

Appendix E

Traffic Evaluation

GREAT PARK NEIGHBORHOODS VESTING TENTATIVE TRACT MAPS (VTTMS) 19402, 19403, 19404, 19405, 19406 AND MASTER PