Minor Street	Parker Flatts Cut Off Road	Scenario	Existing With Plan
		Peak Hour	AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	17	7	8	66
Through	17	26	380	519
Right	45	6	91	0
Total	79	39	479	585

Major Street Direction

	North/South
x	East/West



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Gigling Road	Parker Flatts Cut Off Road	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**1,064**	**79**	

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

FEHR & PEERS

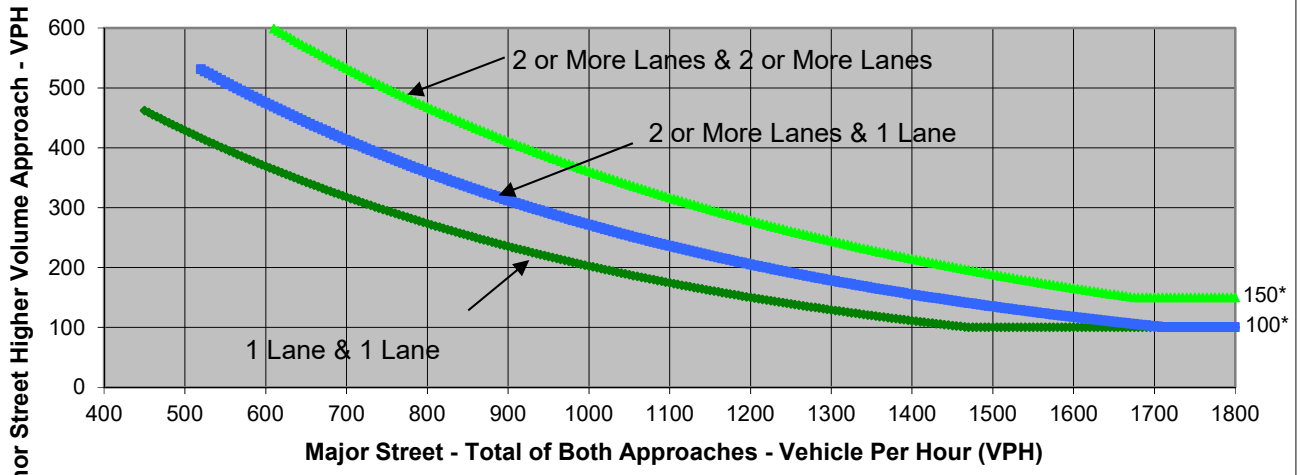
Major Street	General Jim Moore Boulevard	Project	Campus Town Specific Plan
Minor Street	Coe Avenue	Scenario	Existing With Plan
		Peak Hour	AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	221	0	172	0
Through	397	966	0	0
Right	1	253	430	0
Total	619	1,219	602	0

Major Street Direction

x	North/South
	East/West



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	General Jim Moore Boulevard	Coe Avenue	
Number of Approach Lanes	**2**	**2**	**YES**
Traffic Volume (VPH) *	**1,838**	**602**	

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

FEHR PEERS

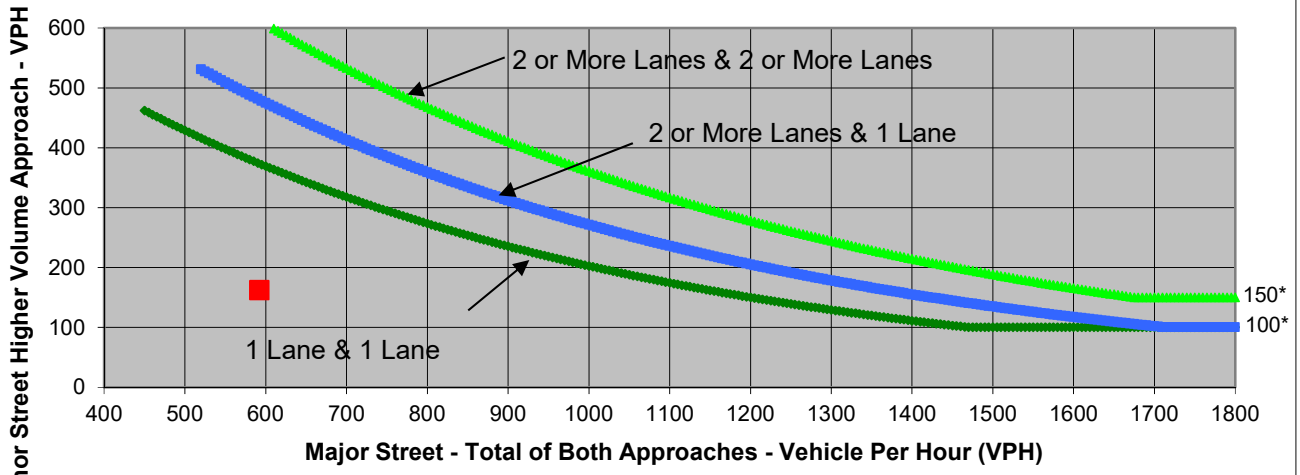
Major Street	Gigling Road	Project	Campus Town Specific Plan
Minor Street	Seventh Avenue	Scenario	Existing With Plan
		Peak Hour	AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	0	3	54	0
Through	0	0	119	418
Right	0	159	0	1
Total	0	162	173	419

Major Street Direction

	North/South
x	East/West



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Gigling Road	Seventh Avenue	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**592**	**162**	

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

FEHR PEERS

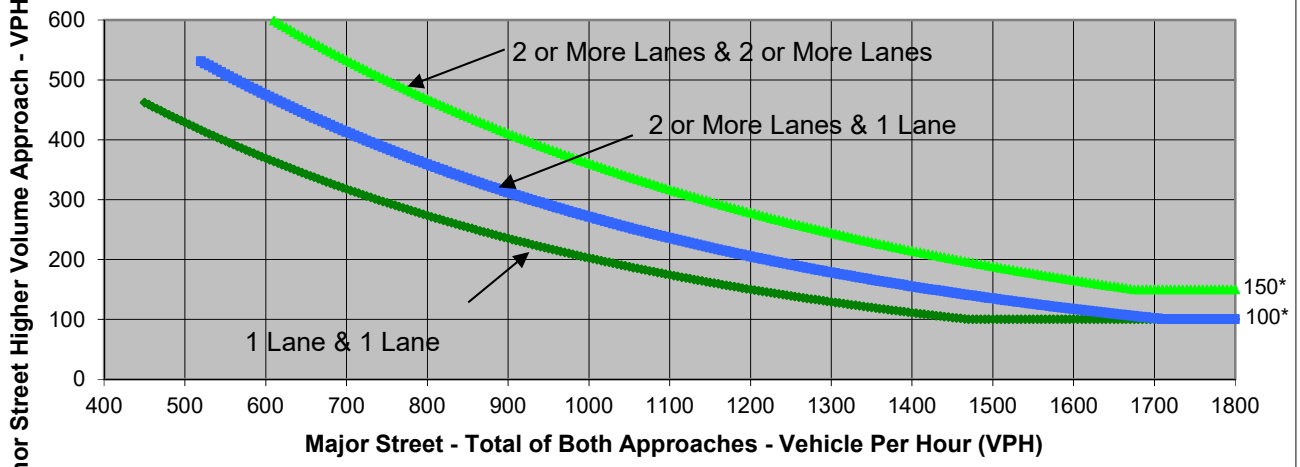
Major Street	Colonel Durham Street	Project	Campus Town Specific Plan
Minor Street	Seventh Avenue	Scenario	Existing With Plan
		Peak Hour	AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	12	0	45	13
Through	23	99	79	180
Right	20	74	8	0
Total	55	173	132	193

Major Street Direction

	North/South
x	East/West



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Colonel Durham Street	Seventh Avenue	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**325**	**173**	

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

FEHR PEERS

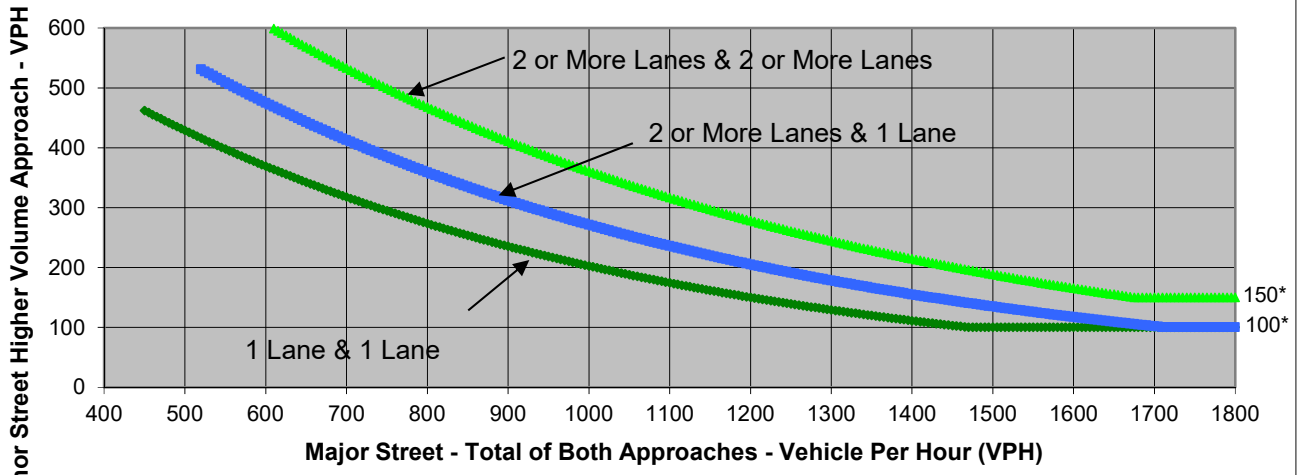
Major Street	Colonel Durham Street	Project	Campus Town Specific Plan
Minor Street	Malmedy Road	Scenario	Existing With Plan
		Peak Hour	PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	10	234	0	9
Through	75	75	10	10
Right	7	0	20	270
Total	92	309	30	289

Major Street Direction

	North/South
x	East/West



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Colonel Durham Street	Malmedy Road	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**319**	**309**	

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

FEHR PEERS

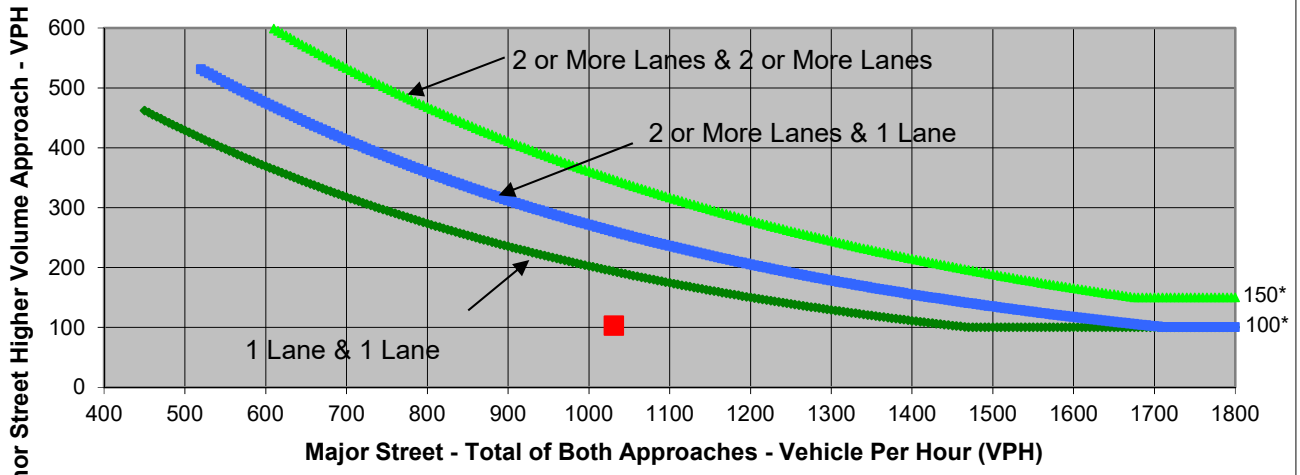
Major Street	Gigling Road	Project	Campus Town Specific Plan
Minor Street	Malmedy Road	Scenario	Existing With Plan
		Peak Hour	PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	12	15	3	37
Through	53	49	491	441
Right	38	5	39	20
Total	103	69	533	498

Major Street Direction

	North/South
x	East/West



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Gigling Road	Malmedy Road	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**1,031**	**103**	

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

FEHR PEERS

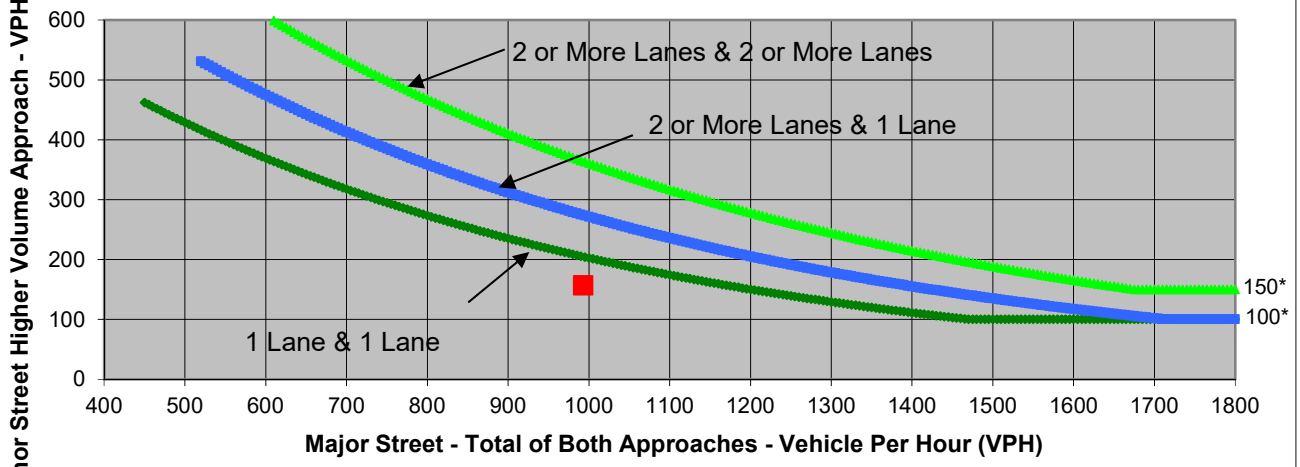
Major Street	Gigling Road	Project	Campus Town Specific Plan
Minor Street	Parker Flatts Cut Off Road	Scenario	Existing With Plan
		Peak Hour	PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	65	0	10	37
Through	39	17	497	439
Right	53	6	8	2
Total	157	23	515	478

Major Street Direction

	North/South
x	East/West



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Gigling Road	Parker Flatts Cut Off Road	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**993**	**157**	

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

FEHR PEERS

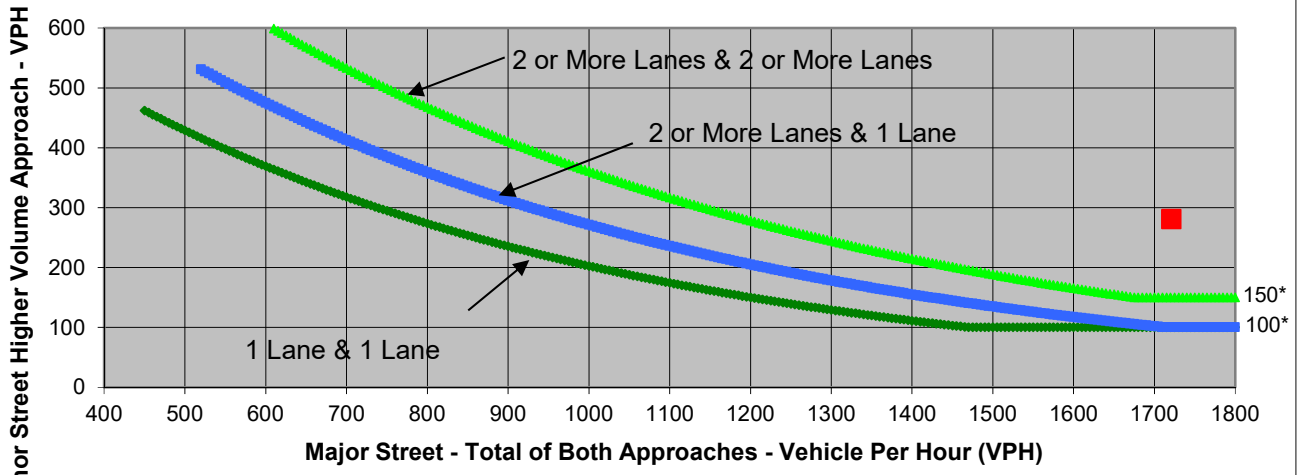
Major Street	General Jim Moore Boulevard	Project	Campus Town Specific Plan
Minor Street	Coe Avenue	Scenario	Existing With Plan
		Peak Hour	PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	153	0	184	0
Through	969	398	0	0
Right	0	201	97	0
Total	1,122	599	281	0

Major Street Direction

x	North/South
	East/West



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	General Jim Moore Boulevard	Coe Avenue	
Number of Approach Lanes	**2**	**2**	**YES**
Traffic Volume (VPH) *	**1,721**	**281**	

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

FEHR PEERS

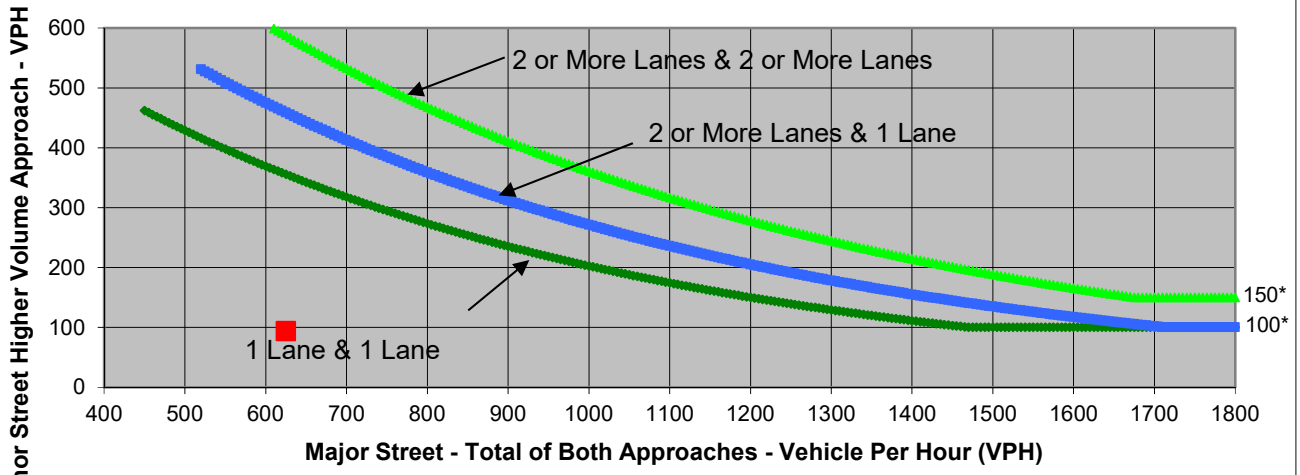
Major Street	Gigling Road	Project	Campus Town Specific Plan
Minor Street	Seventh Avenue	Scenario	Existing With Plan
		Peak Hour	PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	0	2	116	0
Through	0	0	369	136
Right	0	92	0	4
Total	0	94	485	140

Major Street Direction

	North/South
x	East/West



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Gigling Road	Seventh Avenue	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**625**	**94**	

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

FEHR PEERS

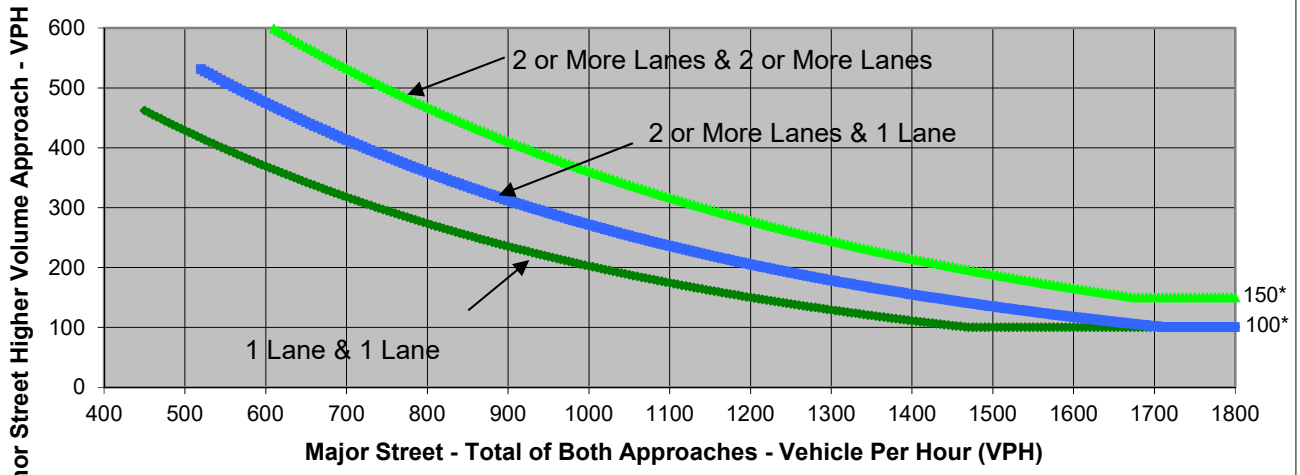
Major Street	Colonel Durham Street	Project	Campus Town Specific Plan
Minor Street	Seventh Avenue	Scenario	Existing With Plan
		Peak Hour	PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	12	0	43	25
Through	39	27	127	103
Right	20	45	16	0
Total	71	72	186	128

Major Street Direction

	North/South
x	East/West



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Colonel Durham Street	Seventh Avenue	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**314**	**72**	

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

Background with Plan Conditions

AM Peak Hour

PM Peak Hour

FEHR PEERS

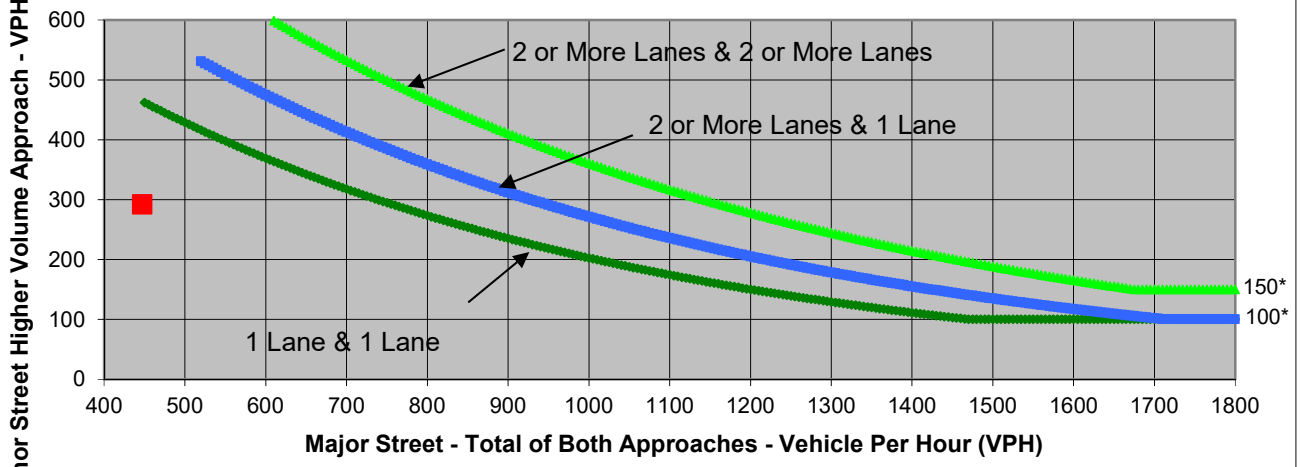
Major Street	Colonel Durham Street	Project	Campus Town Specific Plan
Minor Street	Malmedy Road	Scenario	Background With Plan
		Peak Hour	AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	10	246	0	13
Through	88	46	10	10
Right	5	0	20	394
Total	103	292	30	417

Major Street Direction

	North/South
x	East/West



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Colonel Durham Street	Malmedy Road	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**447**	**292**	

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

FEHR PEERS

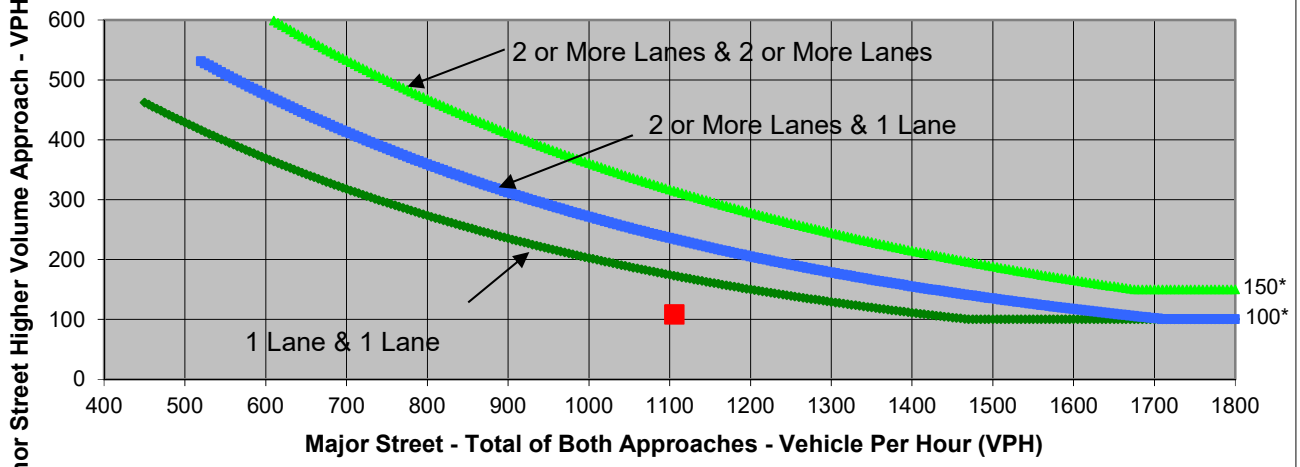
Major Street	Gigling Road	Project	Campus Town Specific Plan
Minor Street	Malmedy Road	Scenario	Background With Plan
		Peak Hour	AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	30	36	3	38
Through	57	31	468	563
Right	21	13	16	18
Total	108	80	487	619

Major Street Direction

	North/South
x	East/West



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Gigling Road	Malmedy Road	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**1,106**	**108**	

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

FEHR PEERS

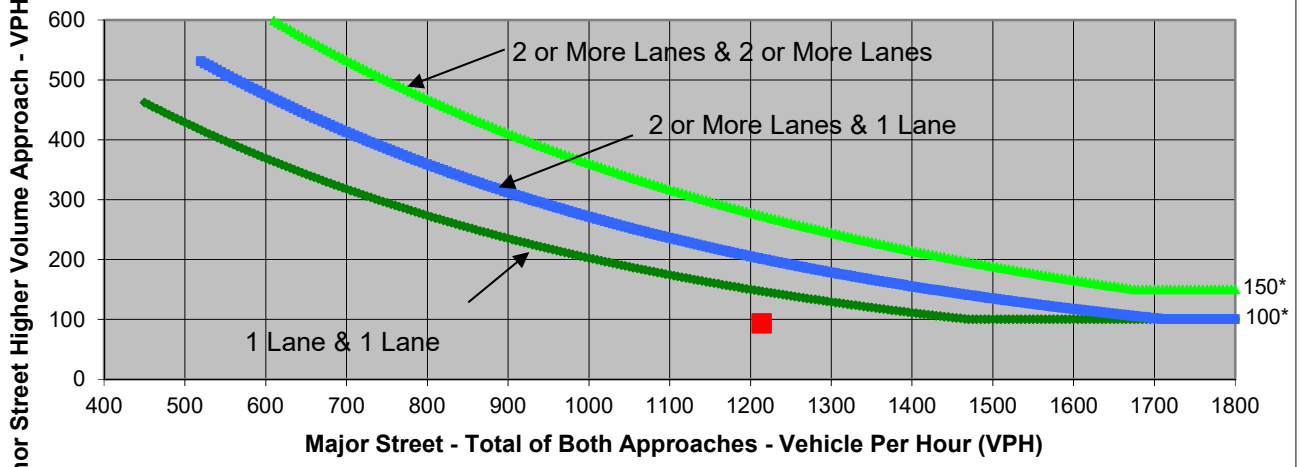
Major Street	Gigling Road	Project	Campus Town Specific Plan
Minor Street	Parker Flatts Cut Off Road	Scenario	Background With Plan
		Peak Hour	AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	17	7	8	115
Through	17	26	416	584
Right	59	6	91	0
Total	93	39	515	699

Major Street Direction

	North/South
x	East/West



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Gigling Road	Parker Flatts Cut Off Road	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**1,214**	**93**	

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

FEHR PEERS

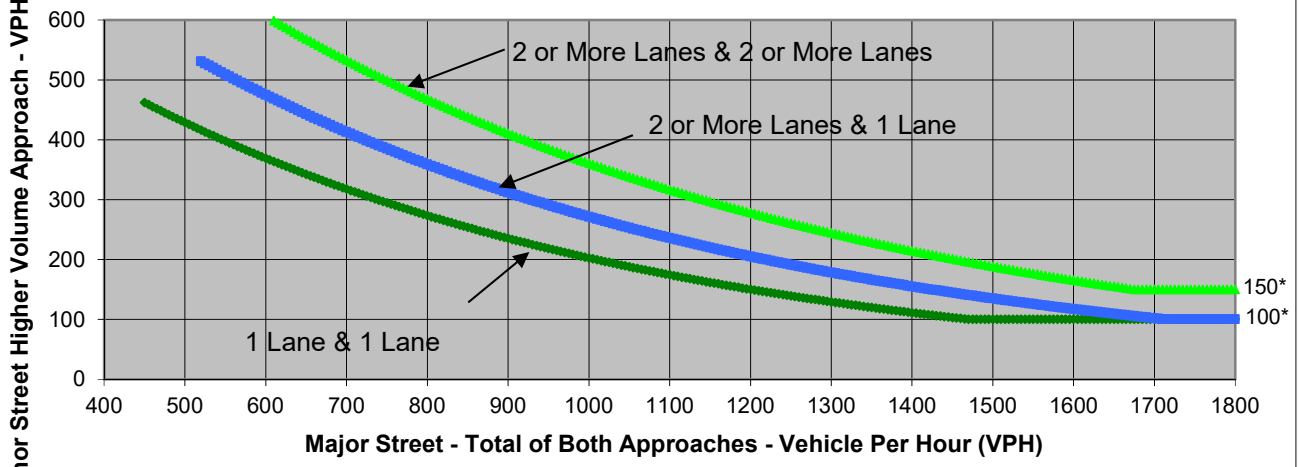
Major Street	General Jim Moore Boulevard	Project	Campus Town Specific Plan
Minor Street	Coe Avenue	Scenario	Background With Plan
		Peak Hour	AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	221	0	533	0
Through	769	1,327	0	0
Right	1	525	430	0
Total	991	1,852	963	0

Major Street Direction

x	North/South
	East/West



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	General Jim Moore Boulevard	Coe Avenue	
Number of Approach Lanes	**2**	**2**	**YES**
Traffic Volume (VPH) *	**2,843**	**963**	

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

FEHR & PEERS

Major Street	Gigling Road
Minor Street	Seventh Avenue

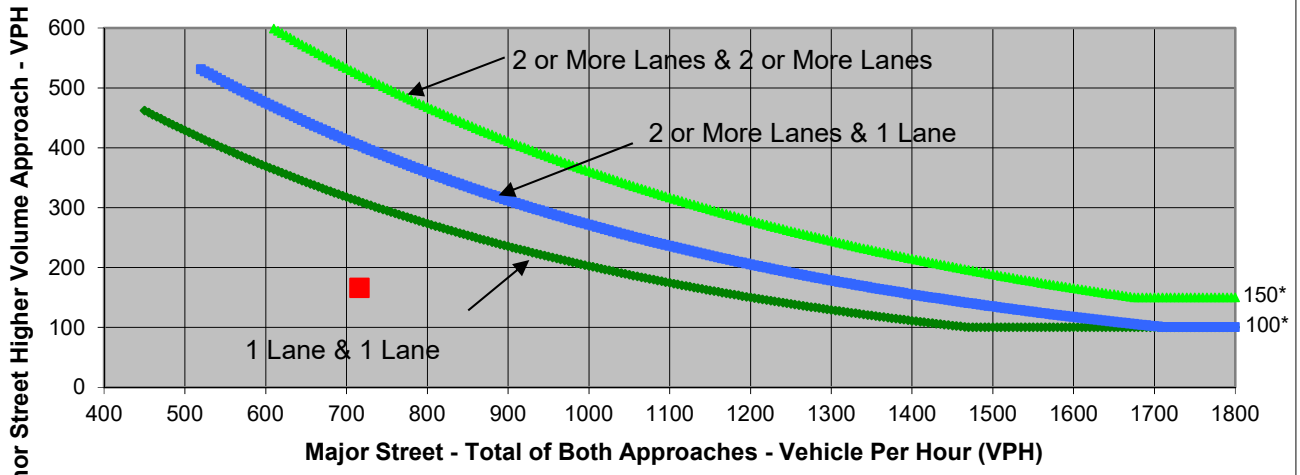
Project	Campus Town Specific Plan
Scenario	Background With Plan
Peak Hour	AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	0	3	55	0
Through	0	0	147	513
Right	0	163	0	1
Total	0	166	202	514

Major Street Direction

	North/South
x	East/West



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Gigling Road	Seventh Avenue	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**716**	**166**	

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

FEHR PEERS

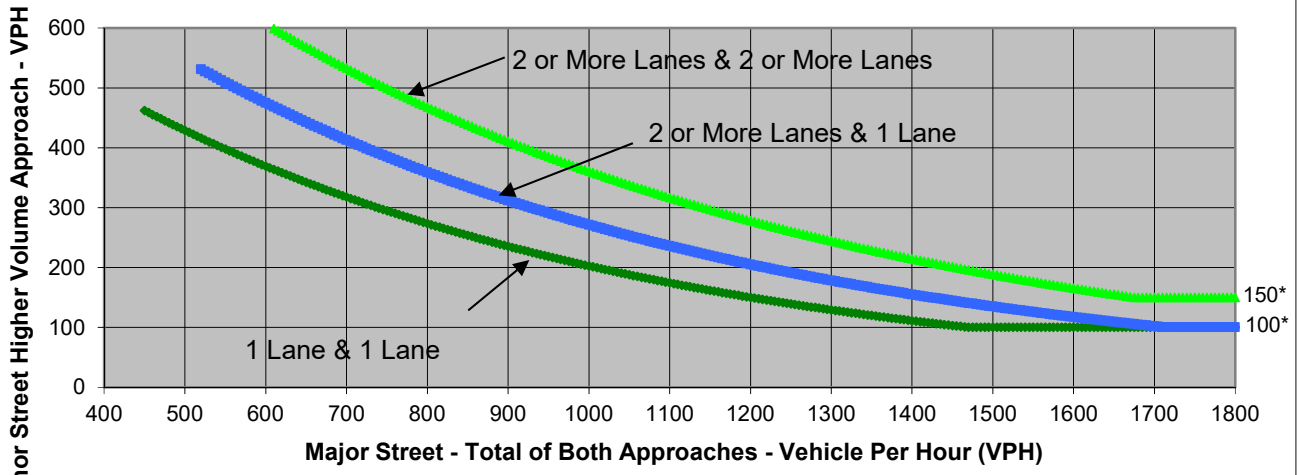
Major Street	Colonel Durham Street	Project	Campus Town Specific Plan
Minor Street	Seventh Avenue	Scenario	Background With Plan
		Peak Hour	AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	12	0	65	13
Through	24	103	104	203
Right	20	74	8	0
Total	56	177	177	216

Major Street Direction

	North/South
x	East/West



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Colonel Durham Street	Seventh Avenue	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**393**	**177**	

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

FEHR PEERS

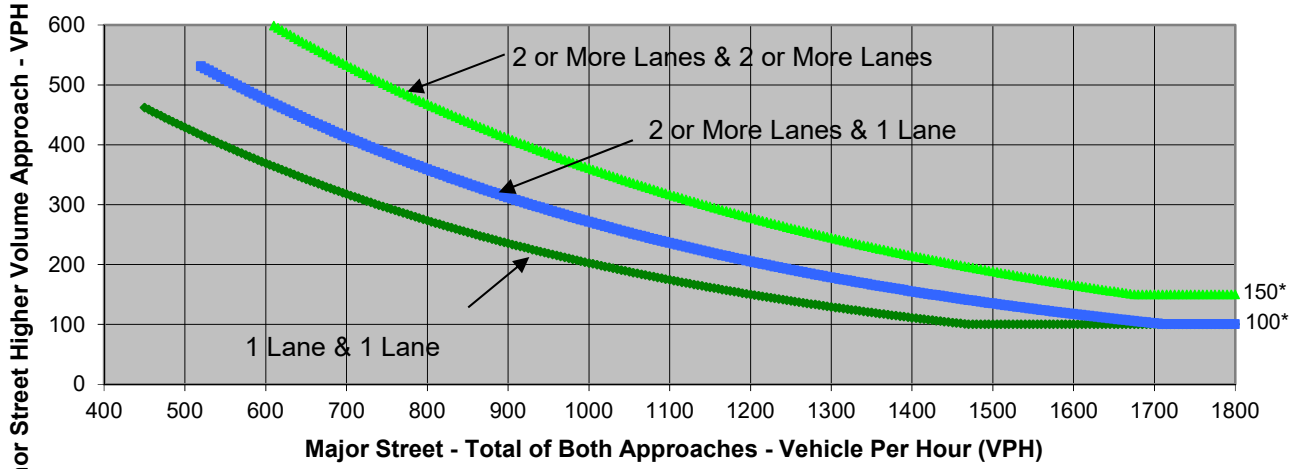
Major Street	Colonel Durham Street	Project	Campus Town Specific Plan
Minor Street	Malmedy Road	Scenario	Background With Plan
		Peak Hour	PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	10	288	0	9
Through	75	75	10	10
Right	7	0	20	316
Total	92	363	30	335

Major Street Direction

	North/South
x	East/West



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Colonel Durham Street	Malmedy Road	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**365**	**363**	

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

FEHR PEERS

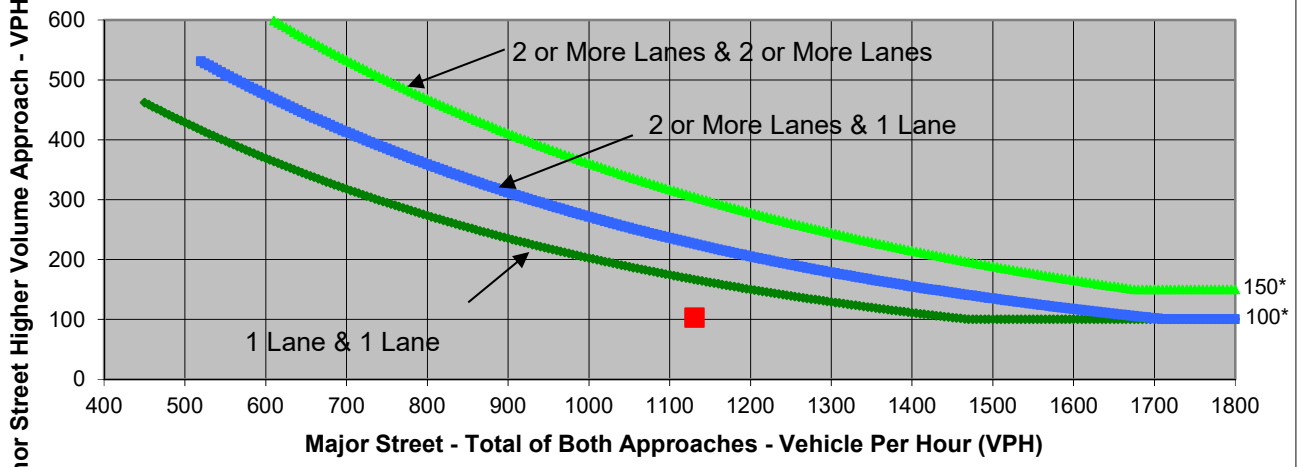
Major Street	Gigling Road	Project	Campus Town Specific Plan
Minor Street	Malmedy Road	Scenario	Background With Plan
		Peak Hour	PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	12	15	3	37
Through	53	49	551	481
Right	38	5	39	20
Total	103	69	593	538

Major Street Direction

	North/South
x	East/West



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Gigling Road	Malmedy Road	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**1,131**	**103**	

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

FEHR PEERS

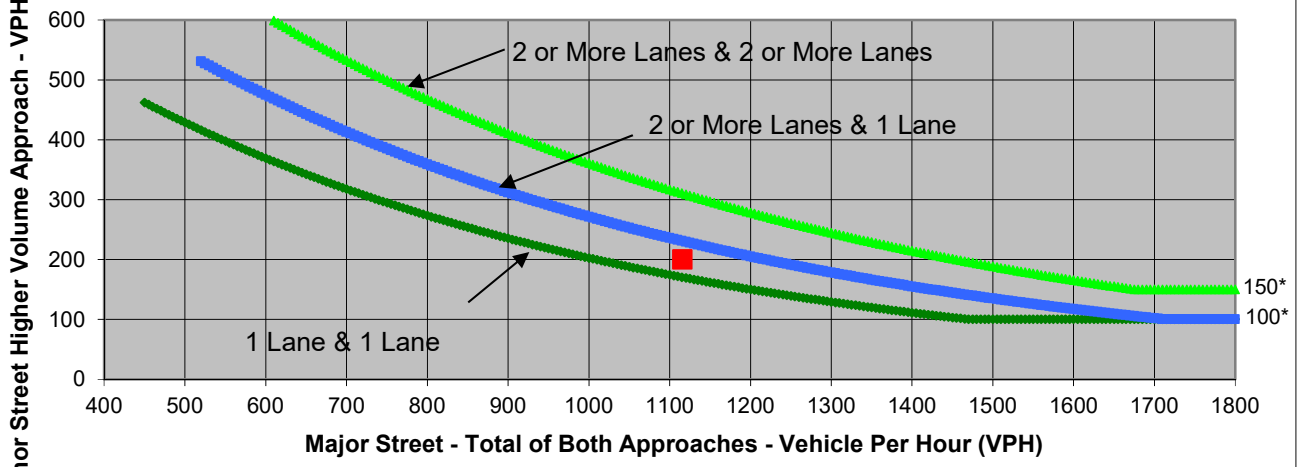
Major Street	Gigling Road	Project	Campus Town Specific Plan
Minor Street	Parker Flatts Cut Off Road	Scenario	Background With Plan
		Peak Hour	PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	65	0	10	61
Through	39	17	556	479
Right	96	6	8	2
Total	200	23	574	542

Major Street Direction

	North/South
x	East/West



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Gigling Road	Parker Flatts Cut Off Road	
Number of Approach Lanes	**1**	**1**	**YES**
Traffic Volume (VPH) *	**1,116**	**200**	

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

FEHR PEERS

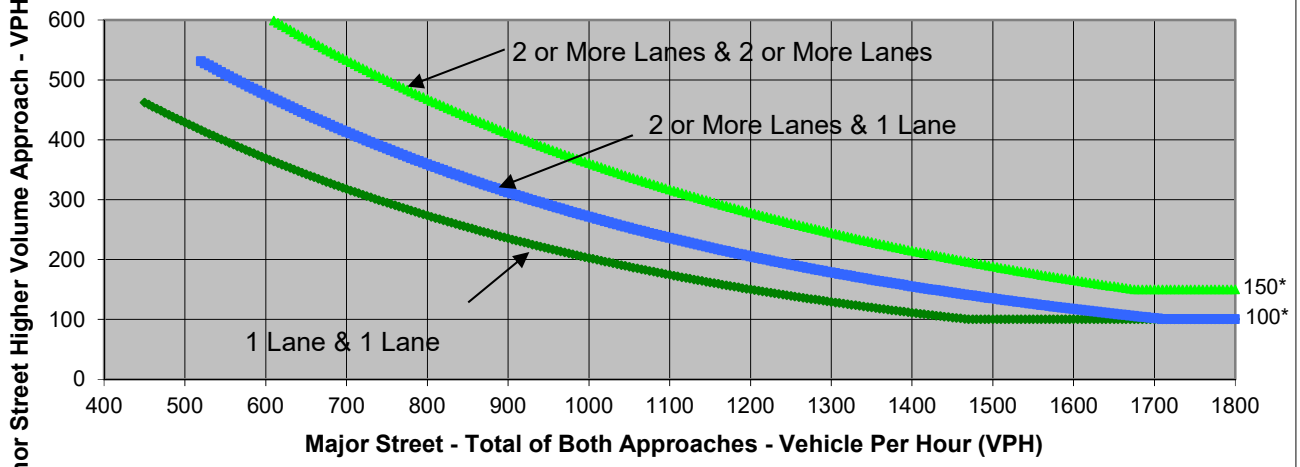
Major Street	General Jim Moore Boulevard	Project	Campus Town Specific Plan
Minor Street	Coe Avenue	Scenario	Background With Plan
		Peak Hour	PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	153	0	596	0
Through	1,475	918	0	0
Right	0	669	97	0
Total	1,628	1,587	693	0

Major Street Direction

x	North/South
	East/West



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	General Jim Moore Boulevard	Coe Avenue	
Number of Approach Lanes	**2**	**2**	**YES**
Traffic Volume (VPH) *	**3,215**	**693**	

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

FEHR PEERS

Major Street	Gigling Road
Minor Street	Seventh Avenue

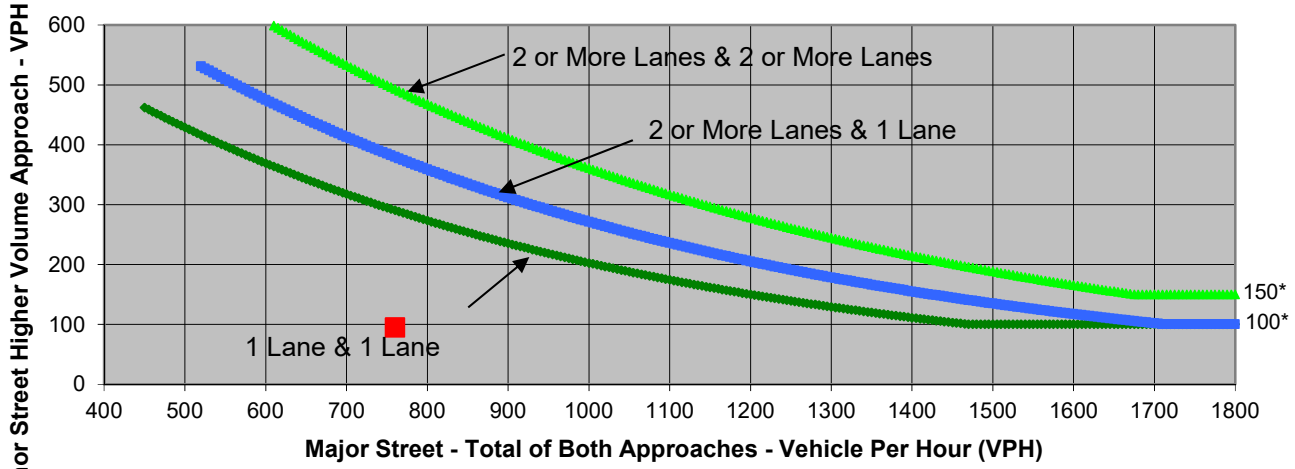
Project	Campus Town Specific Plan
Scenario	Background With Plan
Peak Hour	PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	0	2	121	0
Through	0	0	452	183
Right	0	93	0	4
Total	0	95	573	187

Major Street Direction

	North/South
x	East/West



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Gigling Road	Seventh Avenue	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**760**	**95**	

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

FEHR PEERS

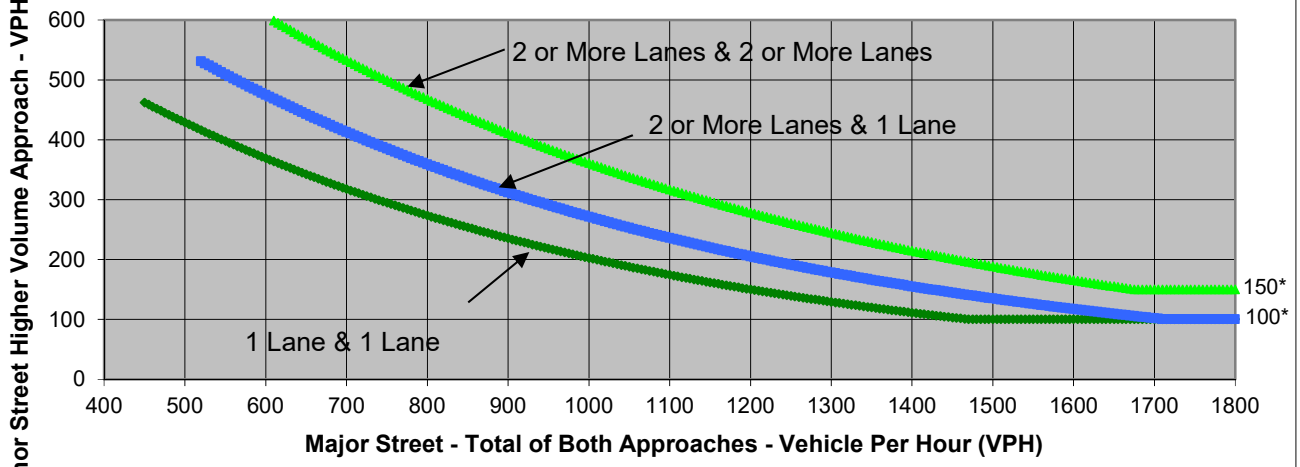
Major Street	Colonel Durham Street	Project	Campus Town Specific Plan
Minor Street	Seventh Avenue	Scenario	Background With Plan
		Peak Hour	PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	12	0	70	25
Through	43	28	154	127
Right	20	45	16	0
Total	75	73	240	152

Major Street Direction

	North/South
x	East/West



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Colonel Durham Street	Seventh Avenue	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**392**	**75**	

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

Cumulative with Plan Conditions

AM Peak Hour

PM Peak Hour

FEHR & PEERS

Major Street	Colonel Durham Street
Minor Street	Malmedy Road

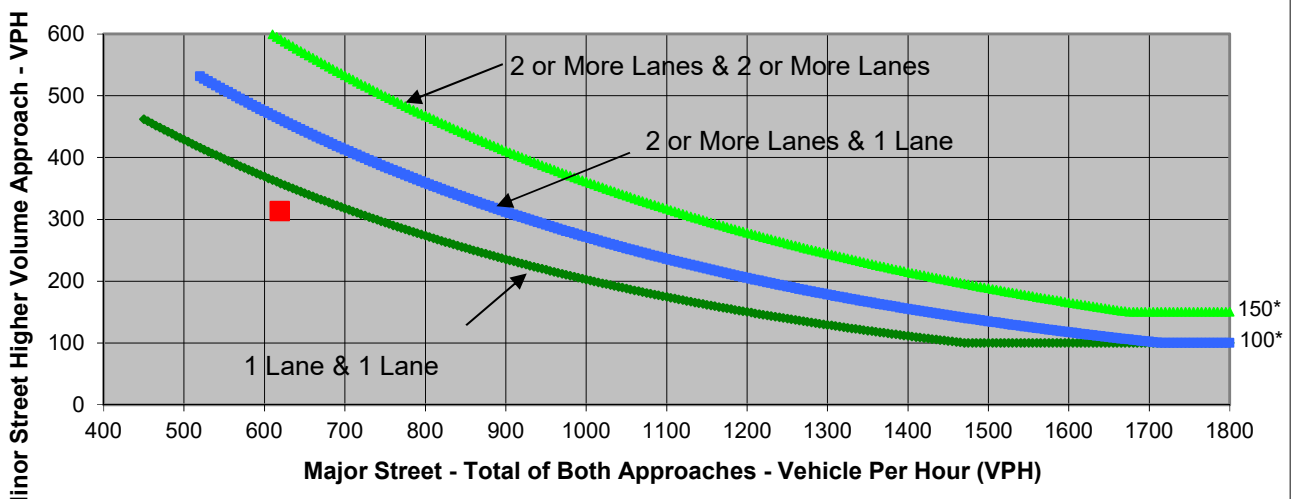
Project	Campus Town Specific Plan
Scenario	Cumulative With Plan
Peak Hour	AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	10	283	0	60
Through	201	30	10	10
Right	5	0	20	519
Total	216	313	30	589

Major Street Direction

	North/South
x	East/West



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Colonel Durham Street	Malmedy Road	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**619**	**313**	

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

FEHR & PEERS

Major Street	Gigling Road
Minor Street	Malmedy Road

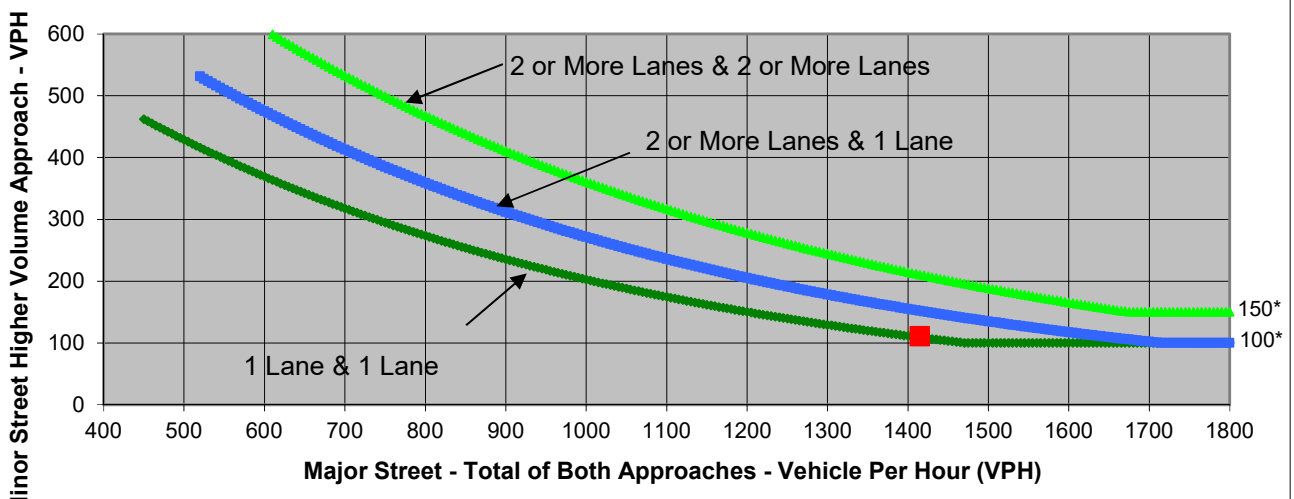
Project	Campus Town Specific Plan
Scenario	Cumulative With Plan
Peak Hour	AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	30	36	3	69
Through	57	31	525	671
Right	21	44	16	131
Total	108	111	544	871

Major Street Direction

	North/South
x	East/West



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Gigling Road	Malmedy Road	
Number of Approach Lanes	**1**	**1**	**YES**
Traffic Volume (VPH) *	**1,415**	**111**	

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

FEHR PEERS

Major Street	Gigling Road
Minor Street	Parker Flatts Cut Off Road

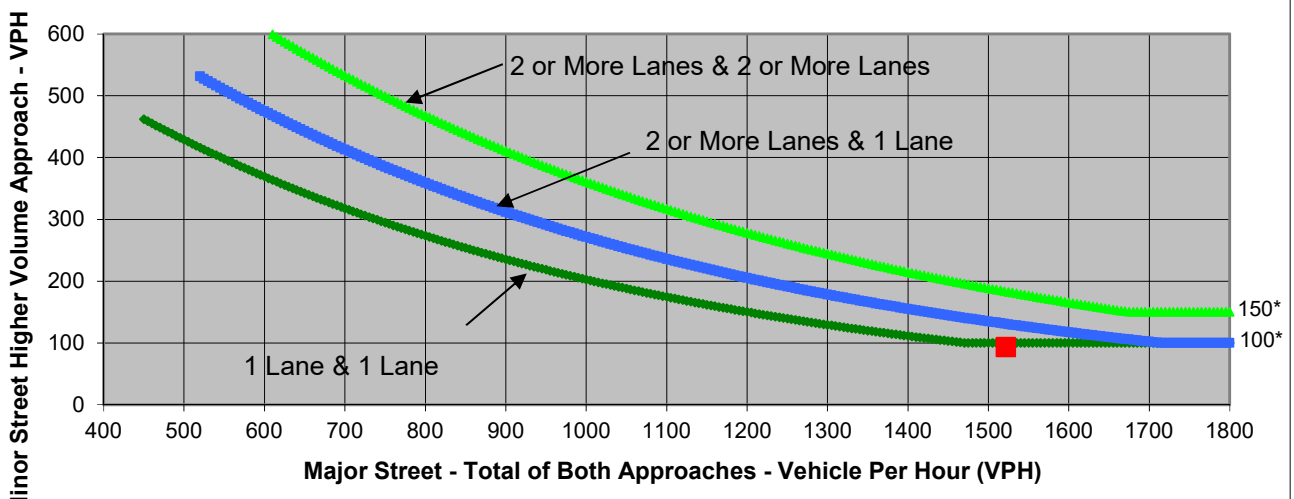
Project	Campus Town Specific Plan
Scenario	Cumulative With Plan
Peak Hour	AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	17	7	8	115
Through	17	26	473	835
Right	59	6	91	0
Total	93	39	572	950

Major Street Direction

	North/South
x	East/West



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Gigling Road	Parker Flatts Cut Off Road	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**1,522**	**93**	

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

FEHR & PEERS

Major Street	General Jim Moore Boulevard
Minor Street	Coe Avenue

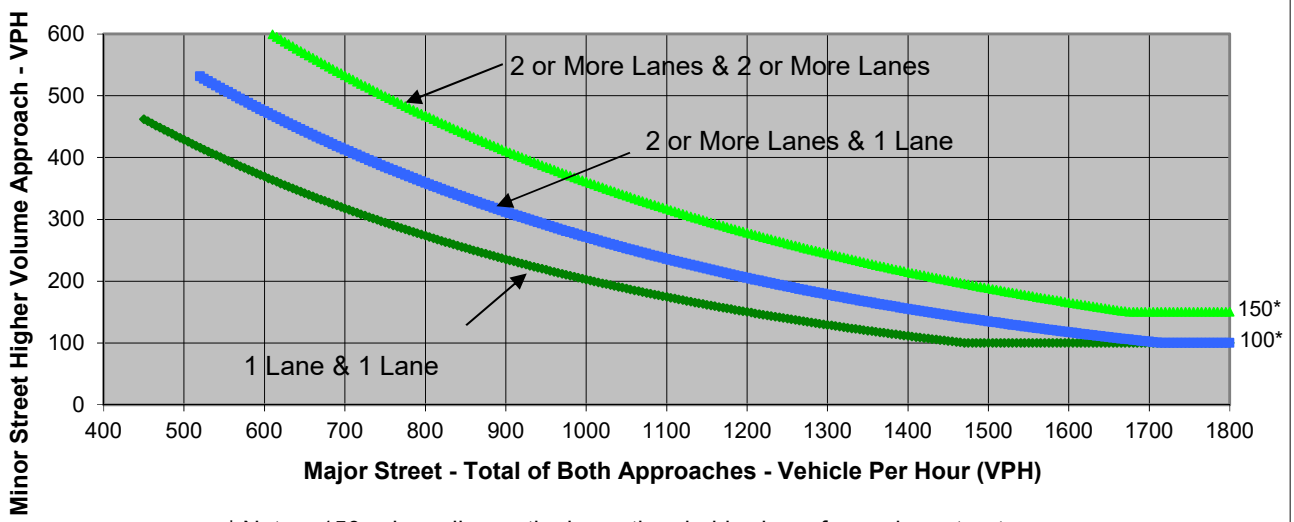
Project	Campus Town Specific Plan
Scenario	Cumulative With Plan
Peak Hour	AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	221	0	633	0
Through	896	1,416	0	0
Right	1	611	430	0
Total	1,118	2,027	1,063	0

Major Street Direction

x	North/South
	East/West



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	General Jim Moore Boulevard	Coe Avenue	
Number of Approach Lanes	**2**	**2**	**YES**
Traffic Volume (VPH) *	**3,145**	**1,063**	

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

FEHR PEERS

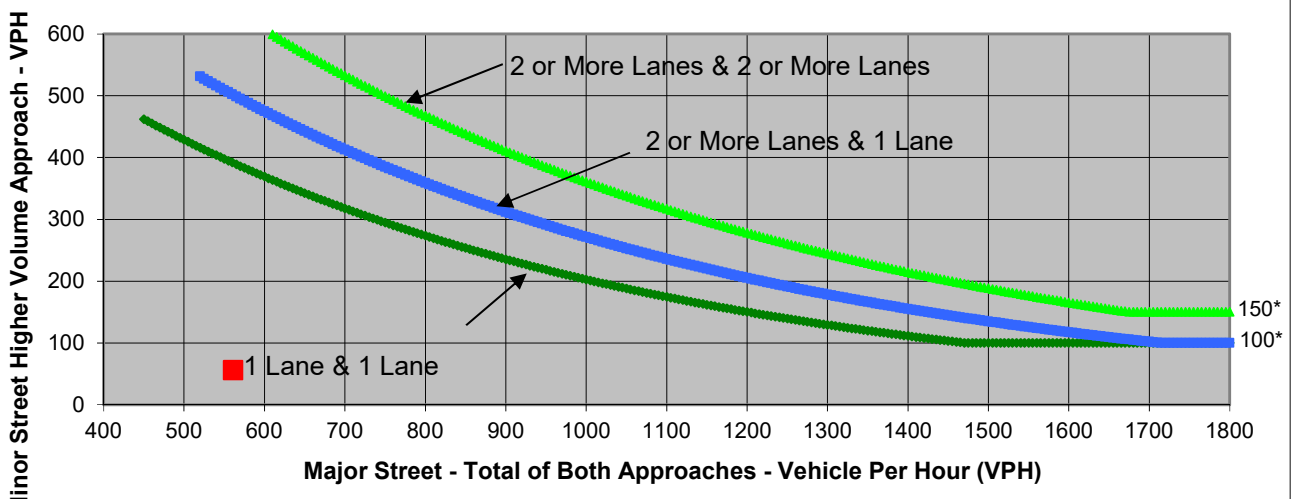
Major Street	Colonel Durham Street	Project	Campus Town Specific Plan
Minor Street	Seventh Avenue	Scenario	Cumulative With Plan
		Peak Hour	AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	12	0	81	13
Through	24	0	124	335
Right	20	0	8	0
Total	56	0	213	348

Major Street Direction

	North/South
x	East/West



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Colonel Durham Street	Seventh Avenue	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**561**	**56**	

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

FEHR PEERS

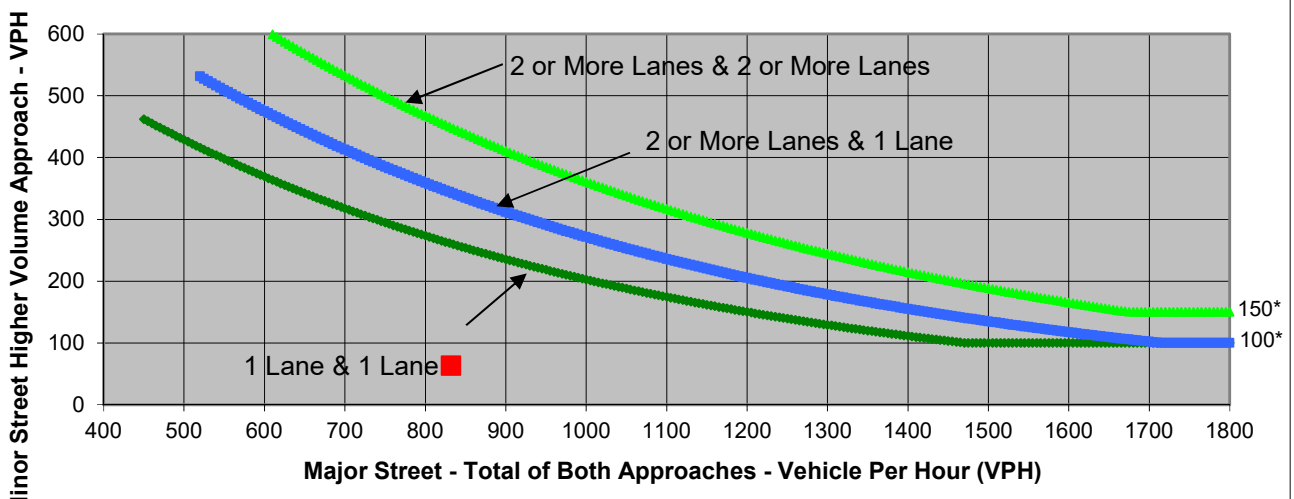
Project	Campus Town Specific Plan
Scenario	Cumulative With Plan
Peak Hour	AM
Major Street	Gigling Road
Minor Street	Seventh Avenue

Turn Movement Volumes

	NB	SB	EB	WB
Left	0	3	55	0
Through	0	0	147	629
Right	0	60	0	1
Total	0	63	202	630

Major Street Direction

	North/South
x	East/West



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Gigling Road	Seventh Avenue	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**832**	**63**	

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

FEHR PEERS

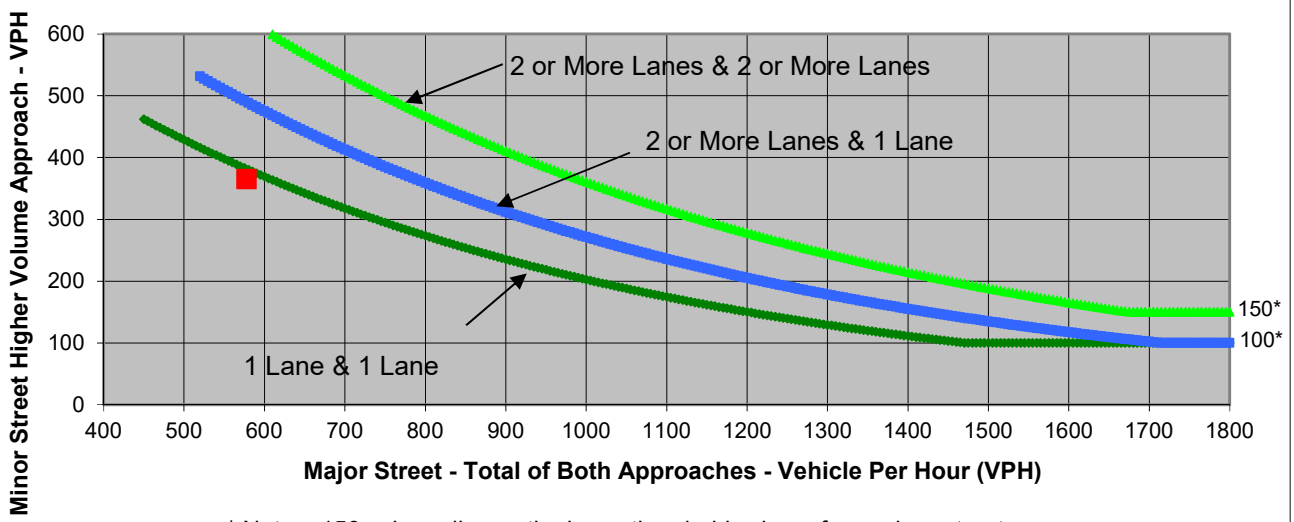
Project	Campus Town Specific Plan
Scenario	Cumulative With Plan
Peak Hour	PM
Major Street	Colonel Durham Street
Minor Street	Malmedy Road

Turn Movement Volumes

	NB	SB	EB	WB
Left	10	312	0	75
Through	204	53	10	10
Right	7	0	20	463
Total	221	365	30	548

Major Street Direction

	North/South
x	East/West



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Colonel Durham Street	Malmedy Road	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**578**	**365**	

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

FEHR PEERS

Major Street	Gigling Road
Minor Street	Malmedy Road

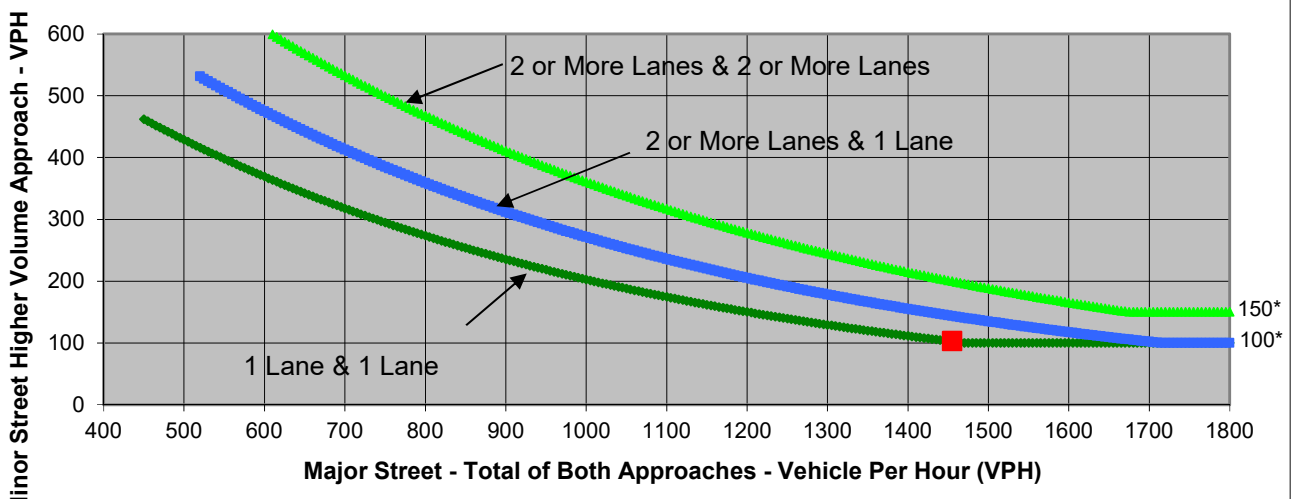
Project	Campus Town Specific Plan
Scenario	Cumulative With Plan
Peak Hour	PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	12	15	3	81
Through	53	49	590	593
Right	38	5	39	149
Total	103	69	632	823

Major Street Direction

	North/South
x	East/West



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Gigling Road	Malmedy Road	
Number of Approach Lanes	**1**	**1**	**YES**
Traffic Volume (VPH) *	**1,455**	**103**	

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

FEHR PEERS

Major Street	Gigling Road
Minor Street	Parker Flatts Cut Off Road

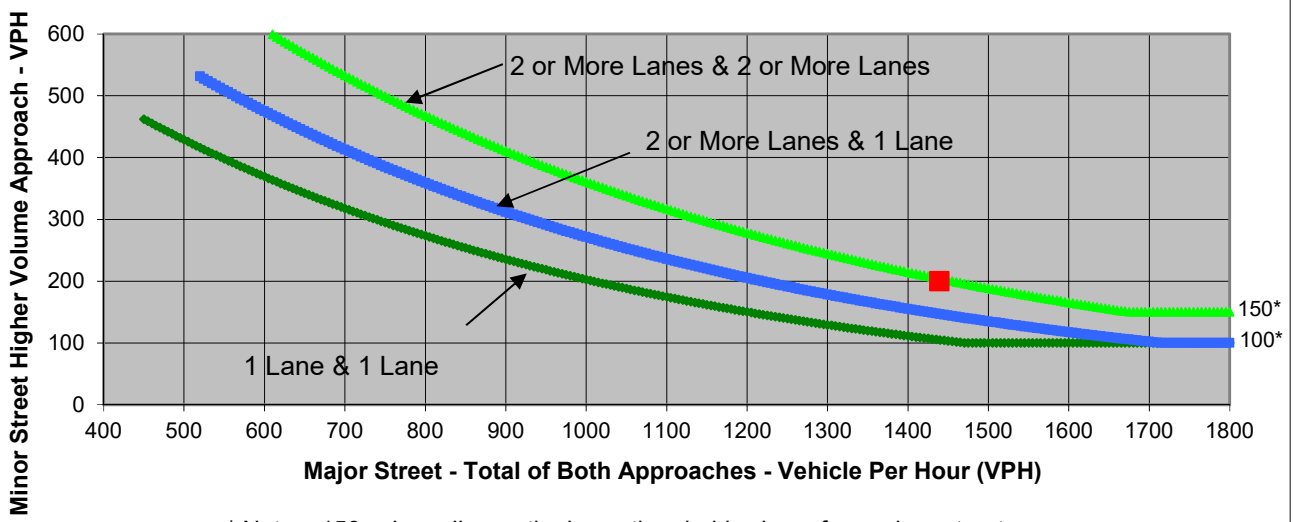
Project	Campus Town Specific Plan
Scenario	Cumulative With Plan
Peak Hour	PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	65	0	10	61
Through	39	17	595	763
Right	96	6	8	2
Total	200	23	613	826

Major Street Direction

	North/South
x	East/West



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Gigling Road	Parker Flatts Cut Off Road	
Number of Approach Lanes	**1**	**1**	**YES**
Traffic Volume (VPH) *	**1,439**	**200**	

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

FEHR PEERS

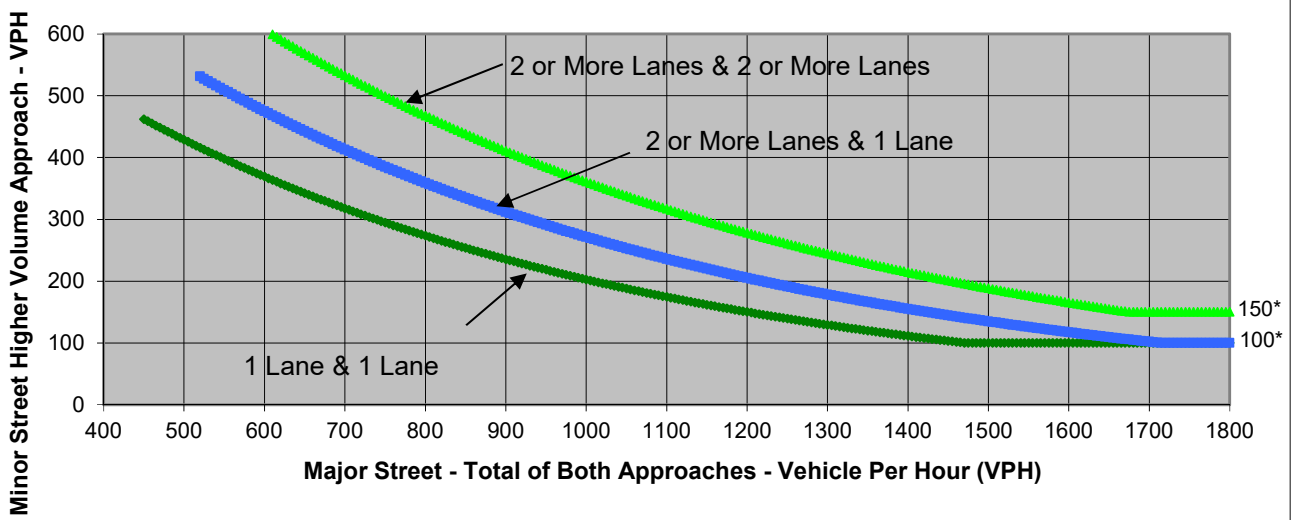
Major Street	General Jim Moore Boulevard	Project	Campus Town Specific Plan
Minor Street	Coe Avenue	Scenario	Cumulative With Plan
		Peak Hour	PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	153	0	673	0
Through	1,555	1,007	0	0
Right	0	756	97	0
Total	1,708	1,763	770	0

Major Street Direction

x	North/South
	East/West



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	General Jim Moore Boulevard	Coe Avenue	
Number of Approach Lanes	**2**	**2**	**YES**
Traffic Volume (VPH) *	**3,471**	**770**	

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

FEHR PEERS

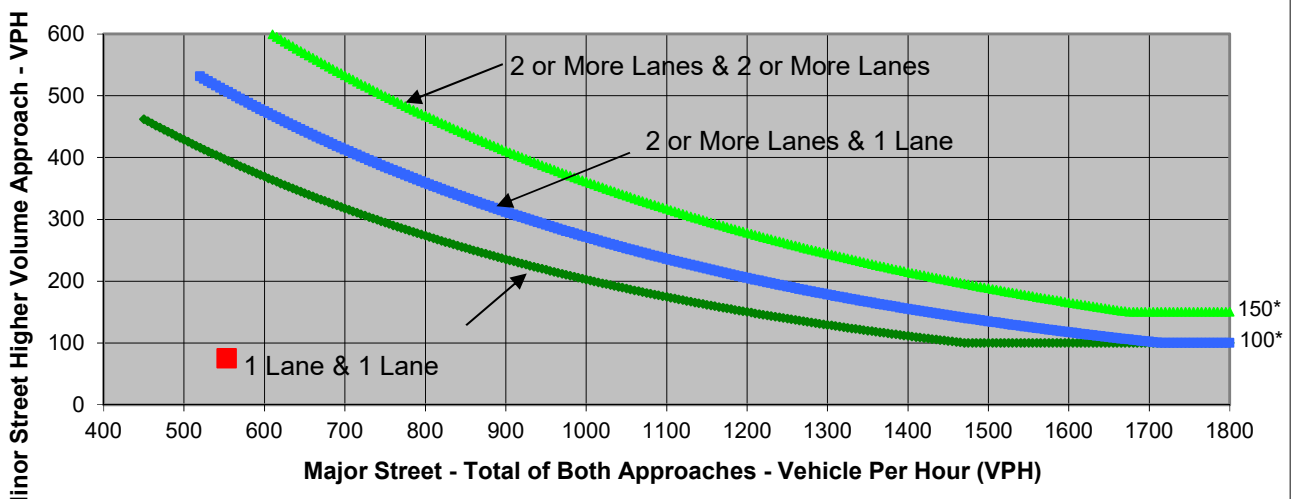
Major Street	Colonel Durham Street	Project	Campus Town Specific Plan
Minor Street	Seventh Avenue	Scenario	Cumulative With Plan
		Peak Hour	PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	12	0	86	25
Through	43	0	161	265
Right	20	0	16	0
Total	75	0	263	290

Major Street Direction

	North/South
x	East/West



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Colonel Durham Street	Seventh Avenue	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**553**	**75**	

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

FEHR PEERS

Major Street	Gigling Road
Minor Street	Seventh Avenue

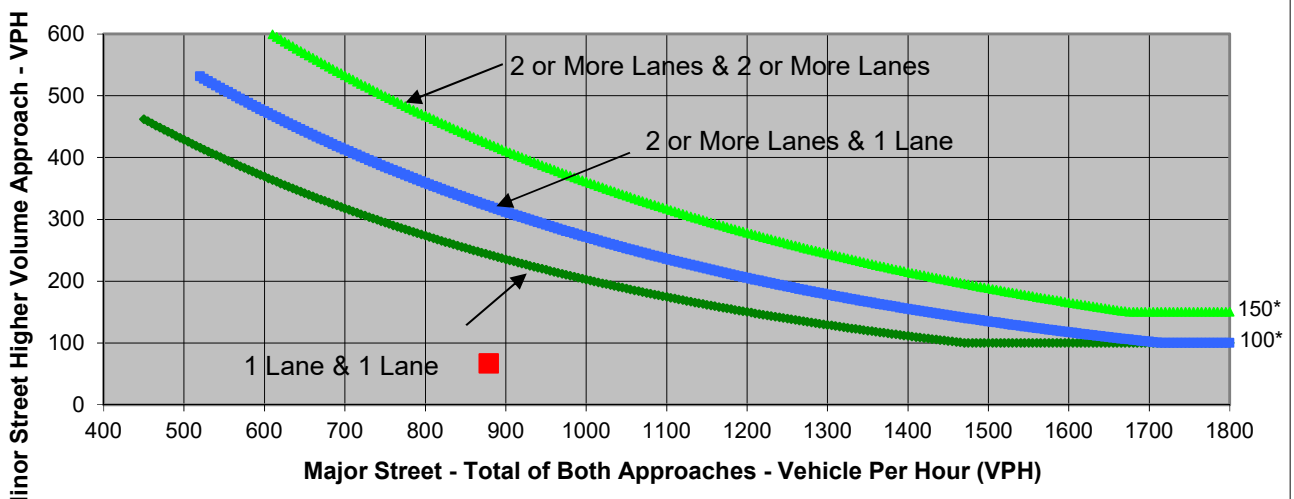
Project	Campus Town Specific Plan
Scenario	Cumulative With Plan
Peak Hour	PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	0	2	121	0
Through	0	0	452	302
Right	0	65	0	4
Total	0	67	573	306

Major Street Direction

	North/South
x	East/West



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Gigling Road	Seventh Avenue	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**879**	**67**	

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

Appendix G:
Mitigated Intersection LOS Calculations

Existing with Plan Conditions

AM Peak Hour

PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	164	178	795	45	245	49	386	129	10	31	209	74
Future Volume (veh/h)	164	178	795	45	245	49	386	129	10	31	209	74
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	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
Adj Sat Flow, veh/h/ln	1863	1863	1863	1792	1792	1900	1881	1881	1900	1863	1863	1863
Adj Flow Rate, veh/h	184	200	0	51	275	55	434	145	11	35	235	83
Adj No. of Lanes	2	1	1	2	2	0	3	2	0	1	2	1
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	6	6	6	1	1	1	2	2	2
Cap, veh/h	263	352	315	102	405	80	995	1159	87	37	593	418
Arrive On Green	0.08	0.19	0.00	0.03	0.14	0.15	0.20	0.34	0.35	0.02	0.17	0.18
Sat Flow, veh/h	3442	1863	1583	3312	2834	558	5052	3370	253	1774	3539	1578
Grp Volume(v), veh/h	184	200	0	51	164	166	434	76	80	35	235	83
Grp Sat Flow(s),veh/h/ln	1721	1863	1583	1656	1703	1690	1684	1787	1836	1774	1770	1578
Q Serve(g_s), s	2.5	4.7	0.0	0.7	4.4	4.5	3.6	1.4	1.4	0.9	2.8	2.0
Cycle Q Clear(g_c), s	2.5	4.7	0.0	0.7	4.4	4.5	3.6	1.4	1.4	0.9	2.8	2.0
Prop In Lane	1.00		1.00	1.00		0.33	1.00		0.14	1.00		1.00
Lane Grp Cap(c), veh/h	263	352	315	102	244	242	995	615	631	37	593	418
V/C Ratio(X)	0.70	0.57	0.00	0.50	0.67	0.69	0.44	0.12	0.13	0.95	0.40	0.20
Avail Cap(c_a), veh/h	358	387	346	241	301	299	998	963	989	207	1619	876
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.7	17.7	0.0	22.9	19.5	19.5	17.0	10.8	10.8	23.5	17.8	13.7
Incr Delay (d2), s/veh	3.7	1.9	0.0	1.4	4.8	5.5	0.2	0.2	0.2	32.1	0.5	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	1.3	2.6	0.0	0.4	2.4	2.4	1.7	0.7	0.7	0.8	1.4	0.9
LnGrp Delay(d),s/veh	25.4	19.6	0.0	24.4	24.3	25.0	17.2	11.0	11.0	55.6	18.4	14.0
LnGrp LOS	C	B		C	C	C	B	B	B	E	B	B
Approach Vol, veh/h		384			381			590			353	
Approach Delay, s/veh		22.4			24.6			15.5			21.0	
Approach LOS		C			C			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.5	13.1	8.7	11.9	6.0	21.5	6.5	14.1
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	10.0	22.5	5.5	9.0	6.1	26.4	4.0	10.5
Max Q Clear Time (g_c+I1), s	5.6	4.8	4.5	6.5	2.9	3.4	2.7	6.7
Green Ext Time (p_c), s	0.6	3.3	0.1	0.9	0.0	3.7	0.0	1.3

Intersection Summary	
HCM 2010 Ctrl Delay	20.2
HCM 2010 LOS	C

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	65	78	118	228	70	35	122	398	153	74	882	149
Future Volume (veh/h)	65	78	118	228	70	35	122	398	153	74	882	149
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.98	0.99		0.98	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1881	1900	1900	1863	1900	1881	1881	1900	1863	1863	1863
Adj Flow Rate, veh/h	83	100	122	292	90	41	156	510	169	95	1131	122
Adj No. of Lanes	0	1	0	0	1	0	1	3	0	1	3	1
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Percent Heavy Veh, %	1	1	1	2	2	2	1	1	1	2	2	2
Cap, veh/h	217	261	272	442	116	50	182	716	229	303	1301	399
Arrive On Green	0.41	0.41	0.42	0.41	0.41	0.42	0.10	0.19	0.19	0.17	0.26	0.26
Sat Flow, veh/h	356	636	662	847	283	121	1792	3833	1228	1774	5085	1562
Grp Volume(v), veh/h	305	0	0	423	0	0	156	454	225	95	1131	122
Grp Sat Flow(s),veh/h/ln	1654	0	0	1252	0	0	1792	1712	1638	1774	1695	1562
Q Serve(g_s), s	0.0	0.0	0.0	11.5	0.0	0.0	5.5	8.0	8.4	3.0	13.8	4.1
Cycle Q Clear(g_c), s	8.2	0.0	0.0	19.7	0.0	0.0	5.5	8.0	8.4	3.0	13.8	4.1
Prop In Lane	0.27		0.40	0.69		0.10	1.00		0.75	1.00		1.00
Lane Grp Cap(c), veh/h	750	0	0	608	0	0	182	639	306	303	1301	399
V/C Ratio(X)	0.41	0.00	0.00	0.70	0.00	0.00	0.86	0.71	0.74	0.31	0.87	0.31
Avail Cap(c_a), veh/h	891	0	0	725	0	0	194	1190	569	303	1610	494
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.6	0.0	0.0	17.1	0.0	0.0	28.6	24.7	24.6	23.5	23.1	19.5
Incr Delay (d2), s/veh	0.1	0.0	0.0	1.6	0.0	0.0	26.6	0.5	1.3	0.2	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	3.9	0.0	0.0	7.0	0.0	0.0	4.1	3.8	3.9	1.5	6.9	1.8
LnGrp Delay(d),s/veh	13.7	0.0	0.0	18.7	0.0	0.0	55.2	25.2	25.9	23.7	27.0	19.6
LnGrp LOS	B			B			E	C	C	C	C	B
Approach Vol, veh/h		305			423			835			1348	
Approach Delay, s/veh		13.7			18.7			31.0			26.1	
Approach LOS		B			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	11.6	21.6		31.6	16.1	17.1		31.6
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	7.5	21.0		33.0	5.5	23.0		33.0
Max Q Clear Time (g_c+I1), s	7.5	15.8		21.7	5.0	10.4		10.2
Green Ext Time (p_c), s	0.0	1.1		1.1	0.0	0.8		1.2

Intersection Summary		
HCM 2010 Ctrl Delay		25.1
HCM 2010 LOS		C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	172	0	430	0	0	0	221	397	1	0	966	253
Future Volume (veh/h)	172	0	430	0	0	0	221	397	1	0	966	253
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1900	1863	1863	1863	1881	1881	1900	0	1863	1863
Adj Flow Rate, veh/h	191	0	478	0	0	0	246	441	1	0	1073	281
Adj No. of Lanes	1	1	0	1	1	1	1	2	0	0	2	1
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, %	1	1	1	2	2	2	1	1	1	0	2	2
Cap, veh/h	612	0	446	112	520	442	291	2125	5	0	1234	552
Arrive On Green	0.28	0.00	0.28	0.00	0.00	0.00	0.16	0.58	0.58	0.00	0.35	0.35
Sat Flow, veh/h	1790	0	1597	913	1863	1583	1792	3659	8	0	3632	1583
Grp Volume(v), veh/h	191	0	478	0	0	0	246	215	227	0	1073	281
Grp Sat Flow(s),veh/h/ln	1790	0	1597	913	1863	1583	1792	1787	1880	0	1770	1583
Q Serve(g_s), s	5.5	0.0	18.0	0.0	0.0	0.0	8.6	3.7	3.7	0.0	18.3	9.1
Cycle Q Clear(g_c), s	5.5	0.0	18.0	0.0	0.0	0.0	8.6	3.7	3.7	0.0	18.3	9.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h	612	0	446	112	520	442	291	1038	1092	0	1234	552
V/C Ratio(X)	0.31	0.00	1.07	0.00	0.00	0.00	0.85	0.21	0.21	0.00	0.87	0.51
Avail Cap(c_a), veh/h	612	0	446	112	520	442	292	1054	1109	0	1263	565
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	18.7	0.0	23.2	0.0	0.0	0.0	26.2	6.4	6.4	0.0	19.6	16.6
Incr Delay (d2), s/veh	0.3	0.0	62.9	0.0	0.0	0.0	19.9	0.1	0.1	0.0	6.7	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	0.0	15.6	0.0	0.0	0.0	5.8	1.8	1.9	0.0	9.9	4.0
LnGrp Delay(d),s/veh	19.0	0.0	86.2	0.0	0.0	0.0	46.1	6.5	6.5	0.0	26.3	17.3
LnGrp LOS	B		F				D	A	A		C	B
Approach Vol, veh/h		669			0			688			1354	
Approach Delay, s/veh		67.0			0.0			20.7			24.4	
Approach LOS		E						C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		8
Phs Duration (G+Y+Rc), s		41.9		22.5	15.0	27.0		22.5
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s		38.0		18.0	10.5	23.0		18.0
Max Q Clear Time (g_c+I1), s		5.7		20.0	10.6	20.3		0.0
Green Ext Time (p_c), s		14.0		0.0	0.0	2.2		0.0

Intersection Summary		
HCM 2010 Ctrl Delay		34.0
HCM 2010 LOS		C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	107	228	359	44	271	45	819	146	25	55	154	170
Future Volume (veh/h)	107	228	359	44	271	45	819	146	25	55	154	170
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1881	1900	1900	1900	1881	1881	1900	1900	1900	1900
Adj Flow Rate, veh/h	111	238	0	46	282	45	853	152	25	57	160	177
Adj No. of Lanes	2	1	1	2	2	0	3	2	0	1	2	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	1	1	1	0	0	0	1	1	1	0	0	0
Cap, veh/h	219	346	294	133	497	78	1112	1152	186	79	713	420
Arrive On Green	0.06	0.18	0.00	0.04	0.16	0.16	0.22	0.37	0.37	0.04	0.20	0.20
Sat Flow, veh/h	3476	1881	1599	3510	3125	493	5052	3083	498	1810	3610	1615
Grp Volume(v), veh/h	111	238	0	46	161	166	853	87	90	57	160	177
Grp Sat Flow(s),veh/h/ln	1738	1881	1599	1755	1805	1813	1684	1787	1793	1810	1805	1615
Q Serve(g_s), s	1.5	5.9	0.0	0.6	4.1	4.2	7.9	1.6	1.7	1.6	1.9	4.5
Cycle Q Clear(g_c), s	1.5	5.9	0.0	0.6	4.1	4.2	7.9	1.6	1.7	1.6	1.9	4.5
Prop In Lane	1.00		1.00	1.00		0.27	1.00		0.28	1.00		1.00
Lane Grp Cap(c), veh/h	219	346	294	133	287	288	1112	668	670	79	713	420
V/C Ratio(X)	0.51	0.69	0.00	0.35	0.56	0.57	0.77	0.13	0.13	0.72	0.22	0.42
Avail Cap(c_a), veh/h	299	433	368	281	405	407	1367	1078	1081	232	1663	846
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.6	19.0	0.0	23.4	19.4	19.4	18.3	10.3	10.3	23.6	16.8	15.3
Incr Delay (d2), s/veh	1.8	3.7	0.0	0.6	2.1	2.2	1.9	0.2	0.2	4.5	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	0.8	3.4	0.0	0.3	2.2	2.3	3.8	0.8	0.8	0.9	0.9	2.1
LnGrp Delay(d),s/veh	24.5	22.7	0.0	24.0	21.5	21.6	20.2	10.5	10.5	28.1	17.0	16.1
LnGrp LOS	C	C		C	C	C	C	B	B	C	B	B
Approach Vol, veh/h		349			373			1030			394	
Approach Delay, s/veh		23.3			21.8			18.5			18.2	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.5	14.4	7.6	12.4	6.7	23.2	6.4	13.7
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	13.5	23.0	4.3	11.2	6.4	30.1	4.0	11.5
Max Q Clear Time (g_c+I1), s	9.9	6.5	3.5	6.2	3.6	3.7	2.6	7.9
Green Ext Time (p_c), s	1.1	3.3	0.0	1.7	0.0	3.9	0.0	1.3

Intersection Summary	
HCM 2010 Ctrl Delay	19.8
HCM 2010 LOS	B

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	27	33	130	28	6	49	883	176	31	482	45
Future Volume (veh/h)	45	27	33	130	28	6	49	883	176	31	482	45
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1881	1900	1881	1881	1900	1900	1900	1900
Adj Flow Rate, veh/h	49	29	11	141	30	4	53	960	168	34	524	-10
Adj No. of Lanes	0	1	0	0	1	0	1	3	0	1	3	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	1	1	1	1	1	1	0	0	0
Cap, veh/h	314	152	39	444	55	6	297	1373	240	75	974	303
Arrive On Green	0.17	0.18	0.18	0.17	0.18	0.18	0.17	0.31	0.31	0.04	0.19	0.00
Sat Flow, veh/h	664	827	210	1201	298	35	1792	4400	768	1810	5187	1615
Grp Volume(v), veh/h	89	0	0	175	0	0	53	746	382	34	524	-10
Grp Sat Flow(s),veh/h/ln	1702	0	0	1534	0	0	1792	1712	1744	1810	1729	1615
Q Serve(g_s), s	0.0	0.0	0.0	1.8	0.0	0.0	0.7	5.6	5.6	0.5	2.7	0.0
Cycle Q Clear(g_c), s	1.2	0.0	0.0	3.0	0.0	0.0	0.7	5.6	5.6	0.5	2.7	0.0
Prop In Lane	0.55		0.12	0.81		0.02	1.00		0.44	1.00		1.00
Lane Grp Cap(c), veh/h	476	0	0	479	0	0	297	1069	544	75	974	303
V/C Ratio(X)	0.19	0.00	0.00	0.37	0.00	0.00	0.18	0.70	0.70	0.46	0.54	-0.03
Avail Cap(c_a), veh/h	1915	0	0	1842	0	0	313	2743	1397	316	4156	1294
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	10.3	0.0	0.0	11.0	0.0	0.0	10.5	8.8	8.8	13.7	10.7	0.0
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.2	0.0	0.0	0.1	0.3	0.6	1.6	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	0.0	1.3	0.0	0.0	0.4	2.6	2.7	0.3	1.3	0.0
LnGrp Delay(d),s/veh	10.4	0.0	0.0	11.2	0.0	0.0	10.6	9.1	9.5	15.3	10.9	0.0
LnGrp LOS	B			B			B	A	A	B	B	
Approach Vol, veh/h		89			175			1181			548	
Approach Delay, s/veh		10.4			11.2			9.3			11.4	
Approach LOS		B			B			A			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	9.3	10.0		9.9	5.7	13.6		9.9
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	5.1	23.4		33.0	5.1	23.4		33.0
Max Q Clear Time (g_c+I1), s	2.7	4.7		5.0	2.5	7.6		3.2
Green Ext Time (p_c), s	0.0	0.7		0.3	0.0	1.4		0.3

Intersection Summary	
HCM 2010 Ctrl Delay	10.1
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	184	0	97	0	0	0	153	969	0	0	398	201
Future Volume (veh/h)	184	0	97	0	0	0	153	969	0	0	398	201
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1900	1863	1863	1863	1881	1881	0	0	1881	1881
Adj Flow Rate, veh/h	207	0	109	0	0	0	172	1089	0	0	447	226
Adj No. of Lanes	1	1	0	1	1	1	1	2	0	0	2	1
Peak Hour Factor	0.89	0.92	0.89	0.92	0.92	0.92	0.89	0.89	0.92	0.92	0.89	0.89
Percent Heavy Veh, %	1	2	2	2	2	2	1	1	0	0	1	1
Cap, veh/h	511	0	293	178	346	294	225	2114	0	0	1267	563
Arrive On Green	0.19	0.00	0.19	0.00	0.00	0.00	0.13	0.59	0.00	0.00	0.35	0.35
Sat Flow, veh/h	1792	0	1578	1279	1863	1583	1792	3668	0	0	3668	1588
Grp Volume(v), veh/h	207	0	109	0	0	0	172	1089	0	0	447	226
Grp Sat Flow(s),veh/h/ln	1792	0	1578	1279	1863	1583	1792	1787	0	0	1787	1588
Q Serve(g_s), s	4.3	0.0	2.4	0.0	0.0	0.0	3.8	7.2	0.0	0.0	3.7	4.3
Cycle Q Clear(g_c), s	4.3	0.0	2.4	0.0	0.0	0.0	3.8	7.2	0.0	0.0	3.7	4.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h	511	0	293	178	346	294	225	2114	0	0	1267	563
V/C Ratio(X)	0.41	0.00	0.37	0.00	0.00	0.00	0.77	0.52	0.00	0.00	0.35	0.40
Avail Cap(c_a), veh/h	977	0	704	511	830	706	466	2921	0	0	1593	708
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	15.1	0.0	14.4	0.0	0.0	0.0	17.1	4.8	0.0	0.0	9.6	9.8
Incr Delay (d2), s/veh	0.5	0.0	0.8	0.0	0.0	0.0	5.4	0.2	0.0	0.0	0.2	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	0.0	1.1	0.0	0.0	0.0	2.2	3.5	0.0	0.0	1.8	2.0
LnGrp Delay(d),s/veh	15.7	0.0	15.2	0.0	0.0	0.0	22.5	5.0	0.0	0.0	9.8	10.3
LnGrp LOS	B		B				C	A			A	B
Approach Vol, veh/h		316			0			1261			673	
Approach Delay, s/veh		15.5			0.0			7.4			9.9	
Approach LOS		B						A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		8
Phs Duration (G+Y+Rc), s		28.4		12.0	9.6	18.8		12.0
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s		33.0		18.0	10.5	18.0		18.0
Max Q Clear Time (g_c+I1), s		9.2		6.3	5.8	6.3		0.0
Green Ext Time (p_c), s		12.4		0.9	0.2	7.8		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	9.3
HCM 2010 LOS	A

Background with Plan Conditions

AM Peak Hour

PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	186	223	1084	45	288	49	693	532	10	31	439	80
Future Volume (veh/h)	186	223	1084	45	288	49	693	532	10	31	439	80
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	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
Adj Sat Flow, veh/h/ln	1863	1863	1863	1792	1792	1900	1881	1881	1900	1863	1863	1863
Adj Flow Rate, veh/h	209	251	0	51	324	53	779	598	10	35	493	90
Adj No. of Lanes	2	1	1	2	2	0	3	2	0	1	2	1
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	6	6	6	1	1	1	2	2	2
Cap, veh/h	299	358	290	156	446	72	946	1621	27	68	1067	587
Arrive On Green	0.09	0.19	0.00	0.05	0.15	0.14	0.19	0.45	0.44	0.04	0.30	0.29
Sat Flow, veh/h	3442	1863	1583	3312	2933	475	5052	3597	60	1774	3539	1580
Grp Volume(v), veh/h	209	251	0	51	187	190	779	297	311	35	493	90
Grp Sat Flow(s),veh/h/ln	1721	1863	1583	1656	1703	1705	1684	1787	1870	1774	1770	1580
Q Serve(g_s), s	3.5	7.4	0.0	0.9	6.1	6.3	8.7	6.4	6.4	1.1	6.6	2.2
Cycle Q Clear(g_c), s	3.5	7.4	0.0	0.9	6.1	6.3	8.7	6.4	6.4	1.1	6.6	2.2
Prop In Lane	1.00		1.00	1.00		0.28	1.00		0.03	1.00		1.00
Lane Grp Cap(c), veh/h	299	358	290	156	259	259	946	805	843	68	1067	587
V/C Ratio(X)	0.70	0.70	0.00	0.33	0.72	0.73	0.82	0.37	0.37	0.52	0.46	0.15
Avail Cap(c_a), veh/h	299	358	290	254	272	273	946	879	920	169	1415	742
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.1	22.2	0.0	27.1	23.7	23.8	22.9	10.6	10.6	27.7	16.7	12.3
Incr Delay (d2), s/veh	7.1	6.3	0.0	0.5	8.9	9.8	5.8	0.6	0.6	2.3	0.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	4.4	0.0	0.4	3.5	3.7	4.5	3.3	3.4	0.6	3.3	1.0
LnGrp Delay(d),s/veh	33.1	28.5	0.0	27.6	32.7	33.6	28.8	11.2	11.2	30.0	17.0	12.5
LnGrp LOS	C	C		C	C	C	C	B	B	C	B	B
Approach Vol, veh/h		460			428			1387			618	
Approach Delay, s/veh		30.6			32.5			21.1			17.1	
Approach LOS		C			C			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.0	21.7	9.1	12.9	6.2	30.5	6.8	15.3
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	10.5	23.0	4.6	8.9	5.1	28.4	4.0	9.5
Max Q Clear Time (g_c+I1), s	10.7	8.6	5.5	8.3	3.1	8.4	2.9	9.4
Green Ext Time (p_c), s	0.0	8.4	0.0	0.2	0.0	10.4	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	23.4
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	94	75	460	31	123	47	1076	233	205	1325	46
Future Volume (veh/h)	22	94	75	460	31	123	47	1076	233	205	1325	46
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1810	1810	1810	1863	1863	1863	1881	1881	1881	1863	1863	1863
Adj Flow Rate, veh/h	25	108	54	529	36	0	54	1237	0	236	1523	0
Adj No. of Lanes	1	1	1	1	1	1	2	3	1	2	3	1
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	5	5	5	2	2	2	1	1	1	2	2	2
Cap, veh/h	56	167	199	568	708	592	172	1511	461	333	1737	531
Arrive On Green	0.03	0.09	0.09	0.32	0.38	0.00	0.05	0.29	0.00	0.10	0.34	0.00
Sat Flow, veh/h	1723	1810	1533	1774	1863	1583	3476	5136	1599	3442	5085	1583
Grp Volume(v), veh/h	25	108	54	529	36	0	54	1237	0	236	1523	0
Grp Sat Flow(s),veh/h/ln	1723	1810	1533	1774	1863	1583	1738	1712	1599	1721	1695	1583
Q Serve(g_s), s	1.2	4.7	2.6	23.5	1.0	0.0	1.2	18.2	0.0	5.4	22.9	0.0
Cycle Q Clear(g_c), s	1.2	4.7	2.6	23.5	1.0	0.0	1.2	18.2	0.0	5.4	22.9	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	56	167	199	568	708	592	172	1511	461	333	1737	531
V/C Ratio(X)	0.44	0.65	0.27	0.93	0.05	0.00	0.31	0.82	0.00	0.71	0.88	0.00
Avail Cap(c_a), veh/h	123	433	424	640	985	828	235	1714	524	334	1847	565
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	38.7	35.7	32.0	26.8	16.0	0.0	37.4	26.7	0.0	35.7	25.2	0.0
Incr Delay (d2), s/veh	2.0	1.6	0.3	18.3	0.0	0.0	0.4	2.5	0.0	5.8	4.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	2.4	1.1	14.3	0.5	0.0	0.6	8.9	0.0	2.9	11.5	0.0
LnGrp Delay(d),s/veh	40.7	37.3	32.3	45.1	16.0	0.0	37.8	29.3	0.0	41.5	29.8	0.0
LnGrp LOS	D	D	C	D	B		D	C		D	C	
Approach Vol, veh/h		187			565			1291			1759	
Approach Delay, s/veh		36.3			43.2			29.6			31.4	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	31.8	6.7	35.0	11.9	28.0	30.1	11.5
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.6	29.1	5.3	42.6	7.4	26.7	28.9	19.0
Max Q Clear Time (g_c+I1), s	3.2	24.9	3.2	3.0	7.4	20.2	25.5	6.7
Green Ext Time (p_c), s	0.0	2.4	0.0	0.1	0.0	3.2	0.1	0.1

Intersection Summary	
HCM 2010 Ctrl Delay	32.8
HCM 2010 LOS	C

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	65	78	118	277	70	35	122	1144	167	74	1466	149
Future Volume (veh/h)	65	78	118	277	70	35	122	1144	167	74	1466	149
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	0.99		0.98	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1881	1900	1900	1863	1900	1881	1881	1900	1863	1863	1863
Adj Flow Rate, veh/h	83	100	122	355	90	41	156	1467	187	95	1879	122
Adj No. of Lanes	0	1	0	0	1	0	1	3	0	1	3	1
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Percent Heavy Veh, %	1	1	1	2	2	2	1	1	1	2	2	2
Cap, veh/h	223	269	298	433	94	43	144	1592	203	172	1841	568
Arrive On Green	0.44	0.44	0.43	0.44	0.44	0.43	0.08	0.35	0.34	0.10	0.36	0.36
Sat Flow, veh/h	405	617	681	848	215	98	1792	4607	587	1774	5085	1568
Grp Volume(v), veh/h	305	0	0	486	0	0	156	1090	564	95	1879	122
Grp Sat Flow(s),veh/h/ln	1704	0	0	1161	0	0	1792	1712	1770	1774	1695	1568
Q Serve(g_s), s	0.0	0.0	0.0	28.7	0.0	0.0	8.0	30.4	30.4	5.1	36.0	5.4
Cycle Q Clear(g_c), s	12.1	0.0	0.0	40.7	0.0	0.0	8.0	30.4	30.4	5.1	36.0	5.4
Prop In Lane	0.27		0.40	0.73		0.08	1.00		0.33	1.00		1.00
Lane Grp Cap(c), veh/h	790	0	0	570	0	0	144	1183	612	172	1841	568
V/C Ratio(X)	0.39	0.00	0.00	0.85	0.00	0.00	1.08	0.92	0.92	0.55	1.02	0.21
Avail Cap(c_a), veh/h	799	0	0	577	0	0	144	1288	666	172	1841	568
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.2	0.0	0.0	28.5	0.0	0.0	45.7	31.2	31.3	42.8	31.7	21.9
Incr Delay (d2), s/veh	0.1	0.0	0.0	11.2	0.0	0.0	98.6	10.0	16.9	2.2	26.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.7	0.0	0.0	14.7	0.0	0.0	7.9	16.0	17.8	2.6	21.2	2.3
LnGrp Delay(d),s/veh	19.3	0.0	0.0	39.7	0.0	0.0	144.3	41.2	48.3	45.0	58.0	22.0
LnGrp LOS	B			D			F	D	D	D	F	C
Approach Vol, veh/h		305			486			1810			2096	
Approach Delay, s/veh		19.3			39.7			52.3			55.3	
Approach LOS		B			D			D			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	12.0	40.0		47.4	13.7	38.3		47.4
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	7.5	35.5		43.5	6.1	36.9		43.5
Max Q Clear Time (g_c+I1), s	10.0	38.0		42.7	7.1	32.4		14.1
Green Ext Time (p_c), s	0.0	0.0		0.2	0.0	1.4		1.4

Intersection Summary	
HCM 2010 Ctrl Delay	50.2
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	533	0	430	0	0	0	221	796	1	0	1327	525
Future Volume (veh/h)	533	0	430	0	0	0	221	796	1	0	1327	525
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1900	1863	1863	1863	1881	1881	1881	1863	1863	1863
Adj Flow Rate, veh/h	592	0	478	0	0	0	246	884	1	0	1474	583
Adj No. of Lanes	1	1	0	1	1	1	1	2	1	1	2	1
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, %	1	1	1	2	2	2	1	1	1	2	2	2
Cap, veh/h	643	0	516	65	601	511	220	2128	950	65	1528	682
Arrive On Green	0.32	0.00	0.32	0.00	0.00	0.00	0.12	0.60	0.60	0.00	0.43	0.43
Sat Flow, veh/h	1790	0	1598	913	1863	1583	1792	3574	1596	625	3539	1580
Grp Volume(v), veh/h	592	0	478	0	0	0	246	884	1	0	1474	583
Grp Sat Flow(s),veh/h/ln	1790	0	1598	913	1863	1583	1792	1787	1596	625	1770	1580
Q Serve(g_s), s	35.5	0.0	31.8	0.0	0.0	0.0	13.5	14.6	0.0	0.0	44.6	36.6
Cycle Q Clear(g_c), s	35.5	0.0	31.8	0.0	0.0	0.0	13.5	14.6	0.0	0.0	44.6	36.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	643	0	516	65	601	511	220	2128	950	65	1528	682
V/C Ratio(X)	0.92	0.00	0.93	0.00	0.00	0.00	1.12	0.42	0.00	0.00	0.96	0.85
Avail Cap(c_a), veh/h	643	0	516	65	601	511	220	2129	951	66	1529	682
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	37.7	0.0	36.0	0.0	0.0	0.0	48.2	12.0	9.0	0.0	30.4	28.1
Incr Delay (d2), s/veh	18.6	0.0	23.0	0.0	0.0	0.0	96.2	0.1	0.0	0.0	15.4	10.4
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	21.2	0.0	17.2	0.0	0.0	0.0	12.5	7.2	0.0	0.0	25.0	17.8
LnGrp Delay(d),s/veh	56.3	0.0	59.0	0.0	0.0	0.0	144.4	12.1	9.0	0.0	45.9	38.5
LnGrp LOS	E		E				F	B	A		D	D
Approach Vol, veh/h		1070			0			1131			2057	
Approach Delay, s/veh		57.5			0.0			40.9			43.8	
Approach LOS		E						D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		8
Phs Duration (G+Y+Rc), s		70.0		40.0	18.0	52.0		40.0
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s		65.5		35.5	13.5	47.5		35.5
Max Q Clear Time (g_c+I1), s		16.6		37.5	15.5	46.6		0.0
Green Ext Time (p_c), s		34.2		0.0	0.0	0.9		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	46.5
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	140	283	836	44	318	45	1137	644	25	55	600	174
Future Volume (veh/h)	140	283	836	44	318	45	1137	644	25	55	600	174
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1881	1900	1900	1900	1881	1881	1900	1900	1900	1900
Adj Flow Rate, veh/h	146	295	0	46	331	45	1184	671	25	57	625	181
Adj No. of Lanes	2	1	1	2	2	0	3	2	0	1	2	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	1	1	1	0	0	0	1	1	1	0	0	0
Cap, veh/h	225	350	298	116	494	67	1332	1750	65	73	991	548
Arrive On Green	0.06	0.19	0.00	0.03	0.15	0.15	0.26	0.50	0.50	0.04	0.27	0.27
Sat Flow, veh/h	3476	1881	1599	3510	3198	431	5052	3514	131	1810	3610	1615
Grp Volume(v), veh/h	146	295	0	46	186	190	1184	341	355	57	625	181
Grp Sat Flow(s),veh/h/ln	1738	1881	1599	1755	1805	1824	1684	1787	1858	1810	1805	1615
Q Serve(g_s), s	3.0	11.2	0.0	1.0	7.2	7.3	16.7	8.8	8.8	2.3	11.3	6.2
Cycle Q Clear(g_c), s	3.0	11.2	0.0	1.0	7.2	7.3	16.7	8.8	8.8	2.3	11.3	6.2
Prop In Lane	1.00		1.00	1.00		0.24	1.00		0.07	1.00		1.00
Lane Grp Cap(c), veh/h	225	350	298	116	279	282	1332	890	925	73	991	548
V/C Ratio(X)	0.65	0.84	0.00	0.40	0.67	0.68	0.89	0.38	0.38	0.78	0.63	0.33
Avail Cap(c_a), veh/h	258	367	312	189	316	319	1395	890	925	163	1119	605
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.9	29.1	0.0	35.2	29.6	29.6	26.3	11.6	11.6	35.3	23.6	18.2
Incr Delay (d2), s/veh	4.6	15.8	0.0	0.8	4.9	5.2	7.1	0.6	0.6	6.7	1.1	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	7.4	0.0	0.5	3.9	4.1	8.7	4.4	4.6	1.3	5.7	2.8
LnGrp Delay(d),s/veh	38.5	45.0	0.0	36.0	34.4	34.8	33.3	12.1	12.1	42.0	24.7	18.7
LnGrp LOS	D	D		D	C	C	C	B	B	D	C	B
Approach Vol, veh/h		441			422			1880			863	
Approach Delay, s/veh		42.8			34.8			25.5			24.6	
Approach LOS		D			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	24.1	24.9	9.3	16.0	7.5	41.5	7.0	18.3
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	20.5	23.0	5.5	13.0	6.7	36.8	4.0	14.5
Max Q Clear Time (g_c+I1), s	18.7	13.3	5.0	9.3	4.3	10.8	3.0	13.2
Green Ext Time (p_c), s	0.8	7.1	0.0	1.6	0.0	15.0	0.0	0.6

Intersection Summary	
HCM 2010 Ctrl Delay	28.5
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	18	12	27	240	42	294	57	1481	410	163	1245	46
Future Volume (veh/h)	18	12	27	240	42	294	57	1481	410	163	1245	46
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1776	1776	1776	1881	1881	1881	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	20	13	-1	270	47	0	64	1664	0	183	1399	0
Adj No. of Lanes	1	1	1	1	1	1	2	3	1	2	3	1
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	7	7	7	1	1	1	2	2	2	2	2	2
Cap, veh/h	40	125	186	316	420	357	183	1994	621	274	2129	663
Arrive On Green	0.02	0.07	0.00	0.18	0.22	0.00	0.05	0.39	0.00	0.08	0.42	0.00
Sat Flow, veh/h	1691	1776	1509	1792	1881	1599	3442	5085	1583	3442	5085	1583
Grp Volume(v), veh/h	20	13	-1	270	47	0	64	1664	0	183	1399	0
Grp Sat Flow(s),veh/h/ln	1691	1776	1509	1792	1881	1599	1721	1695	1583	1721	1695	1583
Q Serve(g_s), s	0.7	0.4	0.0	9.3	1.3	0.0	1.1	18.9	0.0	3.3	14.1	0.0
Cycle Q Clear(g_c), s	0.7	0.4	0.0	9.3	1.3	0.0	1.1	18.9	0.0	3.3	14.1	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	40	125	186	316	420	357	183	1994	621	274	2129	663
V/C Ratio(X)	0.51	0.10	-0.01	0.85	0.11	0.00	0.35	0.83	0.00	0.67	0.66	0.00
Avail Cap(c_a), veh/h	146	667	647	378	942	801	269	2323	723	285	2347	731
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	30.8	27.8	0.0	25.5	19.8	0.0	29.2	17.6	0.0	28.6	14.9	0.0
Incr Delay (d2), s/veh	3.7	0.1	0.0	13.2	0.0	0.0	0.4	2.1	0.0	4.3	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.2	0.0	5.7	0.7	0.0	0.6	9.2	0.0	1.7	6.6	0.0
LnGrp Delay(d),s/veh	34.5	28.0	0.0	38.7	19.8	0.0	29.6	19.7	0.0	32.9	15.3	0.0
LnGrp LOS	C	C		D	B		C	B		C	B	
Approach Vol, veh/h		32			317			1728			1582	
Approach Delay, s/veh		32.9			35.9			20.0			17.3	
Approach LOS		C			D			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.9	31.3	6.0	18.8	9.6	29.6	15.8	9.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.6	29.5	5.5	32.0	5.3	29.2	13.5	24.0
Max Q Clear Time (g_c+I1), s	3.1	16.1	2.7	3.3	5.3	20.9	11.3	2.4
Green Ext Time (p_c), s	0.0	5.2	0.0	0.0	0.0	4.2	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	20.4
HCM 2010 LOS	C

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	27	33	153	28	6	49	1757	219	31	1446	45
Future Volume (veh/h)	45	27	33	153	28	6	49	1757	219	31	1446	45
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1881	1900	1881	1881	1900	1900	1900	1900
Adj Flow Rate, veh/h	49	29	11	166	30	4	53	1910	215	34	1572	-10
Adj No. of Lanes	0	1	0	0	1	0	1	3	0	1	3	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	1	1	1	1	1	1	0	0	0
Cap, veh/h	264	136	39	374	47	6	255	2239	250	70	1938	603
Arrive On Green	0.20	0.19	0.19	0.20	0.19	0.19	0.14	0.48	0.48	0.04	0.37	0.00
Sat Flow, veh/h	756	730	210	1227	253	30	1792	4688	524	1810	5187	1615
Grp Volume(v), veh/h	89	0	0	200	0	0	53	1391	734	34	1572	-10
Grp Sat Flow(s),veh/h/ln	1696	0	0	1511	0	0	1792	1712	1788	1810	1729	1615
Q Serve(g_s), s	0.0	0.0	0.0	3.5	0.0	0.0	1.2	16.2	16.5	0.8	12.4	0.0
Cycle Q Clear(g_c), s	1.9	0.0	0.0	5.3	0.0	0.0	1.2	16.2	16.5	0.8	12.4	0.0
Prop In Lane	0.55		0.12	0.83		0.02	1.00		0.29	1.00		1.00
Lane Grp Cap(c), veh/h	458	0	0	443	0	0	255	1635	854	70	1938	603
V/C Ratio(X)	0.19	0.00	0.00	0.45	0.00	0.00	0.21	0.85	0.86	0.49	0.81	-0.02
Avail Cap(c_a), veh/h	1282	0	0	1218	0	0	272	2898	1514	203	4185	1303
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	15.7	0.0	0.0	16.9	0.0	0.0	17.2	10.4	10.5	21.4	12.8	0.0
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.3	0.0	0.0	0.1	0.5	1.0	2.0	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	0.0	2.3	0.0	0.0	0.6	7.6	8.2	0.5	5.9	0.0
LnGrp Delay(d),s/veh	15.7	0.0	0.0	17.1	0.0	0.0	17.3	10.9	11.5	23.3	13.1	0.0
LnGrp LOS	B			B			B	B	B	C	B	
Approach Vol, veh/h		89			200			2178			1596	
Approach Delay, s/veh		15.7			17.1			11.3			13.4	
Approach LOS		B			B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	11.0	21.4		13.0	6.2	26.2		13.0
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	6.5	36.6		33.0	5.1	38.4		33.0
Max Q Clear Time (g_c+I1), s	3.2	14.4		7.3	2.8	18.5		3.9
Green Ext Time (p_c), s	0.0	2.6		0.3	0.0	3.2		0.4

Intersection Summary	
HCM 2010 Ctrl Delay	12.5
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	596	0	97	0	0	0	153	1475	0	0	918	669
Future Volume (veh/h)	596	0	97	0	0	0	153	1475	0	0	918	669
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1900	1900	1900	1900	1881	1881	1900	1900	1881	1881
Adj Flow Rate, veh/h	670	0	109	0	0	0	172	1657	0	0	1031	752
Adj No. of Lanes	1	1	0	1	1	1	1	2	1	1	2	1
Peak Hour Factor	0.89	0.25	0.89	0.25	0.25	0.25	0.89	0.89	0.25	0.25	0.89	0.89
Percent Heavy Veh, %	1	0	0	0	0	0	1	1	0	0	1	1
Cap, veh/h	687	0	538	80	644	547	185	2006	906	80	1458	648
Arrive On Green	0.34	0.00	0.34	0.00	0.00	0.00	0.10	0.56	0.00	0.00	0.41	0.41
Sat Flow, veh/h	1792	0	1588	1305	1900	1615	1792	3574	1615	305	3574	1589
Grp Volume(v), veh/h	670	0	109	0	0	0	172	1657	0	0	1031	752
Grp Sat Flow(s),veh/h/ln	1792	0	1588	1305	1900	1615	1792	1787	1615	305	1787	1589
Q Serve(g_s), s	30.5	0.0	4.4	0.0	0.0	0.0	8.6	34.1	0.0	0.0	21.6	36.7
Cycle Q Clear(g_c), s	30.5	0.0	4.4	0.0	0.0	0.0	8.6	34.1	0.0	0.0	21.6	36.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	687	0	538	80	644	547	185	2006	906	80	1458	648
V/C Ratio(X)	0.98	0.00	0.20	0.00	0.00	0.00	0.93	0.83	0.00	0.00	0.71	1.16
Avail Cap(c_a), veh/h	687	0	538	80	644	547	185	2006	906	80	1458	648
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	31.2	0.0	21.1	0.0	0.0	0.0	40.0	16.2	0.0	0.0	22.2	26.6
Incr Delay (d2), s/veh	28.1	0.0	0.2	0.0	0.0	0.0	46.2	3.0	0.0	0.0	1.6	88.6
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	21.9	0.0	1.9	0.0	0.0	0.0	6.6	17.4	0.0	0.0	10.9	32.0
LnGrp Delay(d),s/veh	59.3	0.0	21.3	0.0	0.0	0.0	86.3	19.1	0.0	0.0	23.8	115.2
LnGrp LOS	E		C				F	B			C	F
Approach Vol, veh/h		779			0			1829			1783	
Approach Delay, s/veh		54.0			0.0			25.5			62.3	
Approach LOS		D						C			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		8
Phs Duration (G+Y+Rc), s		55.0		35.0	13.8	41.2		35.0
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s		50.5		30.5	9.3	36.7		30.5
Max Q Clear Time (g_c+I1), s		36.1		32.5	10.6	38.7		0.0
Green Ext Time (p_c), s		13.4		0.0	0.0	0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	45.5
HCM 2010 LOS	D

Cumulative with Plan Conditions

AM Peak Hour

PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	202	276	1099	100	440	80	819	695	10	21	550	40
Future Volume (veh/h)	202	276	1099	100	440	80	819	695	10	21	550	40
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	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
Adj Sat Flow, veh/h/ln	1863	1863	1863	1792	1792	1900	1881	1881	1900	1863	1863	1863
Adj Flow Rate, veh/h	227	310	0	112	494	88	920	781	10	24	618	45
Adj No. of Lanes	2	1	1	2	2	0	3	2	0	1	2	1
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	6	6	6	1	1	1	2	2	2
Cap, veh/h	315	424	350	199	567	100	1078	1720	22	49	1026	582
Arrive On Green	0.09	0.23	0.00	0.06	0.20	0.19	0.21	0.48	0.47	0.03	0.29	0.28
Sat Flow, veh/h	3442	1863	1583	3312	2890	512	5052	3614	46	1774	3539	1580
Grp Volume(v), veh/h	227	310	0	112	290	292	920	386	405	24	618	45
Grp Sat Flow(s),veh/h/ln	1721	1863	1583	1656	1703	1699	1684	1787	1873	1774	1770	1580
Q Serve(g_s), s	4.9	11.8	0.0	2.5	12.6	12.8	13.4	11.1	11.1	1.0	11.5	1.4
Cycle Q Clear(g_c), s	4.9	11.8	0.0	2.5	12.6	12.8	13.4	11.1	11.1	1.0	11.5	1.4
Prop In Lane	1.00		1.00	1.00		0.30	1.00		0.02	1.00		1.00
Lane Grp Cap(c), veh/h	315	424	350	199	334	333	1078	850	891	49	1026	582
V/C Ratio(X)	0.72	0.73	0.00	0.56	0.87	0.88	0.85	0.45	0.45	0.49	0.60	0.08
Avail Cap(c_a), veh/h	315	424	350	199	334	333	1123	857	898	123	1157	641
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.8	27.4	0.0	35.0	29.8	29.9	28.9	13.4	13.4	36.7	23.4	15.7
Incr Delay (d2), s/veh	7.8	6.6	0.0	2.2	21.2	22.3	6.2	0.8	0.8	2.8	0.8	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	6.8	0.0	1.2	7.9	8.1	6.8	5.6	5.8	0.5	5.7	0.6
LnGrp Delay(d),s/veh	41.6	34.0	0.0	37.2	51.0	52.3	35.1	14.2	14.2	39.5	24.2	15.8
LnGrp LOS	D	C		D	D	D	D	B	B	D	C	B
Approach Vol, veh/h		537			694			1711			687	
Approach Delay, s/veh		37.2			49.3			25.5			24.2	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.3	26.2	11.0	19.0	6.1	40.4	8.6	21.4
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	16.5	24.5	6.5	14.5	4.8	36.2	4.1	16.9
Max Q Clear Time (g_c+I1), s	15.4	13.5	6.9	14.8	3.0	13.1	4.5	13.8
Green Ext Time (p_c), s	0.4	8.2	0.0	0.0	0.0	14.3	0.0	1.8

Intersection Summary	
HCM 2010 Ctrl Delay	31.5
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	94	75	454	31	267	47	1219	290	205	1506	46
Future Volume (veh/h)	22	94	75	454	31	267	47	1219	290	205	1506	46
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1810	1810	1810	1863	1863	1863	1881	1881	1881	1863	1863	1863
Adj Flow Rate, veh/h	25	108	54	522	36	0	54	1401	0	236	1731	0
Adj No. of Lanes	1	1	1	2	2	1	2	3	1	2	3	1
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	5	5	5	2	2	2	1	1	1	2	2	2
Cap, veh/h	61	179	214	636	879	381	192	1896	578	355	2120	648
Arrive On Green	0.04	0.10	0.09	0.18	0.25	0.00	0.06	0.37	0.00	0.10	0.42	0.00
Sat Flow, veh/h	1723	1810	1533	3442	3539	1583	3476	5136	1599	3442	5085	1583
Grp Volume(v), veh/h	25	108	54	522	36	0	54	1401	0	236	1731	0
Grp Sat Flow(s),veh/h/ln	1723	1810	1533	1721	1770	1583	1738	1712	1599	1721	1695	1583
Q Serve(g_s), s	0.9	3.8	2.1	9.6	0.5	0.0	1.0	15.5	0.0	4.3	19.7	0.0
Cycle Q Clear(g_c), s	0.9	3.8	2.1	9.6	0.5	0.0	1.0	15.5	0.0	4.3	19.7	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	61	179	214	636	879	381	192	1896	578	355	2120	648
V/C Ratio(X)	0.41	0.60	0.25	0.82	0.04	0.00	0.28	0.74	0.00	0.67	0.82	0.00
Avail Cap(c_a), veh/h	150	538	518	787	1554	683	291	2412	739	457	2636	809
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	31.0	28.3	25.2	25.7	18.7	0.0	29.7	17.9	0.0	28.3	16.9	0.0
Incr Delay (d2), s/veh	1.6	1.2	0.2	4.7	0.0	0.0	0.3	0.6	0.0	1.1	1.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	1.9	0.9	4.9	0.2	0.0	0.5	7.4	0.0	2.1	9.4	0.0
LnGrp Delay(d),s/veh	32.6	29.5	25.4	30.4	18.7	0.0	30.0	18.6	0.0	29.4	18.3	0.0
LnGrp LOS	C	C	C	C	B		C	B		C	B	
Approach Vol, veh/h		187			558			1455			1967	
Approach Delay, s/veh		28.7			29.6			19.0			19.6	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.6	31.3	6.3	20.3	10.8	28.2	16.1	10.5
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.6	33.5	5.2	28.3	8.2	30.3	14.5	19.0
Max Q Clear Time (g_c+I1), s	3.0	21.7	2.9	2.5	6.3	17.5	11.6	5.8
Green Ext Time (p_c), s	0.0	5.1	0.0	0.1	0.0	5.3	0.1	0.1

Intersection Summary	
HCM 2010 Ctrl Delay	21.1
HCM 2010 LOS	C

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	525	16	69	671	131	30	57	21	36	31	44
Future Volume (veh/h)	3	525	16	69	671	131	30	57	21	36	31	44
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1845	1900	1900	1845	1900	1900	1863	1900	1900	1827	1900
Adj Flow Rate, veh/h	3	597	18	78	762	149	34	65	24	41	35	50
Adj No. of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	3	3	3	3	3	3	2	2	2	4	4	4
Cap, veh/h	67	1261	38	132	955	180	127	133	43	138	74	82
Arrive On Green	0.71	0.71	0.71	0.71	0.71	0.71	0.13	0.13	0.13	0.13	0.13	0.13
Sat Flow, veh/h	1	1777	53	86	1346	254	339	1050	337	399	586	648
Grp Volume(v), veh/h	618	0	0	989	0	0	123	0	0	126	0	0
Grp Sat Flow(s),veh/h/ln	1832	0	0	1686	0	0	1726	0	0	1633	0	0
Q Serve(g_s), s	0.0	0.0	0.0	8.3	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0
Cycle Q Clear(g_c), s	8.1	0.0	0.0	21.2	0.0	0.0	3.5	0.0	0.0	3.7	0.0	0.0
Prop In Lane	0.00		0.03	0.08		0.15	0.28		0.20	0.33		0.40
Lane Grp Cap(c), veh/h	1366	0	0	1267	0	0	302	0	0	293	0	0
V/C Ratio(X)	0.45	0.00	0.00	0.78	0.00	0.00	0.41	0.00	0.00	0.43	0.00	0.00
Avail Cap(c_a), veh/h	1819	0	0	1674	0	0	644	0	0	613	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	3.5	0.0	0.0	5.2	0.0	0.0	22.4	0.0	0.0	22.5	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.0	0.0	1.8	0.0	0.0	0.9	0.0	0.0	1.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	0.0	0.0	10.2	0.0	0.0	1.8	0.0	0.0	1.9	0.0	0.0
LnGrp Delay(d),s/veh	3.7	0.0	0.0	7.0	0.0	0.0	23.3	0.0	0.0	23.5	0.0	0.0
LnGrp LOS	A			A			C			C		
Approach Vol, veh/h		618			989			123			126	
Approach Delay, s/veh		3.7			7.0			23.3			23.5	
Approach LOS		A			A			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		11.4		43.3		11.4		43.3
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green Setting (Gmax), s		18.5		52.5		18.5		52.5
Max Q Clear Time (g_c+I1), s		5.5		10.1		5.7		23.2
Green Ext Time (p_c), s		1.2		18.7		1.2		15.7

Intersection Summary		
HCM 2010 Ctrl Delay		8.1
HCM 2010 LOS		A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	473	91	115	835	0	17	17	59	7	26	6
Future Volume (veh/h)	8	473	91	115	835	0	17	17	59	7	26	6
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1845	1900	1900	1863	1900	1900	1863	1863	1900	1900	1900
Adj Flow Rate, veh/h	10	563	108	137	994	0	20	20	70	8	31	7
Adj No. of Lanes	0	1	0	0	1	0	0	1	1	0	1	0
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	3	3	3	2	2	2	2	2	2	0	0	0
Cap, veh/h	61	1166	221	185	1157	0	128	87	127	79	106	22
Arrive On Green	0.78	0.78	0.78	0.78	0.78	0.00	0.08	0.08	0.08	0.08	0.08	0.08
Sat Flow, veh/h	8	1488	282	158	1477	0	575	1083	1583	181	1323	270
Grp Volume(v), veh/h	681	0	0	1131	0	0	40	0	70	46	0	0
Grp Sat Flow(s),veh/h/ln	1778	0	0	1635	0	0	1658	0	1583	1774	0	0
Q Serve(g_s), s	0.0	0.0	0.0	20.8	0.0	0.0	0.0	0.0	2.8	0.0	0.0	0.0
Cycle Q Clear(g_c), s	8.7	0.0	0.0	29.9	0.0	0.0	1.3	0.0	2.8	1.5	0.0	0.0
Prop In Lane	0.01		0.16	0.12		0.00	0.50		1.00	0.17		0.15
Lane Grp Cap(c), veh/h	1448	0	0	1342	0	0	215	0	127	206	0	0
V/C Ratio(X)	0.47	0.00	0.00	0.84	0.00	0.00	0.19	0.00	0.55	0.22	0.00	0.00
Avail Cap(c_a), veh/h	1733	0	0	1602	0	0	530	0	444	552	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	2.5	0.0	0.0	4.4	0.0	0.0	28.5	0.0	29.2	28.6	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.0	0.0	3.7	0.0	0.0	0.4	0.0	3.7	0.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.3	0.0	0.0	14.3	0.0	0.0	0.7	0.0	1.4	0.8	0.0	0.0
LnGrp Delay(d),s/veh	2.7	0.0	0.0	8.1	0.0	0.0	28.9	0.0	32.9	29.2	0.0	0.0
LnGrp LOS	A			A			C		C	C		
Approach Vol, veh/h		681			1131			110			46	
Approach Delay, s/veh		2.7			8.1			31.5			29.2	
Approach LOS		A			A			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		9.8		56.2		9.8		56.2
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green Setting (Gmax), s		18.5		62.5		18.5		62.5
Max Q Clear Time (g_c+I1), s		4.8		10.7		3.5		31.9
Green Ext Time (p_c), s		0.5		26.8		0.5		19.7

Intersection Summary		
HCM 2010 Ctrl Delay		8.0
HCM 2010 LOS		A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	65	78	118	277	70	35	122	1344	167	74	1641	149
Future Volume (veh/h)	65	78	118	277	70	35	122	1344	167	74	1641	149
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	0.99		0.98	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1881	1900	1900	1863	1900	1881	1881	1900	1863	1863	1863
Adj Flow Rate, veh/h	83	100	122	355	90	41	156	1723	187	95	2104	122
Adj No. of Lanes	0	1	0	0	1	0	1	3	0	1	3	1
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Percent Heavy Veh, %	1	1	1	2	2	2	1	1	1	2	2	2
Cap, veh/h	216	261	288	415	89	41	143	1829	198	126	1932	596
Arrive On Green	0.42	0.42	0.41	0.42	0.42	0.41	0.08	0.39	0.38	0.07	0.38	0.38
Sat Flow, veh/h	406	622	685	839	213	97	1792	4701	508	1774	5085	1569
Grp Volume(v), veh/h	305	0	0	486	0	0	156	1253	657	95	2104	122
Grp Sat Flow(s),veh/h/ln	1713	0	0	1149	0	0	1792	1712	1786	1774	1695	1569
Q Serve(g_s), s	0.0	0.0	0.0	29.5	0.0	0.0	8.0	35.3	35.5	5.3	38.0	5.2
Cycle Q Clear(g_c), s	12.5	0.0	0.0	42.0	0.0	0.0	8.0	35.3	35.5	5.3	38.0	5.2
Prop In Lane	0.27		0.40	0.73		0.08	1.00		0.28	1.00		1.00
Lane Grp Cap(c), veh/h	765	0	0	545	0	0	143	1332	695	126	1932	596
V/C Ratio(X)	0.40	0.00	0.00	0.89	0.00	0.00	1.09	0.94	0.95	0.76	1.09	0.20
Avail Cap(c_a), veh/h	765	0	0	545	0	0	143	1366	713	126	1932	596
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.5	0.0	0.0	30.6	0.0	0.0	46.0	29.4	29.6	45.6	31.0	20.8
Incr Delay (d2), s/veh	0.1	0.0	0.0	16.4	0.0	0.0	100.8	12.4	20.8	20.5	49.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.0	0.0	0.0	15.8	0.0	0.0	8.0	18.8	21.5	3.3	26.5	2.3
LnGrp Delay(d),s/veh	20.6	0.0	0.0	47.0	0.0	0.0	146.8	41.8	50.4	66.1	80.2	20.9
LnGrp LOS	C			D			F	D	D	E	F	C
Approach Vol, veh/h		305			486			2066			2321	
Approach Delay, s/veh		20.6			47.0			52.5			76.5	
Approach LOS		C			D			D			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	12.0	42.0		46.0	11.1	42.9		46.0
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	7.5	37.5		41.5	5.6	39.4		41.5
Max Q Clear Time (g_c+I1), s	10.0	40.0		44.0	7.3	37.5		14.5
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	0.9		1.4

Intersection Summary		
HCM 2010 Ctrl Delay		60.9
HCM 2010 LOS		E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	633	0	430	0	0	0	221	896	1	0	1416	611
Future Volume (veh/h)	633	0	430	0	0	0	221	896	1	0	1416	611
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1900	1863	1863	1863	1881	1881	1881	1863	1863	1863
Adj Flow Rate, veh/h	703	0	478	0	0	0	246	996	1	0	1573	679
Adj No. of Lanes	1	1	0	1	1	1	1	2	1	1	2	1
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, %	1	1	1	2	2	2	1	1	1	2	2	2
Cap, veh/h	614	0	498	55	581	494	200	2211	988	55	1672	746
Arrive On Green	0.31	0.00	0.31	0.00	0.00	0.00	0.11	0.62	0.62	0.00	0.47	0.47
Sat Flow, veh/h	1790	0	1597	913	1863	1583	1792	3574	1596	563	3539	1580
Grp Volume(v), veh/h	703	0	478	0	0	0	246	996	1	0	1573	679
Grp Sat Flow(s),veh/h/ln	1790	0	1597	913	1863	1583	1792	1787	1596	563	1770	1580
Q Serve(g_s), s	40.5	0.0	38.1	0.0	0.0	0.0	14.5	19.1	0.0	0.0	54.8	51.6
Cycle Q Clear(g_c), s	40.5	0.0	38.1	0.0	0.0	0.0	14.5	19.1	0.0	0.0	54.8	51.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	614	0	498	55	581	494	200	2211	988	55	1672	746
V/C Ratio(X)	1.15	0.00	0.96	0.00	0.00	0.00	1.23	0.45	0.00	0.00	0.94	0.91
Avail Cap(c_a), veh/h	614	0	498	55	581	494	200	2216	990	56	1677	749
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	46.5	0.0	43.8	0.0	0.0	0.0	57.7	13.1	9.4	0.0	32.5	31.7
Incr Delay (d2), s/veh	83.4	0.0	30.1	0.0	0.0	0.0	139.0	0.1	0.0	0.0	11.0	15.1
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	36.1	0.0	21.0	0.0	0.0	0.0	14.8	9.5	0.0	0.0	29.2	25.6
LnGrp Delay(d),s/veh	129.9	0.0	73.9	0.0	0.0	0.0	196.6	13.2	9.4	0.0	43.5	46.8
LnGrp LOS	F		E				F	B	A		D	D
Approach Vol, veh/h		1181			0			1243			2252	
Approach Delay, s/veh		107.3			0.0			49.5			44.5	
Approach LOS		F						D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		8
Phs Duration (G+Y+Rc), s		84.8		45.0	19.0	65.8		45.0
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s		80.5		40.5	14.5	61.5		40.5
Max Q Clear Time (g_c+I1), s		21.1		42.5	16.5	56.8		0.0
Green Ext Time (p_c), s		44.0		0.0	0.0	4.5		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	61.7
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	157	329	839	92	502	89	1267	805	25	43	741	119
Future Volume (veh/h)	157	329	839	92	502	89	1267	805	25	43	741	119
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1881	1900	1900	1900	1881	1881	1900	1900	1900	1900
Adj Flow Rate, veh/h	164	343	0	96	523	91	1320	839	25	45	772	124
Adj No. of Lanes	2	1	1	2	2	0	3	2	0	1	2	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	1	1	1	0	0	0	1	1	1	0	0	0
Cap, veh/h	219	396	337	158	592	103	1437	1797	54	57	918	512
Arrive On Green	0.06	0.21	0.00	0.04	0.19	0.19	0.28	0.51	0.51	0.03	0.25	0.25
Sat Flow, veh/h	3476	1881	1599	3510	3078	533	5052	3544	106	1810	3610	1615
Grp Volume(v), veh/h	164	343	0	96	306	308	1320	423	441	45	772	124
Grp Sat Flow(s),veh/h/ln	1738	1881	1599	1755	1805	1806	1684	1787	1863	1810	1805	1615
Q Serve(g_s), s	4.1	15.4	0.0	2.3	14.4	14.5	22.1	13.4	13.4	2.2	17.7	5.0
Cycle Q Clear(g_c), s	4.1	15.4	0.0	2.3	14.4	14.5	22.1	13.4	13.4	2.2	17.7	5.0
Prop In Lane	1.00		1.00	1.00		0.30	1.00		0.06	1.00		1.00
Lane Grp Cap(c), veh/h	219	396	337	158	347	348	1437	906	945	57	918	512
V/C Ratio(X)	0.75	0.87	0.00	0.61	0.88	0.89	0.92	0.47	0.47	0.79	0.84	0.24
Avail Cap(c_a), veh/h	219	398	338	161	351	351	1473	906	945	132	991	545
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.3	33.3	0.0	41.0	34.3	34.4	30.3	13.9	13.9	42.1	30.9	22.1
Incr Delay (d2), s/veh	13.4	18.0	0.0	4.5	21.9	22.8	9.3	0.8	0.8	8.5	6.4	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	2.4	10.0	0.0	1.2	9.3	9.5	11.5	6.8	7.1	1.2	9.6	2.2
LnGrp Delay(d),s/veh	53.8	51.4	0.0	45.5	56.3	57.2	39.6	14.7	14.7	50.5	37.3	22.4
LnGrp LOS	D	D		D	E	E	D	B	B	D	D	C
Approach Vol, veh/h		507			710			2184			941	
Approach Delay, s/veh		52.1			55.2			29.8			36.0	
Approach LOS		D			E			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	29.4	26.8	10.0	21.3	7.3	48.9	8.4	22.9
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	25.5	24.0	5.5	17.0	6.4	43.1	4.0	18.5
Max Q Clear Time (g_c+I1), s	24.1	19.7	6.1	16.5	4.2	15.4	4.3	17.4
Green Ext Time (p_c), s	0.7	2.5	0.0	0.3	0.0	18.9	0.0	0.7

Intersection Summary	
HCM 2010 Ctrl Delay	37.9
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	18	12	27	222	42	466	57	1599	449	163	1438	46
Future Volume (veh/h)	18	12	27	222	42	466	57	1599	449	163	1438	46
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1776	1776	1776	1881	1881	1881	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	20	13	-1	249	47	0	64	1797	0	183	1616	0
Adj No. of Lanes	1	1	1	2	2	1	2	3	1	2	3	1
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	7	7	7	1	1	1	2	2	2	2	2	2
Cap, veh/h	40	129	192	352	537	240	189	2253	701	279	2387	743
Arrive On Green	0.02	0.07	0.00	0.10	0.15	0.00	0.05	0.44	0.00	0.08	0.47	0.00
Sat Flow, veh/h	1691	1776	1509	3476	3574	1599	3442	5085	1583	3442	5085	1583
Grp Volume(v), veh/h	20	13	-1	249	47	0	64	1797	0	183	1616	0
Grp Sat Flow(s),veh/h/ln	1691	1776	1509	1738	1787	1599	1721	1695	1583	1721	1695	1583
Q Serve(g_s), s	0.7	0.4	0.0	4.1	0.7	0.0	1.1	18.1	0.0	3.1	14.7	0.0
Cycle Q Clear(g_c), s	0.7	0.4	0.0	4.1	0.7	0.0	1.1	18.1	0.0	3.1	14.7	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	40	129	192	352	537	240	189	2253	701	279	2387	743
V/C Ratio(X)	0.50	0.10	-0.01	0.71	0.09	0.00	0.34	0.80	0.00	0.66	0.68	0.00
Avail Cap(c_a), veh/h	156	715	690	437	1559	697	289	2960	922	335	3028	943
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	28.8	25.8	0.0	25.9	21.8	0.0	27.1	14.3	0.0	26.6	12.3	0.0
Incr Delay (d2), s/veh	3.5	0.1	0.0	2.5	0.0	0.0	0.4	0.9	0.0	2.0	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.2	0.0	2.1	0.3	0.0	0.5	8.5	0.0	1.5	6.9	0.0
LnGrp Delay(d),s/veh	32.3	26.0	0.0	28.4	21.8	0.0	27.5	15.2	0.0	28.6	12.5	0.0
LnGrp LOS	C	C		C	C		C	B		C	B	
Approach Vol, veh/h		32			296			1861			1799	
Approach Delay, s/veh		30.7			27.4			15.6			14.2	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.8	32.5	5.9	13.5	9.3	30.9	10.5	8.8
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.8	35.5	5.5	26.0	5.8	34.7	7.5	24.0
Max Q Clear Time (g_c+I1), s	3.1	16.7	2.7	2.7	5.1	20.1	6.1	2.4
Green Ext Time (p_c), s	0.0	6.9	0.0	0.1	0.0	6.3	0.0	0.1

Intersection Summary	
HCM 2010 Ctrl Delay	15.9
HCM 2010 LOS	B

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (veh/h)	3	590	39	81	593	149	12	53	38	15	49	49
Future Volume (veh/h)	3	590	39	81	593	149	12	53	38	15	49	49
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1881	1900	1900	1900	1900	1900	1810	1900
Adj Flow Rate, veh/h	3	648	43	89	652	164	13	58	42	16	54	54
Adj No. of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	1	1	1	0	0	0	5	5	5
Cap, veh/h	74	1184	78	153	864	207	96	131	86	98	106	94
Arrive On Green	0.69	0.69	0.69	0.69	0.69	0.69	0.13	0.13	0.13	0.13	0.13	0.13
Sat Flow, veh/h	1	1725	114	107	1259	302	111	990	651	122	802	713
Grp Volume(v), veh/h	694	0	0	905	0	0	113	0	0	124	0	0
Grp Sat Flow(s),veh/h/ln	1840	0	0	1668	0	0	1752	0	0	1637	0	0
Q Serve(g_s), s	0.0	0.0	0.0	6.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0
Cycle Q Clear(g_c), s	9.4	0.0	0.0	16.8	0.0	0.0	2.9	0.0	0.0	3.4	0.0	0.0
Prop In Lane	0.00		0.06	0.10		0.18	0.12		0.37	0.13		0.44
Lane Grp Cap(c), veh/h	1336	0	0	1224	0	0	313	0	0	298	0	0
V/C Ratio(X)	0.52	0.00	0.00	0.74	0.00	0.00	0.36	0.00	0.00	0.42	0.00	0.00
Avail Cap(c_a), veh/h	1832	0	0	1658	0	0	722	0	0	683	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	3.9	0.0	0.0	4.9	0.0	0.0	19.9	0.0	0.0	20.2	0.0	0.0
Incr Delay (d2), s/veh	0.3	0.0	0.0	1.2	0.0	0.0	0.7	0.0	0.0	0.9	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.7	0.0	0.0	8.2	0.0	0.0	1.5	0.0	0.0	1.7	0.0	0.0
LnGrp Delay(d),s/veh	4.2	0.0	0.0	6.1	0.0	0.0	20.6	0.0	0.0	21.1	0.0	0.0
LnGrp LOS	A			A			C			C		
Approach Vol, veh/h		694			905			113			124	
Approach Delay, s/veh		4.2			6.1			20.6			21.1	
Approach LOS		A			A			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		11.1		38.5		11.1		38.5
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green Setting (Gmax), s		18.5		47.5		18.5		47.5
Max Q Clear Time (g_c+I1), s		4.9		11.4		5.4		18.8
Green Ext Time (p_c), s		1.1		17.1		1.1		15.2

Intersection Summary	
HCM 2010 Ctrl Delay	7.3
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	595	8	61	763	2	65	39	96	0	17	6
Future Volume (veh/h)	10	595	8	61	763	2	65	39	96	0	17	6
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	0.99		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1881	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	11	669	9	69	857	2	73	44	108	0	19	7
Adj No. of Lanes	0	1	0	0	1	0	0	1	1	0	1	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	1	1	1	0	0	0	0	0	0
Cap, veh/h	84	1219	16	135	1135	3	241	98	216	0	178	66
Arrive On Green	0.67	0.67	0.67	0.67	0.67	0.67	0.13	0.13	0.13	0.00	0.13	0.13
Sat Flow, veh/h	8	1810	24	78	1686	4	861	729	1603	0	1322	487
Grp Volume(v), veh/h	689	0	0	928	0	0	117	0	108	0	0	26
Grp Sat Flow(s),veh/h/ln	1843	0	0	1767	0	0	1590	0	1603	0	0	1810
Q Serve(g_s), s	0.0	0.0	0.0	3.5	0.0	0.0	2.4	0.0	2.9	0.0	0.0	0.6
Cycle Q Clear(g_c), s	9.0	0.0	0.0	15.6	0.0	0.0	3.1	0.0	2.9	0.0	0.0	0.6
Prop In Lane	0.02		0.01	0.07		0.00	0.62		1.00	0.00		0.27
Lane Grp Cap(c), veh/h	1319	0	0	1273	0	0	339	0	216	0	0	244
V/C Ratio(X)	0.52	0.00	0.00	0.73	0.00	0.00	0.35	0.00	0.50	0.00	0.00	0.11
Avail Cap(c_a), veh/h	1738	0	0	1666	0	0	741	0	632	0	0	713
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	4.0	0.0	0.0	5.0	0.0	0.0	18.9	0.0	18.8	0.0	0.0	17.8
Incr Delay (d2), s/veh	0.3	0.0	0.0	1.2	0.0	0.0	0.6	0.0	1.8	0.0	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.5	0.0	0.0	7.9	0.0	0.0	1.5	0.0	1.4	0.0	0.0	0.3
LnGrp Delay(d),s/veh	4.3	0.0	0.0	6.1	0.0	0.0	19.5	0.0	20.6	0.0	0.0	18.0
LnGrp LOS	A			A			B		C			B
Approach Vol, veh/h		689			928			225			26	
Approach Delay, s/veh		4.3			6.1			20.0			18.0	
Approach LOS		A			A			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		10.8		36.1		10.8		36.1
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green Setting (Gmax), s		18.5		42.5		18.5		42.5
Max Q Clear Time (g_c+I1), s		5.1		11.0		2.6		17.6
Green Ext Time (p_c), s		0.9		15.9		0.9		14.0

Intersection Summary	
HCM 2010 Ctrl Delay	7.3
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	27	33	153	28	6	49	1914	219	31	1620	45
Future Volume (veh/h)	45	27	33	153	28	6	49	1914	219	31	1620	45
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1881	1900	1881	1881	1900	1900	1900	1900
Adj Flow Rate, veh/h	49	29	11	166	30	4	53	2080	215	34	1761	-10
Adj No. of Lanes	0	1	0	0	1	0	1	3	0	1	3	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	1	1	1	1	1	1	0	0	0
Cap, veh/h	254	132	39	359	46	6	245	2394	245	68	2108	656
Arrive On Green	0.19	0.18	0.18	0.19	0.18	0.18	0.14	0.51	0.51	0.04	0.41	0.00
Sat Flow, veh/h	767	720	210	1232	250	30	1792	4735	484	1810	5187	1615
Grp Volume(v), veh/h	89	0	0	200	0	0	53	1498	797	34	1761	-10
Grp Sat Flow(s),veh/h/ln	1697	0	0	1512	0	0	1792	1712	1795	1810	1729	1615
Q Serve(g_s), s	0.0	0.0	0.0	3.8	0.0	0.0	1.3	19.0	19.5	0.9	15.1	0.0
Cycle Q Clear(g_c), s	2.1	0.0	0.0	5.9	0.0	0.0	1.3	19.0	19.5	0.9	15.1	0.0
Prop In Lane	0.55		0.12	0.83		0.02	1.00		0.27	1.00		1.00
Lane Grp Cap(c), veh/h	442	0	0	426	0	0	245	1731	908	68	2108	656
V/C Ratio(X)	0.20	0.00	0.00	0.47	0.00	0.00	0.22	0.87	0.88	0.50	0.84	-0.02
Avail Cap(c_a), veh/h	1179	0	0	1120	0	0	245	2660	1395	187	4030	1255
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	17.2	0.0	0.0	18.5	0.0	0.0	19.0	10.7	10.9	23.3	13.2	0.0
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.3	0.0	0.0	0.2	1.3	2.9	2.1	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.0	0.0	2.5	0.0	0.0	0.6	9.0	10.2	0.5	7.1	0.0
LnGrp Delay(d),s/veh	17.3	0.0	0.0	18.8	0.0	0.0	19.1	12.0	13.7	25.4	13.5	0.0
LnGrp LOS	B			B			B	B	B	C	B	
Approach Vol, veh/h		89			200			2348			1785	
Approach Delay, s/veh		17.3			18.8			12.8			13.8	
Approach LOS		B			B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	11.3	24.6		13.6	6.4	29.5		13.6
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	5.1	38.4		33.0	5.1	38.4		33.0
Max Q Clear Time (g_c+I1), s	13.3	17.1		7.9	2.9	21.5		4.1
Green Ext Time (p_c), s	0.0	3.0		0.3	0.0	3.5		0.4

Intersection Summary	
HCM 2010 Ctrl Delay	13.6
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	673	0	97	0	0	0	153	1555	0	0	1007	756
Future Volume (veh/h)	673	0	97	0	0	0	153	1555	0	0	1007	756
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1900	1900	1900	1900	1881	1881	1900	1900	1881	1881
Adj Flow Rate, veh/h	756	0	109	0	0	0	172	1747	0	0	1131	849
Adj No. of Lanes	1	1	0	1	1	1	1	2	1	1	2	1
Peak Hour Factor	0.89	0.25	0.89	0.25	0.25	0.25	0.89	0.89	0.25	0.25	0.89	0.89
Percent Heavy Veh, %	1	0	0	0	0	0	1	1	0	0	1	1
Cap, veh/h	654	0	516	72	618	525	152	2091	945	72	1626	724
Arrive On Green	0.32	0.00	0.32	0.00	0.00	0.00	0.09	0.58	0.00	0.00	0.46	0.46
Sat Flow, veh/h	1792	0	1587	1305	1900	1615	1792	3574	1615	280	3574	1590
Grp Volume(v), veh/h	756	0	109	0	0	0	172	1747	0	0	1131	849
Grp Sat Flow(s),veh/h/ln	1792	0	1587	1305	1900	1615	1792	1787	1615	280	1787	1590
Q Serve(g_s), s	32.5	0.0	5.0	0.0	0.0	0.0	8.5	39.7	0.0	0.0	25.2	45.5
Cycle Q Clear(g_c), s	32.5	0.0	5.0	0.0	0.0	0.0	8.5	39.7	0.0	0.0	25.2	45.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	654	0	516	72	618	525	152	2091	945	72	1626	724
V/C Ratio(X)	1.16	0.00	0.21	0.00	0.00	0.00	1.13	0.84	0.00	0.00	0.70	1.17
Avail Cap(c_a), veh/h	654	0	516	72	618	525	152	2091	945	72	1626	724
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	35.5	0.0	24.5	0.0	0.0	0.0	45.8	16.8	0.0	0.0	21.7	27.3
Incr Delay (d2), s/veh	86.5	0.0	0.2	0.0	0.0	0.0	111.9	3.1	0.0	0.0	1.3	92.3
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	33.7	0.0	2.2	0.0	0.0	0.0	8.9	20.3	0.0	0.0	12.7	38.4
LnGrp Delay(d),s/veh	122.0	0.0	24.7	0.0	0.0	0.0	157.7	20.0	0.0	0.0	23.0	119.5
LnGrp LOS	F		C				F	B			C	F
Approach Vol, veh/h		865			0			1919			1980	
Approach Delay, s/veh		109.8			0.0			32.3			64.4	
Approach LOS		F						C			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		8
Phs Duration (G+Y+Rc), s		63.0		37.0	13.0	50.0		37.0
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s		58.5		32.5	8.5	45.5		32.5
Max Q Clear Time (g_c+I1), s		41.7		34.5	10.5	47.5		0.0
Green Ext Time (p_c), s		15.9		0.0	0.0	0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	59.7
HCM 2010 LOS	E

Appendix H:
Freeway Segment LOS Calculations

Existing Freeway Operation LOS

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	Campus Town Specific Plan
Freeway	Northbound State Route 1
Segment	SR 1 between Lightfighter Drive and Del Monte Boulevard
Alternative	Existing
Time period	AM Peak Hour

Flow Inputs and Adjustments

Volume, V	2,708	vph
Peak-hour factor, PHF	0.93	
Peak 15-min volume, v_{15}	725	veh
Trucks and buses	3.8%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.982	
Driver popoulation factor, f_p	1.00	
Flow rate, v_p	2,955	pcph
Number of lanes, N	3	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	1.17	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	3.7	mph
Calculated free-flow speed, FFS	71.7	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	Actual		Maximum		Violation?
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	985	pcphpl
Average passenger-car speed, S	65.0	mph
Volume-to-capacity ratio, v/c	0.42	
Density, D	15.2	pcpmpl
Level of service, LOS	B	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	Campus Town Specific Plan
Freeway	Northbound State Route 1
Segment	SR 1 between Del Monte Boulevard and Canyon Del Rey Boulevard
Alternative	Existing
Time period	AM Peak Hour

Flow Inputs and Adjustments

Volume, V	2,355	vph
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v_{15}	643	veh
Trucks and buses	3.2%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.984	
Driver popoulation factor, f_p	1.00	
Flow rate, v_p	2,613	pcph
Number of lanes, N	2	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	2.00	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	5.8	mph
Calculated free-flow speed, FFS	69.6	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	Actual		Maximum		Violation?
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	1,307	pcphpl
Average passenger-car speed, S	65.0	mph
Volume-to-capacity ratio, v/c	0.56	
Density, D	20.1	pcpmpl
Level of service, LOS	C	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	Campus Town Specific Plan
Freeway	Northbound State Route 1
Segment	SR 1 between Lightfighter Drive and Del Monte Boulevard
Alternative	Existing With Project
Time period	AM Peak Hour

Flow Inputs and Adjustments

Volume, V	2,747	vph
Peak-hour factor, PHF	0.93	
Peak 15-min volume, v_{15}	735	veh
Trucks and buses	3.8%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.982	
Driver popoulation factor, f_p	1.00	
Flow rate, v_p	2,997	pcph
Number of lanes, N	3	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	1.17	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	3.7	mph
Calculated free-flow speed, FFS	71.7	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	Actual		Maximum		Violation?
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	999	pcphpl
Average passenger-car speed, S	65.0	mph
Volume-to-capacity ratio, v/c	0.43	
Density, D	15.4	pcpmpl
Level of service, LOS	B	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	Campus Town Specific Plan
Freeway	Northbound State Route 1
Segment	SR 1 between Del Monte Boulevard and Canyon Del Rey Boulevard
Alternative	Existing With Project
Time period	AM Peak Hour

Flow Inputs and Adjustments

Volume, V	2,394	vph
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v_{15}	654	veh
Trucks and buses	3.2%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.984	
Driver popoulation factor, f_p	1.00	
Flow rate, v_p	2,657	pcph
Number of lanes, N	2	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	2.00	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	5.8	mph
Calculated free-flow speed, FFS	69.6	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	Actual		Maximum		Violation?
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	1,328	pcphpl
Average passenger-car speed, S	65.0	mph
Volume-to-capacity ratio, v/c	0.57	
Density, D	20.4	pcpmpl
Level of service, LOS	C	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	Campus Town Specific Plan
Freeway	Northbound State Route 1
Segment	SR 1 between Lightfighter Drive and Del Monte Boulevard
Alternative	Existing
Time period	PM Peak Hour

Flow Inputs and Adjustments

Volume, V	4,728	vph
Peak-hour factor, PHF	0.98	
Peak 15-min volume, v_{15}	1,206	veh
Trucks and buses	1.9%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.991	
Driver popoulation factor, f_p	1.00	
Flow rate, v_p	4,870	pcph
Number of lanes, N	3	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	1.17	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	3.7	mph
Calculated free-flow speed, FFS	71.7	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	Actual		Maximum		Violation?
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	1,623	pcphpl
Average passenger-car speed, S	64.3	mph
Volume-to-capacity ratio, v/c	0.69	
Density, D	25.2	pcpmpl
Level of service, LOS	C	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	Campus Town Specific Plan
Freeway	Northbound State Route 1
Segment	SR 1 between Del Monte Boulevard and Canyon Del Rey Boulevard
Alternative	Existing
Time period	PM Peak Hour

Flow Inputs and Adjustments

Volume, V	3,745	vph
Peak-hour factor, PHF	0.97	
Peak 15-min volume, v_{15}	965	veh
Trucks and buses	2.0%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.990	
Driver popoulation factor, f_p	1.00	
Flow rate, v_p	3,900	pcph
Number of lanes, N	2	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	2.00	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	5.8	mph
Calculated free-flow speed, FFS	69.6	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	Actual		Maximum		Violation?
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	1,950	pcphpl
Average passenger-car speed, S	60.7	mph
Volume-to-capacity ratio, v/c	0.83	
Density, D	32.1	pcpmpl
Level of service, LOS	D	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	Campus Town Specific Plan
Freeway	Northbound State Route 1
Segment	SR 1 between Lightfighter Drive and Del Monte Boulevard
Alternative	Existing_WithProject
Time period	PM Peak Hour

Flow Inputs and Adjustments

Volume, V	4,816	vph
Peak-hour factor, PHF	0.98	
Peak 15-min volume, v_{15}	1,229	veh
Trucks and buses	1.9%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.991	
Driver popoulation factor, f_p	1.00	
Flow rate, v_p	4,960	pcph
Number of lanes, N	3	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	1.17	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	3.7	mph
Calculated free-flow speed, FFS	71.7	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	Actual		Maximum		Violation?
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	1,653	pcphpl
Average passenger-car speed, S	64.1	mph
Volume-to-capacity ratio, v/c	0.70	
Density, D	25.8	pcpmpl
Level of service, LOS	C	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	Campus Town Specific Plan
Freeway	Northbound State Route 1
Segment	SR 1 between Del Monte Boulevard and Canyon Del Rey Boulevard
Alternative	Existing_WithProject
Time period	PM Peak Hour

Flow Inputs and Adjustments

Volume, V	3,833	vph
Peak-hour factor, PHF	0.97	
Peak 15-min volume, v_{15}	988	veh
Trucks and buses	2.0%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.990	
Driver popoulation factor, f_p	1.00	
Flow rate, v_p	3,992	pcph
Number of lanes, N	2	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	2.00	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	5.8	mph
Calculated free-flow speed, FFS	69.6	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	Actual		Maximum		Violation?
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	1,996	pcphpl
Average passenger-car speed, S	60.0	mph
Volume-to-capacity ratio, v/c	0.85	
Density, D	33.3	pcpmpl
Level of service, LOS	D	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	Campus Town Specific Plan
Freeway	Southbound State Route 1
Segment	SR 1 between Lightfighter Drive and Del Monte Boulevard
Alternative	Existing
Time period	AM Peak Hour

Flow Inputs and Adjustments

Volume, V	4,778	vph
Peak-hour factor, PHF	0.86	
Peak 15-min volume, v_{15}	1,389	veh
Trucks and buses	3.2%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.984	
Driver popoulation factor, f_p	1.00	
Flow rate, v_p	5,645	pcph
Number of lanes, N	3	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	1.33	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	4.1	mph
Calculated free-flow speed, FFS	71.3	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	Actual		Maximum		Violation?
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	1,882	pcphpl
Average passenger-car speed, S	61.7	mph
Volume-to-capacity ratio, v/c	0.80	
Density, D	30.5	pcpmpl
Level of service, LOS	D	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	Campus Town Specific Plan
Freeway	Southbound State Route 1
Segment	SR 1 between Del Monte Boulevard and Canyon Del Rey Boulevard
Alternative	Existing
Time period	AM Peak Hour

Flow Inputs and Adjustments

Volume, V	3,843	vph
Peak-hour factor, PHF	0.95	
Peak 15-min volume, v_{15}	1,011	veh
Trucks and buses	2.4%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.988	
Driver popoulation factor, f_p	1.00	
Flow rate, v_p	4,095	pcph
Number of lanes, N	2	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	5.0	ft
Total ramp density, TRD	2.17	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.6	mph
TRD adjustment	6.2	mph
Calculated free-flow speed, FFS	68.6	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	Actual		Maximum		Violation?
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	2,047	pcphpl
Average passenger-car speed, S	59.1	mph
Volume-to-capacity ratio, v/c	0.87	
Density, D	34.7	pcpmpl
Level of service, LOS	D	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	Seaside Specific Plan
Freeway	Southbound State Route 1
Segment	SR 1 between Lightfighter Drive and Del Monte Boulevard
Alternative	Existing With Project
Time period	AM Peak Hour

Flow Inputs and Adjustments

Volume, V	4,848	vph
Peak-hour factor, PHF	0.86	
Peak 15-min volume, v_{15}	1,409	veh
Trucks and buses	3.2%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.984	
Driver popoulation factor, f_p	1.00	
Flow rate, v_p	5,727	pcph
Number of lanes, N	3	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	1.33	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	4.1	mph
Calculated free-flow speed, FFS	71.3	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	Actual		Maximum		Violation?
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	1,909	pcphpl
Average passenger-car speed, S	61.3	mph
Volume-to-capacity ratio, v/c	0.81	
Density, D	31.1	pcpmpl
Level of service, LOS	D	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	Seaside Specific Plan
Freeway	Southbound State Route 1
Segment	SR 1 between Del Monte Boulevard and Canyon Del Rey Boulevard
Alternative	Existing With Project
Time period	AM Peak Hour

Flow Inputs and Adjustments

Volume, V	3,913	vph
Peak-hour factor, PHF	0.95	
Peak 15-min volume, v_{15}	1,030	veh
Trucks and buses	2.4%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.988	
Driver popoulation factor, f_p	1.00	
Flow rate, v_p	4,169	pcph
Number of lanes, N	2	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	5.0	ft
Total ramp density, TRD	2.17	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.6	mph
TRD adjustment	6.2	mph
Calculated free-flow speed, FFS	68.6	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	Actual		Maximum		Violation?
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	2,085	pcphpl
Average passenger-car speed, S	58.4	mph
Volume-to-capacity ratio, v/c	0.89	
Density, D	35.7	pcpmpl
Level of service, LOS	E	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	Campus Town Specific Plan
Freeway	Southbound State Route 1
Segment	SR 1 between Lightfighter Drive and Del Monte Boulevard
Alternative	Existing
Time period	PM Peak Hour

Flow Inputs and Adjustments

Volume, V	3,177	vph
Peak-hour factor, PHF	0.97	
Peak 15-min volume, v_{15}	819	veh
Trucks and buses	1.1%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.994	
Driver popoulation factor, f_p	1.00	
Flow rate, v_p	3,294	pcph
Number of lanes, N	3	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	1.33	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	4.1	mph
Calculated free-flow speed, FFS	71.3	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	Actual		Maximum		Violation?
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	1,098	pcphpl
Average passenger-car speed, S	65.0	mph
Volume-to-capacity ratio, v/c	0.47	
Density, D	16.9	pcpmpl
Level of service, LOS	B	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	Campus Town Specific Plan
Freeway	Southbound State Route 1
Segment	SR 1 between Del Monte Boulevard and Canyon Del Rey Boulevard
Alternative	Existing
Time period	PM Peak Hour

Flow Inputs and Adjustments

Volume, V	2,629	vph
Peak-hour factor, PHF	0.96	
Peak 15-min volume, v_{15}	685	veh
Trucks and buses	1.0%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.995	
Driver popoulation factor, f_p	1.00	
Flow rate, v_p	2,752	pcph
Number of lanes, N	2	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	5.0	ft
Total ramp density, TRD	2.17	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.6	mph
TRD adjustment	6.2	mph
Calculated free-flow speed, FFS	68.6	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	Actual		Maximum		Violation?
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	1,376	pcphpl
Average passenger-car speed, S	65.0	mph
Volume-to-capacity ratio, v/c	0.59	
Density, D	21.2	pcpmpl
Level of service, LOS	C	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	Campus Town Specific Plan
Freeway	Southbound State Route 1
Segment	SR 1 between Lightfighter Drive and Del Monte Boulevard
Alternative	Existing With Project
Time period	PM Peak Hour

Flow Inputs and Adjustments

Volume, V	3,246	vph
Peak-hour factor, PHF	0.97	
Peak 15-min volume, v_{15}	837	veh
Trucks and buses	1.1%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.994	
Driver popoulation factor, f_p	1.00	
Flow rate, v_p	3,365	pcph
Number of lanes, N	3	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	1.33	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	4.1	mph
Calculated free-flow speed, FFS	71.3	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	Actual		Maximum		Violation?
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	1,122	pcphpl
Average passenger-car speed, S	65.0	mph
Volume-to-capacity ratio, v/c	0.48	
Density, D	17.3	pcpmpl
Level of service, LOS	B	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	Campus Town Specific Plan
Freeway	Southbound State Route 1
Segment	SR 1 between Del Monte Boulevard and Canyon Del Rey Boulevard
Alternative	Existing With Project
Time period	PM Peak Hour

Flow Inputs and Adjustments

Volume, V	2,698	vph
Peak-hour factor, PHF	0.96	
Peak 15-min volume, v_{15}	703	veh
Trucks and buses	1.0%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.995	
Driver popoulation factor, f_p	1.00	
Flow rate, v_p	2,824	pcph
Number of lanes, N	2	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	5.0	ft
Total ramp density, TRD	2.17	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.6	mph
TRD adjustment	6.2	mph
Calculated free-flow speed, FFS	68.6	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	Actual		Maximum		Violation?
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	1,412	pcphpl
Average passenger-car speed, S	65.0	mph
Volume-to-capacity ratio, v/c	0.60	
Density, D	21.7	pcpmpl
Level of service, LOS	C	

Cumulative Freeway Operation LOS

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	Campus Town Specific Plan
Freeway	Northbound State Route 1
Segment	SR 1 between Lightfighter Drive and Del Monte Boulevard
Alternative	Cumulative No Project
Time period	AM Peak Hour

Flow Inputs and Adjustments

Volume, V	4,108	vph
Peak-hour factor, PHF	0.93	
Peak 15-min volume, v_{15}	1,100	veh
Trucks and buses	3.8%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.982	
Driver popoulation factor, f_p	1.00	
Flow rate, v_p	4,482	pcph
Number of lanes, N	3	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	1.17	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	3.7	mph
Calculated free-flow speed, FFS	71.7	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	Actual		Maximum		Violation?
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	1,494	pcphpl
Average passenger-car speed, S	64.9	mph
Volume-to-capacity ratio, v/c	0.64	
Density, D	23.0	pcpmpl
Level of service, LOS	C	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	Campus Town Specific Plan
Freeway	Northbound State Route 1
Segment	SR 1 between Del Monte Boulevard and Canyon Del Rey Boulevard
Alternative	Cumulative No Project
Time period	AM Peak Hour

Flow Inputs and Adjustments

Volume, V	3,802	vph
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v_{15}	1,038	veh
Trucks and buses	3.2%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.984	
Driver popoulation factor, f_p	1.00	
Flow rate, v_p	4,219	pcph
Number of lanes, N	2	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	2.00	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	5.8	mph
Calculated free-flow speed, FFS	69.6	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	Actual		Maximum		Violation?
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	2,110	pcphpl
Average passenger-car speed, S	57.9	mph
Volume-to-capacity ratio, v/c	0.90	
Density, D	36.5	pcpmpl
Level of service, LOS	E	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	Campus Town Specific Plan
Freeway	Northbound State Route 1
Segment	SR 1 between Lightfighter Drive and Del Monte Boulevard
Alternative	Cumulative With Project
Time period	AM Peak Hour

Flow Inputs and Adjustments

Volume, V	4,147	vph
Peak-hour factor, PHF	0.93	
Peak 15-min volume, v_{15}	1,110	veh
Trucks and buses	3.8%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.982	
Driver popoulation factor, f_p	1.00	
Flow rate, v_p	4,525	pcph
Number of lanes, N	3	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	1.17	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	3.7	mph
Calculated free-flow speed, FFS	71.7	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	Actual		Maximum		Violation?
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	1,508	pcphpl
Average passenger-car speed, S	64.8	mph
Volume-to-capacity ratio, v/c	0.64	
Density, D	23.3	pcpmpl
Level of service, LOS	C	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	Campus Town Specific Plan
Freeway	Northbound State Route 1
Segment	SR 1 between Del Monte Boulevard and Canyon Del Rey Boulevard
Alternative	Cumulative With Project
Time period	AM Peak Hour

Flow Inputs and Adjustments

Volume, V	3,841	vph
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v_{15}	1,049	veh
Trucks and buses	3.2%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.984	
Driver popoulation factor, f_p	1.00	
Flow rate, v_p	4,262	pcph
Number of lanes, N	2	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	2.00	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	5.8	mph
Calculated free-flow speed, FFS	69.6	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	Actual		Maximum		Violation?
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	2,131	pcphpl
Average passenger-car speed, S	57.4	mph
Volume-to-capacity ratio, v/c	0.91	
Density, D	37.1	pcpmpl
Level of service, LOS	E	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	Campus Town Specific Plan
Freeway	Northbound State Route 1
Segment	SR 1 between Lightfighter Drive and Del Monte Boulevard
Alternative	Cumulative No Project
Time period	PM Peak Hour

Flow Inputs and Adjustments

Volume, V	6,236	vph
Peak-hour factor, PHF	0.98	
Peak 15-min volume, v_{15}	1,591	veh
Trucks and buses	1.9%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.991	
Driver popoulation factor, f_p	1.00	
Flow rate, v_p	6,423	pcph
Number of lanes, N	3	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	1.17	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	3.7	mph
Calculated free-flow speed, FFS	71.7	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	Actual		Maximum		Violation?
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	2,141	pcphpl
Average passenger-car speed, S	57.2	mph
Volume-to-capacity ratio, v/c	0.91	
Density, D	37.4	pcpmpl
Level of service, LOS	E	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	Campus Town Specific Plan
Freeway	Northbound State Route 1
Segment	SR 1 between Del Monte Boulevard and Canyon Del Rey Boulevard
Alternative	Cumulative No Project
Time period	PM Peak Hour

Flow Inputs and Adjustments

Volume, V	5,335	vph
Peak-hour factor, PHF	0.97	
Peak 15-min volume, v_{15}	1,375	veh
Trucks and buses	2.0%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.990	
Driver popoulation factor, f_p	1.00	
Flow rate, v_p	5,556	pcph
Number of lanes, N	2	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	2.00	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	5.8	mph
Calculated free-flow speed, FFS	69.6	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	Actual		Maximum		Violation?
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	2,778	pcphpl
Average passenger-car speed, S	-	mph
Volume-to-capacity ratio, v/c	1.18	
Density, D	-	pcpmpl
Level of service, LOS	F	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	Campus Town Specific Plan
Freeway	Northbound State Route 1
Segment	SR 1 between Lightfighter Drive and Del Monte Boulevard
Alternative	Cumulative With Project
Time period	PM Peak Hour

Flow Inputs and Adjustments

Volume, V	6,324	vph
Peak-hour factor, PHF	0.98	
Peak 15-min volume, v_{15}	1,613	veh
Trucks and buses	1.9%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.991	
Driver popoulation factor, f_p	1.00	
Flow rate, v_p	6,514	pcph
Number of lanes, N	3	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	1.17	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	3.7	mph
Calculated free-flow speed, FFS	71.7	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	Actual		Maximum		Violation?
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	2,171	pcphpl
Average passenger-car speed, S	56.6	mph
Volume-to-capacity ratio, v/c	0.92	
Density, D	38.4	pcpmpl
Level of service, LOS	E	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	Campus Town Specific Plan
Freeway	Northbound State Route 1
Segment	SR 1 between Del Monte Boulevard and Canyon Del Rey Boulevard
Alternative	Cumulative With Project
Time period	PM Peak Hour

Flow Inputs and Adjustments

Volume, V	5,422	vph
Peak-hour factor, PHF	0.97	
Peak 15-min volume, v_{15}	1,397	veh
Trucks and buses	2.0%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.990	
Driver popoulation factor, f_p	1.00	
Flow rate, v_p	5,646	pcph
Number of lanes, N	2	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	2.00	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	5.8	mph
Calculated free-flow speed, FFS	69.6	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	Actual		Maximum		Violation?
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	2,823	pcphpl
Average passenger-car speed, S	-	mph
Volume-to-capacity ratio, v/c	1.20	
Density, D	-	pcpmpl
Level of service, LOS	F	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	Campus Town Specific Plan
Freeway	Southbound State Route 1
Segment	SR 1 between Lightfighter Drive and Del Monte Boulevard
Alternative	Cumulative No Project
Time period	AM Peak Hour

Flow Inputs and Adjustments

Volume, V	5,824	vph
Peak-hour factor, PHF	0.86	
Peak 15-min volume, v_{15}	1,693	veh
Trucks and buses	3.2%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.984	
Driver popoulation factor, f_p	1.00	
Flow rate, v_p	6,881	pcph
Number of lanes, N	3	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	1.33	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	4.1	mph
Calculated free-flow speed, FFS	71.3	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	Actual		Maximum		Violation?
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	2,294	pcphpl
Average passenger-car speed, S	53.7	mph
Volume-to-capacity ratio, v/c	0.98	
Density, D	42.7	pcpmpl
Level of service, LOS	E	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	Campus Town Specific Plan
Freeway	Southbound State Route 1
Segment	SR 1 between Del Monte Boulevard and Canyon Del Rey Boulevard
Alternative	Cumulative No Project
Time period	AM Peak Hour

Flow Inputs and Adjustments

Volume, V	4,979	vph
Peak-hour factor, PHF	0.95	
Peak 15-min volume, v_{15}	1,310	veh
Trucks and buses	2.4%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.988	
Driver popoulation factor, f_p	1.00	
Flow rate, v_p	5,305	pcph
Number of lanes, N	2	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	5.0	ft
Total ramp density, TRD	2.17	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.6	mph
TRD adjustment	6.2	mph
Calculated free-flow speed, FFS	68.6	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	Actual		Maximum		Violation?
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	2,653	pcphpl
Average passenger-car speed, S	-	mph
Volume-to-capacity ratio, v/c	1.13	
Density, D	-	pcpmpl
Level of service, LOS	F	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	Campus Town Specific Plan
Freeway	Southbound State Route 1
Segment	SR 1 between Lightfighter Drive and Del Monte Boulevard
Alternative	Cumulative With Project
Time period	AM Peak Hour

Flow Inputs and Adjustments

Volume, V	5,894	vph
Peak-hour factor, PHF	0.86	
Peak 15-min volume, v_{15}	1,713	veh
Trucks and buses	3.2%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.984	
Driver popoulation factor, f_p	1.00	
Flow rate, v_p	6,963	pcph
Number of lanes, N	3	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	1.33	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	4.1	mph
Calculated free-flow speed, FFS	71.3	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	Actual		Maximum		Violation?
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	2,321	pcphpl
Average passenger-car speed, S	53.0	mph
Volume-to-capacity ratio, v/c	0.99	
Density, D	43.8	pcpmpl
Level of service, LOS	E	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	Campus Town Specific Plan
Freeway	Southbound State Route 1
Segment	SR 1 between Del Monte Boulevard and Canyon Del Rey Boulevard
Alternative	Cumulative With Project
Time period	AM Peak Hour

Flow Inputs and Adjustments

Volume, V	5,049	vph
Peak-hour factor, PHF	0.95	
Peak 15-min volume, v_{15}	1,329	veh
Trucks and buses	2.4%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.988	
Driver popoulation factor, f_p	1.00	
Flow rate, v_p	5,380	pcph
Number of lanes, N	2	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	5.0	ft
Total ramp density, TRD	2.17	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.6	mph
TRD adjustment	6.2	mph
Calculated free-flow speed, FFS	68.6	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	Actual		Maximum		Violation?
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	2,690	pcphpl
Average passenger-car speed, S	-	mph
Volume-to-capacity ratio, v/c	1.14	
Density, D	-	pcpmpl
Level of service, LOS	F	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	Campus Town Specific Plan
Freeway	Southbound State Route 1
Segment	SR 1 between Lightfighter Drive and Del Monte Boulevard
Alternative	Cumulative No Project
Time period	PM Peak Hour

Flow Inputs and Adjustments

Volume, V	4,906	vph
Peak-hour factor, PHF	0.97	
Peak 15-min volume, v_{15}	1,264	veh
Trucks and buses	1.1%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.994	
Driver popoulation factor, f_p	1.00	
Flow rate, v_p	5,086	pcph
Number of lanes, N	3	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	1.33	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	4.1	mph
Calculated free-flow speed, FFS	71.3	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	Actual		Maximum		Violation?
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	1,695	pcphpl
Average passenger-car speed, S	63.8	mph
Volume-to-capacity ratio, v/c	0.72	
Density, D	26.6	pcpmpl
Level of service, LOS	D	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	Campus Town Specific Plan
Freeway	Southbound State Route 1
Segment	SR 1 between Del Monte Boulevard and Canyon Del Rey Boulevard
Alternative	Cumulative No Project
Time period	PM Peak Hour

Flow Inputs and Adjustments

Volume, V	4,448	vph
Peak-hour factor, PHF	0.96	
Peak 15-min volume, v_{15}	1,158	veh
Trucks and buses	1.0%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.995	
Driver popoulation factor, f_p	1.00	
Flow rate, v_p	4,657	pcph
Number of lanes, N	2	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	5.0	ft
Total ramp density, TRD	2.17	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.6	mph
TRD adjustment	6.2	mph
Calculated free-flow speed, FFS	68.6	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	Actual		Maximum		Violation?
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	2,328	pcphpl
Average passenger-car speed, S	52.8	mph
Volume-to-capacity ratio, v/c	0.99	
Density, D	44.1	pcpmpl
Level of service, LOS	E	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	Campus Town Specific Plan
Freeway	Southbound State Route 1
Segment	SR 1 between Lightfighter Drive and Del Monte Boulevard
Alternative	Cumulative With Project
Time period	PM Peak Hour

Flow Inputs and Adjustments

Volume, V	4,975	vph
Peak-hour factor, PHF	0.97	
Peak 15-min volume, v_{15}	1,282	veh
Trucks and buses	1.1%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.994	
Driver popoulation factor, f_p	1.00	
Flow rate, v_p	5,158	pcph
Number of lanes, N	3	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	1.33	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	4.1	mph
Calculated free-flow speed, FFS	71.3	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	Actual		Maximum		Violation?
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	1,719	pcphpl
Average passenger-car speed, S	63.6	mph
Volume-to-capacity ratio, v/c	0.73	
Density, D	27.1	pcpmpl
Level of service, LOS	D	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	Campus Town Specific Plan
Freeway	Southbound State Route 1
Segment	SR 1 between Del Monte Boulevard and Canyon Del Rey Boulevard
Alternative	Cumulative With Project
Time period	PM Peak Hour

Flow Inputs and Adjustments

Volume, V	4,517	vph
Peak-hour factor, PHF	0.96	
Peak 15-min volume, v_{15}	1,176	veh
Trucks and buses	1.0%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.995	
Driver popoulation factor, f_p	1.00	
Flow rate, v_p	4,729	pcph
Number of lanes, N	2	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	5.0	ft
Total ramp density, TRD	2.17	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.6	mph
TRD adjustment	6.2	mph
Calculated free-flow speed, FFS	68.6	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	Actual		Maximum		Violation?
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	2,364	pcphpl
Average passenger-car speed, S	-	mph
Volume-to-capacity ratio, v/c	1.01	
Density, D	-	pcpmpl
Level of service, LOS	F	

Appendix I:
Freeway Queuing Calculations

Queues
1: 1st Avenue & Lightfighter Drive

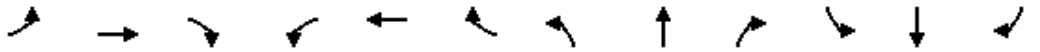
05/30/2019

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Volume (vph)	0	748	126	20	754	0	158	0	16	14	4	18
Future Volume (vph)	0	748	126	20	754	0	158	0	16	14	4	18
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	6%	6%	6%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	890	150	24	898	0	188	0	19	17	5	21
v/c Ratio		0.48	0.09	0.16	0.45		0.50		0.05	0.10	0.03	0.09
Control Delay		13.9	0.1	38.4	10.1		30.9		0.2	36.9	36.2	0.8
Queue Delay		0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0
Total Delay		13.9	0.1	38.4	10.1		30.9		0.2	36.9	36.2	0.8
Queue Length 50th (ft)		111	0	8	112		59		0	6	2	0
Queue Length 95th (ft)		231	0	36	175		154		0	29	14	0
Internal Link Dist (ft)		274			636			745			995	
Turn Bay Length (ft)				115			125					150
Base Capacity (vph)		2688	1583	579	3268		761		726	732	770	701
Starvation Cap Reductn		0	0	0	0		0		0	0	0	0
Spillback Cap Reductn		0	0	0	0		0		0	0	0	0
Storage Cap Reductn		0	0	0	0		0		0	0	0	0
Reduced v/c Ratio		0.33	0.09	0.04	0.27		0.25		0.03	0.02	0.01	0.03

Intersection Summary

47: SR 1 SB On-Ramp/SR 1 SB Off-Ramp & Imjin Parkway

05/30/2019



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Volume (vph)	0	0	0	959	0	0	0	0	0	409	5	0
Future Volume (vph)	0	0	0	959	0	0	0	0	0	409	5	0
Confl. Peds. (#/hr)				3								
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.91	0.92	0.91	0.92	0.91	0.91	0.91	0.91	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	3%	2%	3%	2%	2%	2%	3%	3%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	1054	0	0	0	0	0	454	0
v/c Ratio					0.92						0.91	
Control Delay					35.5						70.5	
Queue Delay					0.0						0.0	
Total Delay					35.5						70.5	
Queue Length 50th (ft)					756						393	
Queue Length 95th (ft)					#1369						530	
Internal Link Dist (ft)		148			281			478			409	
Turn Bay Length (ft)												
Base Capacity (vph)					1151						772	
Starvation Cap Reductn					0						0	
Spillback Cap Reductn					0						0	
Storage Cap Reductn					0						0	
Reduced v/c Ratio					0.92						0.59	

Intersection Summary

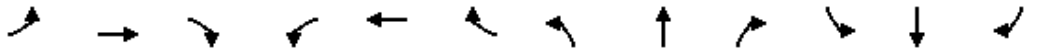
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Volume (vph)	0	453	103	14	971	0	195	0	22	1	0	20
Future Volume (vph)	0	453	103	14	971	0	195	0	22	1	0	20
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	5%	5%	5%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	477	108	15	1022	0	205	0	23	1	0	21
v/c Ratio		0.25	0.07	0.09	0.51		0.52		0.06	0.01		0.09
Control Delay		9.9	0.1	30.4	10.1		26.5		0.3	31.0		0.7
Queue Delay		0.0	0.0	0.0	0.0		0.0		0.0	0.0		0.0
Total Delay		9.9	0.1	30.4	10.1		26.5		0.3	31.0		0.7
Queue Length 50th (ft)		31	0	4	80		49		0	0		0
Queue Length 95th (ft)		117	0	24	213		148		0	5		0
Internal Link Dist (ft)		274			636			745			995	
Turn Bay Length (ft)				115			125					150
Base Capacity (vph)		2897	1599	644	3499		804		764	774		764
Starvation Cap Reductn		0	0	0	0		0		0	0		0
Spillback Cap Reductn		0	0	0	0		0		0	0		0
Storage Cap Reductn		0	0	0	0		0		0	0		0
Reduced v/c Ratio		0.16	0.07	0.02	0.29		0.25		0.03	0.00		0.03

Intersection Summary

47: SR 1 SB On-Ramp/SR 1 SB Off-Ramp & Imjin Parkway

05/30/2019



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Volume (vph)	0	0	0	992	0	0	0	0	0	260	1	0
Future Volume (vph)	0	0	0	992	0	0	0	0	0	260	1	0
Confl. Peds. (#/hr)				3								
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.91	0.92	0.91	0.92	0.91	0.91	0.91	0.91	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	3%	2%	3%	2%	2%	2%	3%	3%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	1090	0	0	0	0	0	287	0
v/c Ratio					0.86						0.80	
Control Delay					22.4						64.4	
Queue Delay					0.0						0.0	
Total Delay					22.4						64.4	
Queue Length 50th (ft)					561						221	
Queue Length 95th (ft)					#1153						322	
Internal Link Dist (ft)		148			281			478			409	
Turn Bay Length (ft)												
Base Capacity (vph)					1271						850	
Starvation Cap Reductn					0						0	
Spillback Cap Reductn					0						0	
Storage Cap Reductn					0						0	
Reduced v/c Ratio					0.86						0.34	

Intersection Summary

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

Queues
1: 1st Avenue & Lightfighter Drive

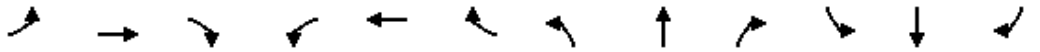
05/30/2019

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Volume (vph)	0	830	134	33	903	0	172	0	27	14	4	18
Future Volume (vph)	0	830	134	33	903	0	172	0	27	14	4	18
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	6%	6%	6%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	988	160	39	1075	0	205	0	32	17	5	21
v/c Ratio		0.56	0.10	0.26	0.53		0.61		0.09	0.14	0.04	0.12
Control Delay		17.0	0.1	42.9	11.4		38.6		0.5	43.6	41.5	1.3
Queue Delay		0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0
Total Delay		17.0	0.1	42.9	11.4		38.6		0.5	43.6	41.5	1.3
Queue Length 50th (ft)		192	0	18	160		92		0	8	2	0
Queue Length 95th (ft)		285	0	53	237		177		0	31	14	0
Internal Link Dist (ft)		274			636			745			995	
Turn Bay Length (ft)				115			125					150
Base Capacity (vph)		2366	1583	519	3071		650		632	625	658	610
Starvation Cap Reductn		0	0	0	0		0		0	0	0	0
Spillback Cap Reductn		0	0	0	0		0		0	0	0	0
Storage Cap Reductn		0	0	0	0		0		0	0	0	0
Reduced v/c Ratio		0.42	0.10	0.08	0.35		0.32		0.05	0.03	0.01	0.03

Intersection Summary

47: SR 1 SB On-Ramp/SR 1 SB Off-Ramp & Imjin Parkway

05/30/2019



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Volume (vph)	0	0	0	959	0	0	0	0	0	409	5	0
Future Volume (vph)	0	0	0	959	0	0	0	0	0	409	5	0
Confl. Peds. (#/hr)				3								
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.91	0.92	0.91	0.92	0.91	0.91	0.91	0.91	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	3%	2%	3%	2%	2%	2%	3%	3%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	1054	0	0	0	0	0	454	0
v/c Ratio					0.92						0.91	
Control Delay					35.5						70.5	
Queue Delay					0.0						0.0	
Total Delay					35.5						70.5	
Queue Length 50th (ft)					756						393	
Queue Length 95th (ft)					#1369						530	
Internal Link Dist (ft)		148			281			478			409	
Turn Bay Length (ft)												
Base Capacity (vph)					1151						772	
Starvation Cap Reductn					0						0	
Spillback Cap Reductn					0						0	
Storage Cap Reductn					0						0	
Reduced v/c Ratio					0.92						0.59	

Intersection Summary

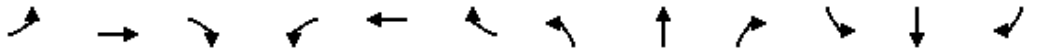
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Volume (vph)	0	638	121	44	1117	0	208	0	32	1	0	20
Future Volume (vph)	0	638	121	44	1117	0	208	0	32	1	0	20
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	5%	5%	5%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	672	127	46	1176	0	219	0	34	1	0	21
v/c Ratio		0.39	0.08	0.24	0.57		0.56		0.08	0.01		0.10
Control Delay		14.1	0.1	33.3	10.8		29.8		0.8	35.0		0.9
Queue Delay		0.0	0.0	0.0	0.0		0.0		0.0	0.0		0.0
Total Delay		14.1	0.1	33.3	10.8		29.8		0.8	35.0		0.9
Queue Length 50th (ft)		76	0	13	100		57		0	0		0
Queue Length 95th (ft)		188	0	55	277		168		3	6		0
Internal Link Dist (ft)		274			636			745			995	
Turn Bay Length (ft)				115			125					150
Base Capacity (vph)		2695	1599	598	3379		748		716	720		704
Starvation Cap Reductn		0	0	0	0		0		0	0		0
Spillback Cap Reductn		0	0	0	0		0		0	0		0
Storage Cap Reductn		0	0	0	0		0		0	0		0
Reduced v/c Ratio		0.25	0.08	0.08	0.35		0.29		0.05	0.00		0.03

Intersection Summary

47: SR 1 SB On-Ramp/SR 1 SB Off-Ramp & Imjin Parkway

05/30/2019



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Volume (vph)	0	0	0	992	0	0	0	0	0	260	1	0
Future Volume (vph)	0	0	0	992	0	0	0	0	0	260	1	0
Confl. Peds. (#/hr)				3								
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.91	0.92	0.91	0.92	0.91	0.91	0.91	0.91	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	3%	2%	3%	2%	2%	2%	3%	3%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	1090	0	0	0	0	0	287	0
v/c Ratio					0.86						0.80	
Control Delay					22.4						64.4	
Queue Delay					0.0						0.0	
Total Delay					22.4						64.4	
Queue Length 50th (ft)					561						221	
Queue Length 95th (ft)					#1153						322	
Internal Link Dist (ft)		148			281			478			409	
Turn Bay Length (ft)												
Base Capacity (vph)					1271						850	
Starvation Cap Reductn					0						0	
Spillback Cap Reductn					0						0	
Storage Cap Reductn					0						0	
Reduced v/c Ratio					0.86						0.34	

Intersection Summary

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

Queues
1: 1st Avenue & Lightfighter Drive

05/30/2019

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Volume (vph)	0	1504	197	100	1400	0	184	0	46	76	4	96
Future Volume (vph)	0	1504	197	100	1400	0	184	0	46	76	4	96
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	6%	6%	6%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1790	235	119	1667	0	219	0	55	90	5	114
v/c Ratio		1.14	0.15	0.63	0.80		0.77		0.17	0.58	0.03	0.54
Control Delay		99.4	0.2	60.1	21.1		60.1		5.0	61.1	45.2	27.2
Queue Delay		0.0	0.0	0.0	0.2		0.0		0.0	0.0	0.0	0.0
Total Delay		99.4	0.2	60.1	21.3		60.1		5.0	61.1	45.2	27.2
Queue Length 50th (ft)		~710	0	74	406		136		0	56	3	21
Queue Length 95th (ft)		#986	0	136	586		221		14	112	15	71
Internal Link Dist (ft)		274			636			745			995	
Turn Bay Length (ft)				115			125					150
Base Capacity (vph)		1572	1583	345	2404		432		447	415	437	432
Starvation Cap Reductn		0	0	0	166		0		0	0	0	0
Spillback Cap Reductn		0	0	0	0		0		0	0	0	0
Storage Cap Reductn		0	0	0	0		0		0	0	0	0
Reduced v/c Ratio		1.14	0.15	0.34	0.74		0.51		0.12	0.22	0.01	0.26

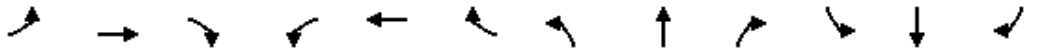
Intersection Summary

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

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

47: SR 1 SB On-Ramp/SR 1 SB Off-Ramp & Imjin Parkway

05/30/2019



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Volume (vph)	0	0	0	959	0	0	0	0	0	1301	5	0
Future Volume (vph)	0	0	0	959	0	0	0	0	0	1301	5	0
Confl. Peds. (#/hr)				3								
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.91	0.92	0.91	0.92	0.91	0.91	0.91	0.91	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	3%	2%	3%	2%	2%	2%	3%	3%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	1054	0	0	0	0	0	1435	0
v/c Ratio					1.06						2.15	
Control Delay					78.3						547.3	
Queue Delay					0.0						0.0	
Total Delay					78.3						547.3	
Queue Length 50th (ft)					~1194						~2367	
Queue Length 95th (ft)					#1459						#2634	
Internal Link Dist (ft)		148			281			478			409	
Turn Bay Length (ft)												
Base Capacity (vph)					997						668	
Starvation Cap Reductn					0						0	
Spillback Cap Reductn					0						0	
Storage Cap Reductn					0						0	
Reduced v/c Ratio					1.06						2.15	

Intersection Summary

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

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

Queues

1: 1st Avenue & Lightfighter Drive

05/30/2019

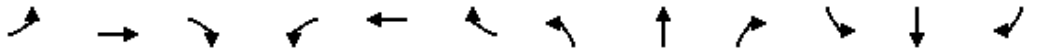
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Volume (vph)	0	1443	153	71	1821	0	270	0	107	103	0	149
Future Volume (vph)	0	1443	153	71	1821	0	270	0	107	103	0	149
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	5%	5%	5%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1519	161	75	1917	0	284	0	113	108	0	157
v/c Ratio		0.94	0.10	0.49	0.97		0.79		0.27	0.58		0.66
Control Delay		42.1	0.1	58.3	38.9		56.3		8.9	57.9		37.3
Queue Delay		0.0	0.0	0.0	0.3		0.0		0.0	0.0		0.0
Total Delay		42.1	0.1	58.3	39.1		56.3		8.9	57.9		37.3
Queue Length 50th (ft)		517	0	49	623		179		0	70		49
Queue Length 95th (ft)		#834	0	103	#955		#321		48	134		124
Internal Link Dist (ft)		274			636			745			995	
Turn Bay Length (ft)				115			125					150
Base Capacity (vph)		1612	1599	358	2455		448		485	430		445
Starvation Cap Reductn		0	0	0	117		0		0	0		0
Spillback Cap Reductn		0	0	0	0		0		0	0		0
Storage Cap Reductn		0	0	0	0		0		0	0		0
Reduced v/c Ratio		0.94	0.10	0.21	0.82		0.63		0.23	0.25		0.35

Intersection Summary

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

47: SR 1 SB On-Ramp/SR 1 SB Off-Ramp & Imjin Parkway

05/30/2019



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Volume (vph)	0	0	0	992	0	0	0	0	0	1305	1	0
Future Volume (vph)	0	0	0	992	0	0	0	0	0	1305	1	0
Confl. Peds. (#/hr)				3								
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.91	0.92	0.91	0.92	0.91	0.91	0.91	0.91	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	3%	2%	3%	2%	2%	2%	3%	3%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	1090	0	0	0	0	0	1435	0
v/c Ratio					1.10						2.16	
Control Delay					92.7						554.4	
Queue Delay					0.0						0.0	
Total Delay					92.7						554.4	
Queue Length 50th (ft)					~1277						~2373	
Queue Length 95th (ft)					#1543						#2640	
Internal Link Dist (ft)		148			281			478			409	
Turn Bay Length (ft)												
Base Capacity (vph)					992						663	
Starvation Cap Reductn					0						0	
Spillback Cap Reductn					0						0	
Storage Cap Reductn					0						0	
Reduced v/c Ratio					1.10						2.16	

Intersection Summary

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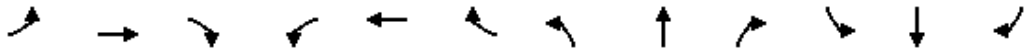

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Volume (vph)	0	1586	205	113	1549	0	198	0	56	76	4	96
Future Volume (vph)	0	1586	205	113	1549	0	198	0	56	76	4	96
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	6%	6%	6%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1888	244	135	1844	0	236	0	67	90	5	114
v/c Ratio		1.23	0.15	0.67	0.89		0.79		0.20	0.58	0.03	0.54
Control Delay		138.1	0.2	61.5	26.3		61.9		8.0	62.8	46.5	27.9
Queue Delay		0.0	0.0	0.0	0.5		0.0		0.0	0.0	0.0	0.0
Total Delay		138.1	0.2	61.5	26.8		61.9		8.0	62.8	46.5	27.9
Queue Length 50th (ft)		~818	0	87	520		150		0	58	3	21
Queue Length 95th (ft)		#1086	0	153	707		241		25	112	15	72
Internal Link Dist (ft)		274			636			745			995	
Turn Bay Length (ft)				115			125					150
Base Capacity (vph)		1535	1583	337	2348		422		438	406	427	424
Starvation Cap Reductn		0	0	0	164		0		0	0	0	0
Spillback Cap Reductn		0	0	0	0		0		0	0	0	0
Storage Cap Reductn		0	0	0	0		0		0	0	0	0
Reduced v/c Ratio		1.23	0.15	0.40	0.84		0.56		0.15	0.22	0.01	0.27

Intersection Summary

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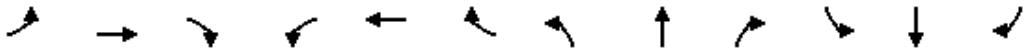
47: SR 1 SB On-Ramp/SR 1 SB Off-Ramp & Imjin Parkway

05/30/2019



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Volume (vph)	0	0	0	959	0	0	0	0	0	1301	5	0
Future Volume (vph)	0	0	0	959	0	0	0	0	0	1301	5	0
Confl. Peds. (#/hr)				3								
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.91	0.92	0.91	0.92	0.91	0.91	0.91	0.91	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	3%	2%	3%	2%	2%	2%	3%	3%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	1054	0	0	0	0	0	1435	0
v/c Ratio					1.06						2.15	
Control Delay					78.3						547.3	
Queue Delay					0.0						0.0	
Total Delay					78.3						547.3	
Queue Length 50th (ft)					~1194						~2367	
Queue Length 95th (ft)					#1459						#2634	
Internal Link Dist (ft)		148			281			478			409	
Turn Bay Length (ft)												
Base Capacity (vph)					997						668	
Starvation Cap Reductn					0						0	
Spillback Cap Reductn					0						0	
Storage Cap Reductn					0						0	
Reduced v/c Ratio					1.06						2.15	

Intersection Summary

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

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

Queues
1: 1st Avenue & Lightfighter Drive

05/30/2019

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Volume (vph)	0	1628	171	100	1967	0	284	0	117	103	0	149
Future Volume (vph)	0	1628	171	100	1967	0	284	0	117	103	0	149
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	5%	5%	5%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1714	180	105	2071	0	299	0	123	108	0	157
v/c Ratio		1.13	0.11	0.59	1.04		0.81		0.29	0.59		0.67
Control Delay		98.9	0.1	61.2	56.6		59.5		8.8	60.7		38.8
Queue Delay		0.0	0.0	0.0	2.1		0.0		0.0	0.0		0.0
Total Delay		98.9	0.1	61.2	58.7		59.5		8.8	60.7		38.8
Queue Length 50th (ft)		~751	0	72	~845		195		0	74		52
Queue Length 95th (ft)		#1038	0	135	#1094		#365		51	137		126
Internal Link Dist (ft)		274			636			745			995	
Turn Bay Length (ft)				115			125					150
Base Capacity (vph)		1515	1599	336	2306		420		470	404		423
Starvation Cap Reductn		0	0	0	128		0		0	0		0
Spillback Cap Reductn		0	0	0	0		0		0	0		0
Storage Cap Reductn		0	0	0	0		0		0	0		0
Reduced v/c Ratio		1.13	0.11	0.31	0.95		0.71		0.26	0.27		0.37

Intersection Summary

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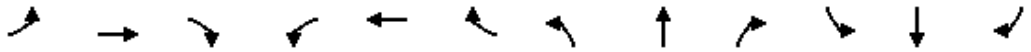

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Volume (vph)	0	0	0	992	0	0	0	0	0	1305	1	0
Future Volume (vph)	0	0	0	992	0	0	0	0	0	1305	1	0
Confl. Peds. (#/hr)				3								
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.91	0.92	0.91	0.92	0.91	0.91	0.91	0.91	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	3%	2%	3%	2%	2%	2%	3%	3%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	1090	0	0	0	0	0	1435	0
v/c Ratio					1.10						2.16	
Control Delay					92.7						554.4	
Queue Delay					0.0						0.0	
Total Delay					92.7						554.4	
Queue Length 50th (ft)					~1277						~2373	
Queue Length 95th (ft)					#1543						#2640	
Internal Link Dist (ft)		148			281			478			409	
Turn Bay Length (ft)												
Base Capacity (vph)					992						663	
Starvation Cap Reductn					0						0	
Spillback Cap Reductn					0						0	
Storage Cap Reductn					0						0	
Reduced v/c Ratio					1.10						2.16	

Intersection Summary

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

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

Appendix J:
Xwalk+ Results

XWalk+

Location General Jim Moore Boulevard / Street C

User Ashley Brooks

Date : 11-9-2018

Type Uncontrolled Intersection

Input Parameters	Value	Intersection Characteristics	Yes	No
Speed Limit	35	Frequent at-grade transit?	○	●
Peak Hour Pedestrian Vol	30	Bicycle lanes?	●	○
Major Road Peak Hour Volume Total	3,200	Heavy bicycle traffic?	○	●
Major Road Peak Hour Vol Dir 1	1,800	Major/minor road intersection?	●	○
Major Road Peak Hour Vol Dir 2	1,400	Midblock/off-set intersection?	○	●
Avg Pedestrian Walking Speed	3	Heavy truck traffic?	○	●
15th Percentile Crossing Speed	3	Existing infrastructure limit treatments?	○	●
Ped start-up/end clearance time	5	On-street parking?	○	●
Pedestrian Crossing Distance	70	Downtown area?	○	●
1st Half Crossing Distance	28	Built-up area of an isolated community?	●	○
2nd Half Crossing Distance	28	Median refuge island?	●	○
Number of Lanes	4	Sufficient width for a median?	●	○
Actual Total Pedestrian Delay	0			
Expected Motorist Compliance	Low			

1 of 2 Recommendations

Pedestrian Hybrid Beacon* Signal

TREATMENT IDENTIFICATION MATRIX FOR UNCONTROLLED LOCATIONS

PEDESTRIAN LEVEL OF SERVICE	EXPECTED MOTORIST COMPLIANCE		
	LOW (or Speed > 35 MPH)	MODERATE	HIGH
LOS A-D (average delay up to 30 seconds)	**LEVEL 3** 2 Lane Road: In-Pavement Flashers, Overhead Flashing Beacons Multi-Lane Road: RRFB Plus LEVELS 1 and 2	**LEVEL 2** Curb Extentions, Bus Bulb, Reduced Curb Radii, Staggered Pedestrian Refuge Plus LEVEL 1	**LEVEL 1** High Visibility Crosswalk Markings, Advanced Yield Lines, Advance Signage
LOS E-F (average delay greater than 30 seconds)	LEVEL 4 PHB*, RRFB, or Direct Pedestrians to Nearest Safe Crossing Plus LEVELS 1, 2, and 3	**LEVEL 3** 2 Lane Road: In-Pavement Flashers, Overhead Flashing Beacons Multi-Lane Road: RRFB Plus LEVELS 1 and 2	**LEVEL 2** Curb Extentions, Bus Bulb, Reduced Curb Radii, Staggered Pedestrian Refuge Plus LEVEL 1

Signalized or Unsignalized Crossing?	PHB* Signal
Pedestrian LOS	F
Candidate Pedestrian Treatment Identified	**PHB* Signal**
Candidate for Median Refuge Island?	NO
Candidate for Road Diet?	NO
Other Treatments for Consideration**	NA
Paired Treatments for Consideration**	NA

Appendix K:
Roundabout Calculations

Intersection	
Intersection Delay, s/veh	100.6
Intersection LOS	F

Approach	EB	WB	NB	SB
Entry Lanes	2	2	2	2
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	1772	696	1712	687
Demand Flow Rate, veh/h	1808	738	1729	700
Vehicles Circulating, veh/h	773	1950	572	1572
Vehicles Exiting, veh/h	1499	351	2009	1116
Follow-Up Headway, s	2.200	2.200	2.200	2.200
Ped Vol Crossing Leg, #/h	2	1	2	0
Ped Cap Adj	0.999	1.000	0.999	1.000
Approach Delay, s/veh	107.1	266.0	37.5	73.2
Approach LOS	F	F	E	F

Lane	Left	Right	Left	Right	Left	Right	Left	Right
Designated Moves	LTR	R	LT	TR	L	LTR	LT	TR
Assumed Moves	LTR	R	LT	TR	L	LTR	LT	TR
RT Channelized								
Lane Util	0.470	0.530	0.470	0.530	0.530	0.470	0.470	0.530
Critical Headway, s	4.700	4.400	4.700	4.400	4.700	4.400	4.700	4.400
Entry Flow, veh/h	850	958	347	391	916	813	329	371
Cap Entry Lane, veh/h	755	806	233	274	924	969	340	387
Entry HV Adj Factor	0.980	0.980	0.943	0.944	0.991	0.990	0.981	0.981
Flow Entry, veh/h	833	939	327	369	907	805	323	364
Cap Entry, veh/h	740	789	220	259	914	958	333	380
V/C Ratio	1.126	1.190	1.490	1.428	0.993	0.840	0.968	0.958
Control Delay, s/veh	95.3	117.5	284.0	250.0	49.3	24.1	77.5	69.4
LOS	F	F	F	F	E	C	F	F
95th %tile Queue, veh	24	30	20	21	18	10	10	11

Intersection	
Intersection Delay, s/veh	119.2
Intersection LOS	F

Approach	EB	WB	NB	SB
Entry Lanes	1	2	2	2
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	219	865	1788	2020
Demand Flow Rate, veh/h	229	882	1806	2061
Vehicles Circulating, veh/h	2539	1496	380	624
Vehicles Exiting, veh/h	146	690	2388	1754
Follow-Up Headway, s	2.200	2.200	3.186	2.200
Ped Vol Crossing Leg, #/h	0	0	0	1
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	171.0	166.7	112.7	99.0
Approach LOS	F	F	F	F

Lane	Left	Left	Right	Left	Right	Left	Right
Designated Moves	LTR	L	TR	LT	TR	LT	TR
Assumed Moves	LTR	L	TR	LT	TR	LT	TR
RT Channelized							
Lane Util	1.000	0.603	0.397	0.470	0.530	0.470	0.530
Critical Headway, s	4.113	4.700	4.400	5.190	5.190	4.700	4.400
Entry Flow, veh/h	229	532	350	849	957	969	1092
Cap Entry Lane, veh/h	195	367	415	773	773	877	924
Entry HV Adj Factor	0.955	0.981	0.981	0.990	0.990	0.980	0.981
Flow Entry, veh/h	219	522	343	840	948	950	1071
Cap Entry, veh/h	187	360	407	765	765	859	905
V/C Ratio	1.172	1.451	0.843	1.098	1.238	1.106	1.183
Control Delay, s/veh	171.0	246.3	45.5	84.9	137.4	84.5	111.9
LOS	F	F	E	F	F	F	F
95th %tile Queue, veh	11	27	8	23	33	25	33

Intersection	
Intersection Delay, s/veh	352.8
Intersection LOS	F

Approach	EB	WB	NB	SB
Entry Lanes	2	2	2	2
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	1489	767	2356	1015
Demand Flow Rate, veh/h	1519	813	2379	1036
Vehicles Circulating, veh/h	1008	2531	606	2145
Vehicles Exiting, veh/h	2173	454	1921	1199
Follow-Up Headway, s	2.200	2.200	2.200	2.200
Ped Vol Crossing Leg, #/h	2	1	2	0
Ped Cap Adj	1.000	1.000	0.999	1.000
Approach Delay, s/veh	135.4	880.1	164.4	710.0
Approach LOS	F	F	F	F

Lane	Left	Right	Left	Right	Left	Right	Left	Right
Designated Moves	LTR	R	LT	TR	L	LTR	LT	TR
Assumed Moves	LTR	R	LT	TR	L	LTR	LT	TR
RT Channelized								
Lane Util	0.470	0.530	0.470	0.530	0.530	0.470	0.470	0.530
Critical Headway, s	4.700	4.400	4.700	4.400	4.700	4.400	4.700	4.400
Entry Flow, veh/h	714	805	382	431	1261	1118	487	549
Cap Entry Lane, veh/h	597	650	130	161	893	939	192	229
Entry HV Adj Factor	0.980	0.980	0.944	0.943	0.990	0.990	0.980	0.980
Flow Entry, veh/h	700	789	361	407	1249	1107	477	538
Cap Entry, veh/h	585	637	123	152	883	929	188	225
V/C Ratio	1.196	1.239	2.933	2.680	1.414	1.192	2.542	2.397
Control Delay, s/veh	127.6	142.3	946.7	821.0	208.4	114.9	748.5	676.0
LOS	F	F	F	F	F	F	F	F
95th %tile Queue, veh	25	29	34	36	54	34	41	44

Intersection	
Intersection Delay, s/veh	165.2
Intersection LOS	F

Approach	EB	WB	NB	SB
Entry Lanes	1	2	2	2
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	66	839	2420	1893
Demand Flow Rate, veh/h	70	856	2444	1931
Vehicles Circulating, veh/h	2137	1945	228	376
Vehicles Exiting, veh/h	170	727	1979	2425
Follow-Up Headway, s	2.200	2.200	3.186	2.200
Ped Vol Crossing Leg, #/h	0	0	0	1
Ped Cap Adj	1.000	1.000	1.000	0.999
Approach Delay, s/veh	19.9	436.4	186.7	22.6
Approach LOS	C	F	F	C

Lane	Left	Left	Right	Left	Right	Left	Right
Designated Moves	LTR	L	TR	LT	TR	LT	TR
Assumed Moves	LTR	L	TR	LT	TR	LT	TR
RT Channelized							
Lane Util	1.000	0.304	0.696	0.470	0.530	0.470	0.530
Critical Headway, s	4.113	4.700	4.400	5.190	5.190	4.700	4.400
Entry Flow, veh/h	70	260	596	1149	1295	908	1023
Cap Entry Lane, veh/h	274	234	275	900	900	1124	1159
Entry HV Adj Factor	0.947	0.981	0.980	0.990	0.990	0.980	0.981
Flow Entry, veh/h	66	255	584	1137	1282	890	1003
Cap Entry, veh/h	259	229	270	891	891	1100	1136
V/C Ratio	0.256	1.111	2.166	1.277	1.439	0.809	0.883
Control Delay, s/veh	19.9	137.7	566.8	150.2	219.2	19.4	25.5
LOS	C	F	F	F	F	C	D
95th %tile Queue, veh	1	12	44	41	57	9	13

Traffic Volumes

Existing AM

Intersection	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
1. Lightfighter Drive & First Avenue	158	0	16	14	4	18	0	748	126	20	754	0
2. Lightfighter Drive & Second Avenue	2	1	1	272	4	343	78	696	2	5	424	68
3. Lightfighter Drive & General Jim Moore Boulevard	250	90	2	10	179	59	123	127	710	21	187	10
4. Colonel Durham Street & Malmedy Road	0	58	3	138	29	0	0	0	0	12	0	260
5. Gigling Road & General Jim Moore Boulevard	47	317	178	162	717	46	22	94	75	361	31	46
6. Gigling Road & Malmedy Road	30	45	7	30	9	13	3	353	16	13	382	15
7. Gigling Road & Parker Flatts Cut Off Road	17	9	31	7	11	0	5	285	91	41	381	0
8. Normandy Road & General Jim Moore Boulevard	122	330	105	74	759	149	65	78	118	141	70	35
9. Coe Avenue & General Jim Moore Boulevard	221	339	1	0	874	135	114	0	430	0	0	0
10. Gigling Road & Seventh Avenue	0	0	0	1	0	90	16	103	0	0	409	0
11. Colonel Durham Street & Seventh Avenue	0	20	0	0	97	60	19	37	1	2	157	0

Existing PM

Intersection	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
1. Lightfighter Drive & First Avenue	195	0	22	1	0	20	0	453	103	14	971	0
2. Lightfighter Drive & Second Avenue	5	1	8	78	5	113	145	322	1	2	868	126
3. Lightfighter Drive & General Jim Moore Boulevard	649	108	7	7	86	137	66	138	200	8	213	7
4. Colonel Durham Street & Malmedy Road	0	45	5	115	37	0	0	0	0	6	0	167
5. Gigling Road & General Jim Moore Boulevard	57	554	308	67	234	46	18	12	27	167	42	218
6. Gigling Road & Malmedy Road	12	25	6	9	27	5	3	340	39	12	312	13
7. Gigling Road & Parker Flatts Cut Off Road	65	21	21	0	3	0	2	316	8	12	284	2
8. Normandy Road & General Jim Moore Boulevard	49	729	67	31	361	45	45	27	33	44	28	6
9. Coe Avenue & General Jim Moore Boulevard	153	838	0	0	308	85	53	0	97	0	0	0
10. Gigling Road & Seventh Avenue	0	0	0	0	0	24	30	353	0	0	116	1
11. Colonel Durham Street & Seventh Avenue	0	36	0	0	23	14	17	85	1	0	50	0

Existing with Plan AM

Intersection	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
1. Lightfighter Drive & First Avenue	172	0	27	14	4	18	0	830	134	33	903	0
2. Lightfighter Drive & Second Avenue	17	23	53	288	16	349	89	773	7	41	565	97
3. Lightfighter Drive & General Jim Moore Boulevard	386	129	10	31	209	74	164	178	795	45	245	49
4. Colonel Durham Street & Malmedy Road	10	88	5	202	46	0	0	10	20	13	10	350
5. Gigling Road & General Jim Moore Boulevard	47	366	197	205	806	46	22	94	75	395	31	123
6. Gigling Road & Malmedy Road	30	57	21	36	31	13	3	432	16	38	498	18
7. Gigling Road & Parker Flatts Cut Off Road	17	17	45	7	26	6	8	380	91	66	519	0
8. Normandy Road & General Jim Moore Boulevard	122	398	153	74	882	149	65	78	118	228	70	35
9. Coe Avenue & General Jim Moore Boulevard	221	397	1	0	966	253	172	0	430	0	0	0
10. Gigling Road & Seventh Avenue	0	0	0	3	0	159	54	119	0	0	418	1
11. Colonel Durham Street & Seventh Avenue	12	23	20	0	99	74	45	79	8	13	180	0

Existing with Plan PM

Intersection	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
1. Lightfighter Drive & First Avenue	208	0	32	1	0	20	0	638	121	44	1117	0
2. Lightfighter Drive & Second Avenue	20	23	59	114	32	126	155	497	11	84	1016	155
3. Lightfighter Drive & General Jim Moore Boulevard	819	146	25	55	154	170	107	228	359	44	271	45
4. Colonel Durham Street & Malmedy Road	10	75	7	234	75	0	0	10	20	9	10	270
5. Gigling Road & General Jim Moore Boulevard	57	666	350	163	322	46	18	12	27	200	42	294
6. Gigling Road & Malmedy Road	12	53	38	15	49	5	3	491	39	37	441	20
7. Gigling Road & Parker Flatts Cut Off Road	65	39	53	0	17	6	10	497	8	37	439	2
8. Normandy Road & General Jim Moore Boulevard	49	883	176	31	482	45	45	27	33	130	28	6
9. Coe Avenue & General Jim Moore Boulevard	153	969	0	0	398	201	184	0	97	0	0	0
10. Gigling Road & Seventh Avenue	0	0	0	2	0	92	116	369	0	0	136	4
11. Colonel Durham Street & Seventh Avenue	12	39	20	0	27	45	43	127	16	25	103	0

Background No Dunes AM

Intersection	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
1. Lightfighter Drive & First Avenue	184	0	46	76	4	96	0	1006	197	100	1013	0
2. Lightfighter Drive & Second Avenue	2	1	1	350	4	525	215	909	2	5	581	135
3. Lightfighter Drive & General Jim Moore Boulevard	425	246	2	10	290	65	145	171	935	21	230	10
4. Colonel Durham Street & Malmedy Road	0	58	3	182	29	0	0	0	0	12	0	303
5. Gigling Road & General Jim Moore Boulevard	47	648	214	162	1052	46	22	94	75	426	31	46
6. Gigling Road & Malmedy Road	30	45	7	30	9	13	3	389	16	13	447	15
7. Gigling Road & Parker Flatts Cut Off Road	17	9	45	7	11	0	5	321	91	90	446	0
8. Normandy Road & General Jim Moore Boulevard	122	697	119	74	1160	149	65	78	118	190	70	35
9. Coe Avenue & General Jim Moore Boulevard	221	548	1	0	1143	315	286	0	430	0	0	0
10. Gigling Road & Seventh Avenue	0	0	0	1	0	95	17	131	0	0	504	0
11. Colonel Durham Street & Seventh Avenue	0	21	0	0	102	60	39	62	1	2	180	0

Background No Dunes PM

Intersection	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
1. Lightfighter Drive & First Avenue	270	0	107	103	0	149	0	861	153	71	1186	0
2. Lightfighter Drive & Second Avenue	5	1	8	162	5	229	427	634	1	2	1023	209
3. Lightfighter Drive & General Jim Moore Boulevard	837	364	7	7	218	141	99	193	508	8	259	7
4. Colonel Durham Street & Malmedy Road	0	45	5	170	37	0	0	0	0	6	0	213
5. Gigling Road & General Jim Moore Boulevard	57	998	368	67	674	46	18	12	27	207	42	218
6. Gigling Road & Malmedy Road	12	25	6	9	27	5	3	400	39	12	352	13
7. Gigling Road & Parker Flatts Cut Off Road	65	21	64	0	3	0	2	376	8	36	324	2
8. Normandy Road & General Jim Moore Boulevard	49	1232	110	31	841	45	45	27	33	68	28	6
9. Coe Avenue & General Jim Moore Boulevard	153	1158	0	0	586	312	279	0	97	0	0	0
10. Gigling Road & Seventh Avenue	0	0	0	0	0	25	34	436	0	0	163	1
11. Colonel Durham Street & Seventh Avenue	0	40	0	0	24	14	44	113	1	0	74	0

Background No Dunes with Plan AM

Intersection	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
1. Lightfighter Drive & First Avenue	198	0	56	76	4	96	0	1088	205	113	1162	0
2. Lightfighter Drive & Second Avenue	17	23	53	366	16	531	226	986	7	41	722	164
3. Lightfighter Drive & General Jim Moore Boulevard	560	285	10	31	320	80	186	223	1020	45	288	49
4. Colonel Durham Street & Malmedy Road	10	88	5	246	46	0	0	10	20	13	10	394
5. Gigling Road & General Jim Moore Boulevard	47	697	233	205	1142	46	22	94	75	460	31	123
6. Gigling Road & Malmedy Road	30	57	21	36	31	13	3	468	16	38	563	18
7. Gigling Road & Parker Flatts Cut Off Road	17	17	59	7	26	6	8	416	91	115	584	0
8. Normandy Road & General Jim Moore Boulevard	122	765	167	74	1282	149	65	78	118	277	70	35
9. Coe Avenue & General Jim Moore Boulevard	221	606	1	0	1235	434	344	0	430	0	0	0
10. Gigling Road & Seventh Avenue	0	0	0	3	0	163	55	147	0	0	513	1
11. Colonel Durham Street & Seventh Avenue	12	24	20	0	103	74	65	104	8	13	203	0

Background No Dunes with Plan PM

Intersection	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
1. Lightfighter Drive & First Avenue	284	0	117	103	0	149	0	1046	171	100	1332	0
2. Lightfighter Drive & Second Avenue	20	23	59	198	32	243	438	809	11	84	1171	238
3. Lightfighter Drive & General Jim Moore Boulevard	1007	402	25	55	286	174	140	283	667	44	318	45
4. Colonel Durham Street & Malmedy Road	10	75	7	288	75	0	0	10	20	9	10	316
5. Gigling Road & General Jim Moore Boulevard	57	1109	410	163	762	46	18	12	27	240	42	294
6. Gigling Road & Malmedy Road	12	53	38	15	49	5	3	551	39	37	481	20
7. Gigling Road & Parker Flatts Cut Off Road	65	39	96	0	17	6	10	556	8	61	479	2
8. Normandy Road & General Jim Moore Boulevard	49	1386	219	31	962	45	45	27	33	153	28	6
9. Coe Avenue & General Jim Moore Boulevard	153	1289	0	0	676	428	411	0	97	0	0	0
10. Gigling Road & Seventh Avenue	0	0	0	2	0	93	121	452	0	0	183	4
11. Colonel Durham Street & Seventh Avenue	12	43	20	0	28	45	70	154	16	25	127	0

Background AM

Intersection	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
1. Lightfighter Drive & First Avenue	184	0	46	76	4	96	0	1362	197	100	1287	0
2. Lightfighter Drive & Second Avenue	2	1	1	350	4	666	507	973	2	5	714	135
3. Lightfighter Drive & General Jim Moore Boulevard	557	493	2	10	409	65	145	171	999	21	230	10
4. Colonel Durham Street & Malmedy Road	0	58	3	182	29	0	0	0	0	12	0	303
5. Gigling Road & General Jim Moore Boulevard	47	1027	214	162	1236	46	22	94	75	426	31	46
6. Gigling Road & Malmedy Road	30	45	7	30	9	13	3	389	16	13	447	15
7. Gigling Road & Parker Flatts Cut Off Road	17	9	45	7	11	0	5	321	91	90	446	0
8. Normandy Road & General Jim Moore Boulevard	122	1076	119	74	1343	149	65	78	118	190	70	35
9. Coe Avenue & General Jim Moore Boulevard	221	738	1	0	1235	407	475	0	430	0	0	0
10. Gigling Road & Seventh Avenue	0	0	0	1	0	95	17	131	0	0	504	0
11. Colonel Durham Street & Seventh Avenue	0	21	0	0	102	60	39	62	1	2	180	0

Background PM

Intersection	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
1. Lightfighter Drive & First Avenue	270	0	107	103	0	149	0	1316	153	71	1688	0
2. Lightfighter Drive & Second Avenue	5	1	8	162	5	601	713	803	1	2	1153	209
3. Lightfighter Drive & General Jim Moore Boulevard	967	605	7	7	533	141	99	193	677	8	259	7
4. Colonel Durham Street & Malmedy Road	0	45	5	170	37	0	0	0	0	6	0	213
5. Gigling Road & General Jim Moore Boulevard	57	1369	368	67	1158	46	18	12	27	207	42	218
6. Gigling Road & Malmedy Road	12	25	6	9	27	5	3	400	39	12	352	13
7. Gigling Road & Parker Flatts Cut Off Road	65	21	64	0	3	0	2	376	8	36	324	2
8. Normandy Road & General Jim Moore Boulevard	49	1604	110	31	1325	45	45	27	33	68	28	6
9. Coe Avenue & General Jim Moore Boulevard	153	1344	0	0	827	553	465	0	97	0	0	0
10. Gigling Road & Seventh Avenue	0	0	0	0	0	25	34	436	0	0	163	1
11. Colonel Durham Street & Seventh Avenue	0	40	0	0	24	14	44	113	1	0	74	0

Background with Plan AM

Intersection	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
1. Lightfighter Drive & First Avenue	198	0	56	76	4	96	0	1444	205	113	1436	0
2. Lightfighter Drive & Second Avenue	17	23	53	366	16	672	517	1050	7	41	855	164
3. Lightfighter Drive & General Jim Moore Boulevard	693	532	10	31	439	80	186	223	1084	45	288	49
4. Colonel Durham Street & Malmedy Road	10	88	5	246	46	0	0	10	20	13	10	394
5. Gigling Road & General Jim Moore Boulevard	47	1076	233	205	1325	46	22	94	75	460	31	123
6. Gigling Road & Malmedy Road	30	57	21	36	31	13	3	468	16	38	563	18
7. Gigling Road & Parker Flatts Cut Off Road	17	17	59	7	26	6	8	416	91	115	584	0
8. Normandy Road & General Jim Moore Boulevard	122	1144	167	74	1466	149	65	78	118	277	70	35
9. Coe Avenue & General Jim Moore Boulevard	221	796	1	0	1327	525	533	0	430	0	0	0
10. Gigling Road & Seventh Avenue	0	0	0	3	0	163	55	147	0	0	513	1
11. Colonel Durham Street & Seventh Avenue	12	24	20	0	103	74	65	104	8	13	203	0

Background with Plan PM

Intersection	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
1. Lightfighter Drive & First Avenue	284	0	117	103	0	149	0	1501	171	100	1834	0
2. Lightfighter Drive & Second Avenue	20	23	59	198	32	615	723	978	11	84	1301	238
3. Lightfighter Drive & General Jim Moore Boulevard	1137	644	25	55	600	174	140	283	836	44	318	45
4. Colonel Durham Street & Malmedy Road	10	75	7	288	75	0	0	10	20	9	10	316
5. Gigling Road & General Jim Moore Boulevard	57	1481	410	163	1245	46	18	12	27	240	42	294
6. Gigling Road & Malmedy Road	12	53	38	15	49	5	3	551	39	37	481	20
7. Gigling Road & Parker Flatts Cut Off Road	65	39	96	0	17	6	10	556	8	61	479	2
8. Normandy Road & General Jim Moore Boulevard	49	1757	219	31	1446	45	45	27	33	153	28	6
9. Coe Avenue & General Jim Moore Boulevard	153	1475	0	0	918	669	596	0	97	0	0	0
10. Gigling Road & Seventh Avenue	0	0	0	2	0	93	121	452	0	0	183	4
11. Colonel Durham Street & Seventh Avenue	12	43	20	0	28	45	70	154	16	25	127	0

Cumulative AM

Intersection	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
1. Lightfighter Drive & First Avenue	184	0	46	76	4	96	0	1504	197	100	1400	0
2. Lightfighter Drive & Second Avenue	2	1	1	319	4	579	532	1089	2	5	901	177
3. Lightfighter Drive & General Jim Moore Boulevard	676	650	2	5	502	32	161	224	1016	80	375	36
4. Colonel Durham Street & Malmedy Road	0	164	3	222	16	0	0	0	0	51	0	427
5. Gigling Road & General Jim Moore Boulevard	47	1170	271	162	1405	46	22	94	75	432	31	178
6. Gigling Road & Malmedy Road	30	45	7	30	9	39	3	446	16	39	559	121
7. Gigling Road & Parker Flatts Cut Off Road	17	9	45	7	11	0	5	378	91	90	690	0
8. Normandy Road & General Jim Moore Boulevard	122	1276	119	74	1518	149	65	78	118	190	70	35
9. Coe Avenue & General Jim Moore Boulevard	221	838	1	0	1324	493	575	0	430	0	0	0
10. Gigling Road & Seventh Avenue	0	0	0	0	0	0	17	131	0	0	805	0
11. Colonel Durham Street & Seventh Avenue	0	21	0	0	308	184	55	85	1	2	205	0

Cumulative PM

Intersection	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
1. Lightfighter Drive & First Avenue	270	0	107	103	0	149	0	1443	153	71	1821	0
2. Lightfighter Drive & Second Avenue	5	1	8	125	5	513	734	910	1	2	1359	247
3. Lightfighter Drive & General Jim Moore Boulevard	1082	753	7	7	632	101	116	239	684	65	427	39
4. Colonel Durham Street & Malmedy Road	0	158	5	200	21	0	0	0	0	54	0	357
5. Gigling Road & General Jim Moore Boulevard	57	1487	407	67	1322	46	18	12	27	218	42	363
6. Gigling Road & Malmedy Road	12	25	6	9	27	37	3	439	39	44	477	126
7. Gigling Road & Parker Flatts Cut Off Road	65	21	64	0	3	0	2	415	8	36	593	2
8. Normandy Road & General Jim Moore Boulevard	49	1761	110	31	1499	45	45	27	33	68	28	6
9. Coe Avenue & General Jim Moore Boulevard	153	1424	0	0	916	640	542	0	97	0	0	0
10. Gigling Road & Seventh Avenue	0	0	0	0	0	0	34	436	0	0	414	1
11. Colonel Durham Street & Seventh Avenue	0	40	0	0	250	152	60	126	1	0	109	0

Cumulative with Plan AM

Intersection	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
1. Lightfighter Drive & First Avenue	198	0	56	76	4	96	0	1586	205	113	1549	0
2. Lightfighter Drive & Second Avenue	17	23	53	333	16	580	542	1166	7	41	1049	206
3. Lightfighter Drive & General Jim Moore Boulevard	819	695	10	21	550	40	202	276	1099	100	440	80
4. Colonel Durham Street & Malmedy Road	10	201	5	283	30	0	0	10	20	60	10	519
5. Gigling Road & General Jim Moore Boulevard	47	1219	290	205	1506	46	22	94	75	454	31	267
6. Gigling Road & Malmedy Road	30	57	21	36	31	44	3	525	16	69	671	131
7. Gigling Road & Parker Flatts Cut Off Road	17	17	59	7	26	6	8	473	91	115	835	0
8. Normandy Road & General Jim Moore Boulevard	122	1344	167	74	1641	149	65	78	118	277	70	35
9. Coe Avenue & General Jim Moore Boulevard	221	896	1	0	1416	611	633	0	430	0	0	0
10. Gigling Road & Seventh Avenue	0	0	0	0	0	0	55	147	0	0	889	1
11. Colonel Durham Street & Seventh Avenue	12	24	20	0	316	207	81	124	8	13	228	0

Cumulative with Plan PM

Intersection	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
1. Lightfighter Drive & First Avenue	284	0	117	103	0	149	0	1628	171	100	1967	0
2. Lightfighter Drive & Second Avenue	20	23	59	157	32	516	744	1085	11	84	1523	276
3. Lightfighter Drive & General Jim Moore Boulevard	1267	805	25	43	741	119	157	329	839	92	502	89
4. Colonel Durham Street & Malmedy Road	10	204	7	312	53	0	0	10	20	75	10	463
5. Gigling Road & General Jim Moore Boulevard	57	1599	449	163	1438	46	18	12	27	222	42	466
6. Gigling Road & Malmedy Road	12	53	38	15	49	49	3	590	39	81	593	149
7. Gigling Road & Parker Flatts Cut Off Road	65	39	96	0	17	6	10	595	8	61	763	2
8. Normandy Road & General Jim Moore Boulevard	49	1914	219	31	1620	45	45	27	33	153	28	6
9. Coe Avenue & General Jim Moore Boulevard	153	1555	0	0	1007	756	673	0	97	0	0	0
10. Gigling Road & Seventh Avenue	0	0	0	0	0	0	121	452	0	0	517	4
11. Colonel Durham Street & Seventh Avenue	12	43	20	0	269	203	86	161	16	25	162	0

Alternatives Memorandum

FEHR PEERS

MEMORANDUM

Date:	June 10, 2019
To:	Kurt Overmeyer, City of Seaside Neal Payton, Torti Gallas + Partners Megan Jones, Rincon Consultants
From:	Daniel Rubins and Ashley Brooks, Fehr & Peers
Subject:	**Campus Town Specific Plan in Seaside, California – Alternatives**

SJ17-1728

The Campus Town Specific Plan Environmental Impact Report (EIR) will present two alternatives, not including a No Build Alternative, in addition to the preferred alternative, the Proposed Plan. This memorandum presents the trip generation and vehicle miles traveled (VMT) estimates for the following Campus Town Specific Plan alternative land use plans:

- Reduced Buildout/Clustered Development (called "Reduced Buildout"), and
- Increased Housing Density/Increased Employment Generating Uses (called "Increased Housing/Employment")

The trip generation and VMT per service population estimates for the alternative land use plans are compared to the Plan Conditions (referred to as "the Plan" in this memo) studied in the *Campus Town Specific Plan Draft Transportation Analysis* report (Fehr & Peers, June 2019). The comparison of trip generation and VMT is used to evaluate whether the alternative land use plans would result in fewer significant impacts, similar significant impacts, or more significant impacts compared to the transportation impacts caused by the Plan.

Plan Alternatives

The proposed *Campus Town Specific Plan* (the Plan) is a mixed-use area in northern Seaside just south of California State University at Monterey Bay (CSUMB). The Plan will consist of residential, hotel, office and retail land uses, including student-housing units to directly serve CSUMB. Generally, the Plan area is

bounded by Lightfighter Drive and Colonel Durham Street to the north, Seventh Avenue to the west, Gigling Road to the south and First Avenue to the east.

Table 1 summarizes the building sizes assumed for the Plan and the two-lane use alternatives. The Reduced Buildout Alternative is approximately 75 percent of the Plan's single-family homes, apartments and retail land uses, while the hotel rooms and youth hostel rooms are unchanged and the office is less than 40 percent of the Plan's size. A clustered-design approach would be implemented to preserve more of the mature oak tree grove located west of General Jim Moore Boulevard. The Increased Housing/Employment Alternative would increase the number of apartments by 60 percent and amount of retail by approximately 80 percent, and almost double the amount of office square footage. The hotel rooms, youth hostel, and number of single-family homes would remain unchanged.

Table 1: Campus Town Specific Plan Alternatives Land Use

Scenario	Total Development by Land Use Type		
	Office	Residential	Retail
Draft Transportation Impact Analysis			
The Plan	50,000 sf office	885 single-family homes 600 apartments 250 room hotel 75 room youth hostel	150,000 sf retail
Plan Alternatives			
Reduced Buildout/Clustered Development	18,750 sf office	669 single-family homes 446 apartments 250 room hotel 75 room youth hostel	115,000 sf retail
Increased Housing Density/Increased Employment Generating Uses	145,000 sf office	885 single-family homes 971 apartments 250 room hotel 75 room youth hostel	275,000 sf retail

Notes:
sf = square feet
Source: Rincon Consultants, 2019.

Trip Generation Estimates

To capture the effect of the proposed land use mix on vehicle trip generation, trips for the Plan and Plan Alternatives were estimated using the MainStreet web-based transportation analysis method. MainStreet

creates adjustments to the Institute of Transportation Engineers (ITE) *Trip Generation Manual, 9th Edition* method of applying rates to the individual land uses and summing the results, which has been shown to overestimate traffic generation for mixed-use developments (MXDs). Specifically, MainStreet accounts for the balanced mix of land uses, compact design, good neighborhood connectivity and walkability, and location efficiency of the proposed Plan.

Table 2 presents the trip generation summary for the Plan and the two alternatives. The values presented below include the mixed-use reductions estimated by the MainStreet model. **Attachment A** shows the full trip generation calculations for the Plan and the two Plan Alternatives.

Table 2: Campus Town Specific Plan Alternatives Trip Generation

Scenario	Daily		AM Peak Hour		PM Peak Hour	
	Vehicle Trips	% Change from the Plan	Vehicle Trips	% Change from the Plan	Vehicle Trips	% Change from the Plan
Draft Transportation Impact Analysis						
The Plan	17,814	---	1,086	---	1,561	---
Alternatives						
Reduced Buildout/Clustered Development	13,550	-23.9%	810	-25.4%	1,166	-25.3%
Increased Housing Density/Increased Employment Generating Uses	23,679	32.9%	1,384	27.4%	2,001	28.2%

Source: Fehr & Peers, 2019.

As shown in **Table 2** above, the Increased Housing/Employment Alternative generates more vehicle trips (23,679 daily trips) than the Plan (17,814 daily trips), and the Reduced Buildout Alternative generates fewer vehicle trips (13,550 daily trips) than the Plan.

Vehicle Miles Traveled (VMT)

This section presents the qualitative discussion regarding the change in daily VMT per service population estimates for the Campus Town Specific Plan and its alternatives. The TA presents the project generated VMT per service population estimated using the AMBAG travel model (see Chapter 4 of the TA). The AMBAG travel model was not re-run to estimate the project generated VMT per service population for each alternative. Rather a qualitative evaluation was done for each alternative.

The California Household Travel Survey (CHTS) was used to determine the average trip lengths for residents and for employees in the AMBAG region. The average trip length of a residential and employee trip is 23.0 and 21.6 miles, respectively. This information, combined with the mix of residents and employees in the service population of each Alternative, was used to determine if the VMT per service population ratio would increase or decrease compared to the Proposed Plan for each Alternative.

The Reduced Buildout Alternative includes a proportional reduction in residents and employees compared to the Proposed Plan. As seen in **Table 3**, the number of residents decreases from 4,900 to 3,680 and the number of employees decreases from 750 to 540. This is approximately a 25 percent reduction in residents and employees resulting in the same mix of residents and employees in the service population for the Reduced Buildout Alternative. Therefore, because the ratio of residents-to-employees remains the same and the average trip length for the development would remain the same, the project generated VMT per service population of the Reduced Buildout Alternative is expected to be similar to the Proposed Plan.

The Increased Housing/Employment has an increase in residents and employees. As seen in **Table 3**, the number of residents increases from 4,900 to 6,125 and the number of employees increases from 750 to 1,444. This is a 25 percent increase in the number of residents and approximately double the number of employees. The Increase Housing/Employment Alternative has a larger increase in employees compared to the increase in residents. Given that employees have a lower average trip length compared to residents, the Increased Housing/Employment Alternative results in a lower VMT per service population compared to the Proposed Plan.

Table 3: Population by Land Use

Land Use	Unit	Density (persons per unit)	The Plan		Reduced Buildout		Increase Housing/ Employment	
			Size	Population (persons)	Size	Population (persons)	Size	Population (persons)
Residents								
Housing Units	DU	3.30	1,485	4,900	1,115	3,680	1,856	6,125
Employees								
Hotel Rooms	RM	0.43	250	108	250	108	250	108
Youth Hostel Rooms	RM	0.43	75	33	75	33	75	33
Retail, Dining, and Entertainment	KSF	2.90	150	436	115	334	275	798
Office, Flex, "Maker Space," & Light Industrial	KSF	3.48	50	174	18.75	65	145	505
Total Population				**5,651**		**4,220**		**7,569**

Source: Natelson Company. 2001. *Employment Density Study Summary Report*. October 2001. DOF 2018. E-5 Population and Housing Estimates for Cities, Counties, and the State, 2011-2018 with 2010 Census Benchmark.

Transportation Impacts Alternatives Comparisons

The transportation impact analysis evaluated the potential impact to each mode of transportation. **Table 4** summarizes the qualitative assessment of each alternative's likely effect on the transportation system. **Table 4** indicates the order of magnitude and direction of how transportation impacts for the alternatives compare to the Plan. This assessment shows that for each mode of transportation, fewer or similar significant impacts would occur with the Plan Alternatives.

Table 4: Campus Town Transportation Impacts Alternatives Comparison

Transportation Impact Area	Are significant impacts identified in the TA/EIR for the Original Plan?	Alternatives to The Plan	
		Reduced Buildout/Clustered Development/Oak Avoidance	Increased Jobs-Housing Ratio
Environmental Review			
Vehicle Miles Traveled (VMT) per Service Population	No	≈	↓
Transit Facilities	No	≈	≈
Bicycle and Pedestrian Facilities	Yes	≈	≈
Operations Review			
Intersection Deficiencies	Yes	↓	↑
Freeway Deficiencies	No	↓	↑
Transit Ridership	No	↓	≈

Notes:

↑ = The land use alternative would add impacts or increase the severity of impacts.

↓ = The land use alternative would slightly reduce impacts or reduce the severity of impacts (in the 5-20% range).

↓↓ = The land use alternative would moderately reduce impacts or reduce the severity of impacts (in the 20-50% range).

↓↓↓ = The land use alternative would greatly reduce impacts or reduce the severity of impacts (>50% range).

≈ = The land use alternative would have similar impacts.

1. Facilities Review assumes that the design and facilities are similar to those proposed in the Plan for each of the Plan Alternatives, including, but not limited to, roundabouts, bus stops/stations, and pedestrians crossing treatments.

Source: Fehr & Peers, 2019.

Attachments

Attachment A: Trip Generation

Attachment A

Trip Generation

Table A-1: Campus Town Specific Plan – The Plan Trip Generation

ITE #	Land Use Type	#	Unit[1]	Weekday	AM Peak Hour			PM Peak Hour		
				Total	Total	In	Out	Total	In	Out
Proposed Plan (A)										
210	Single-Family Detached Housing	885	du	8,425	664	166	498	885	558	327
220	Apartment	600	du	3,990	306	61	245	372	242	130
310	Hotel	250	rm	2,043	133	78	55	150	77	74
320	Motel (Youth Hostel)	75	rm	422	34	12	22	35	19	16
710	General Office Building	50	ksf	775	110	97	13	134	23	111
820	Shopping Center	150	ksf	6,405	144	89	55	557	267	290
	Net Raw Plan Trips (A)			**21,634**	**1,327**	**446**	**881**	**2,048**	**1,169**	**880**
MXD+ Trip Reductions (B)										
210	Single-Family Detached Housing			*-1,202*	*-135*	*-34*	*-101*	*-202*	*-127*	*-75*
220	Apartment			*-569*	*-62*	*-12*	*-50*	*-85*	*-55*	*-30*
310	Hotel			*-292*	*-27*	*-16*	*-11*	*-34*	*-18*	*-16*
320	Motel (Youth Hostel)			*-60*	*-7*	*-2*	*-5*	*-8*	*-4*	*-4*
710	General Office Building			*-111*	*-22*	*-20*	*-2*	*-30*	*-5*	*-25*
820	Shopping Center			*-914*	*-29*	*-18*	*-11*	*-127*	*-61*	*-66*
	Net MXD+ Trip Reductions (B)			***-3,148***	***-282***	***-102***	***-180***	***-486***	***-270***	***-216***
Pass-By Trip Reductions (C)										
820	Shopping Center Pass-By Reduction of 25 Percent			*-1,098*	*-23*	*-14*	*-9*	*-86*	*-41*	*-45*
	Net Pass-By Trip Reductions (C)			***-1,098***	***-23***	***-14***	***-9***	***-86***	***-41***	***-45***
	Total Reductions (D=B+C)			***-4,246***	***-305***	***-116***	***-189***	***-572***	***-311***	***-261***
	Total Trip Generation (A-D)			**17,814**	**1,086**	**387**	**699**	**1,561**	**875**	**687**

Notes:
1. du=dwelling units; rm=rooms; ksf=1,000 square feet

Source: Fehr & Peers, 2018.

Table A-2: Campus Town Specific Plan – Reduced Buildout/Clustered Development Alternative Trip Generation

ITE #	Land Use Type	#	Unit[1]	Weekday	AM Peak Hour			PM Peak Hour		
				Total	Total	In	Out	Total	In	Out
Proposed Plan (A)										
210	Single-Family Detached Housing	669	du	6,369	126	377	502	421	248	669
220	Apartment	446	du	2,966	45	182	227	180	97	277
310	Hotel	250	rm	2,043	133	78	55	150	77	74
320	Motel (Youth Hostel)	75	rm	422	34	12	22	35	19	16
710	General Office Building	18.75	ksf	207	29	26	3	28	5	23
820	Shopping Center	115	ksf	4,911	110	68	42	427	205	222
	Net Raw Plan Trips (A)			**16,918**	**355**	**681**	**1,035**	**907**	**680**	**1,586**
MXD+ Trip Reductions (B)										
210	Single-Family Detached Housing			*-868*	*-25*	*-73*	*-98*	*-90*	*-52*	*-142*
220	Apartment			*-405*	*-9*	*-36*	*-45*	*-38*	*-21*	*-59*
310	Hotel			*-279*	*-15*	*-11*	*-26*	*-16*	*-16*	*-32*
320	Motel (Youth Hostel)			*-58*	*-2*	*-4*	*-6*	*-4*	*-3*	*-7*
710	General Office Building			*-28*	*-5*	*-1*	*-6*	*-1*	*-5*	*-6*
820	Shopping Center			*-670*	*-14*	*-8*	*-22*	*-43*	*-47*	*-90*
	Net MXD+ Trip Reductions (B)			***-2,308***	***-70***	***-133***	***-203***	***-192***	***-144***	***-336***
Pass-By Trip Reductions (C)										
820	Shopping Center Pass-By Reduction of 25 Percent			*-1,060*	*-13*	*-9*	*-22*	*-40*	*-44*	*-84*
	Net Pass-By Trip Reductions (C)			***-1,060***	***-13***	***-9***	***-22***	***-40***	***-44***	***-84***
	Total Reductions (D=B+C)			***-3,368***	***-83***	***-142***	***-225***	***-232***	***-188***	***-420***
	Total Trip Generation (A-D)			**13,550**	**272**	**539**	**810**	**675**	**492**	**1,166**

Notes:
1. du=dwelling units; rm=rooms; ksf=1,000 square feet

Source: Fehr & Peers, 2019.

Table A-3: Campus Town Specific Plan – Increased Housing Density/Increased Employment Generating Uses Alternative Trip Generation

ITE #	Land Use Type	#	Unit[1]	Weekday	AM Peak Hour			PM Peak Hour		
				Total	Total	In	Out	Total	In	Out
Proposed Plan (A)										
210	Single-Family Detached Housing	885	du	8,425	166	498	664	558	327	885
220	Apartment	971	du	6,457	99	396	495	391	211	602
310	Hotel	250	rm	2,043	133	78	55	150	77	74
320	Motel (Youth Hostel)	75	rm	422	34	12	22	35	19	16
710	General Office Building	145	ksf	1,599	226	199	27	216	37	179
820	Shopping Center	275	ksf	11,743	264	164	100	1,020	490	530
	Net Raw Plan Trips (A)			**30,689**	**718**	**1,098**	**1,816**	**1,572**	**1,337**	**2,908**
MXD+ Trip Reductions (B)										
210	Single-Family Detached Housing			*-1,237*	*-35*	*-104*	*-139*	*-137*	*-80*	*-217*
220	Apartment			*-948*	*-21*	*-83*	*-104*	*-96*	*-52*	*-148*
310	Hotel			*-300*	*-16*	*-12*	*-28*	*-19*	*-18*	*-37*
320	Motel (Youth Hostel)			*-62*	*-3*	*-4*	*-7*	*-5*	*-4*	*-9*
710	General Office Building			*-235*	*-41*	*-6*	*-47*	*-9*	*-44*	*-53*
820	Shopping Center			*-1,723*	*-34*	*-21*	*-55*	*-121*	*-130*	*-251*
	Net MXD+ Trip Reductions (B)			***-4,505***	***-150***	***-230***	***-380***	***-387***	***-328***	***-715***
Pass-By Trip Reductions (C)										
820	Shopping Center Pass-By Reduction of 25 Percent			*-2,505*	*-33*	*-20*	*-52*	*-92*	*-100*	*-192*
	Net Pass-By Trip Reductions (C)			***-2,505***	***-33***	***-20***	***-52***	***-92***	***-100***	***-192***
	Total Reductions (D=B+C)			***-7,010***	***-183***	***-250***	***-432***	***-479***	***-428***	***-907***
	Total Trip Generation (A-D)			**23,679**	**535**	**848**	**1,384**	**1,093**	**909**	**2,001**

Notes:
1. du=dwelling units; rm=rooms; ksf=1,000 square feet

Source: Fehr & Peers, 2019.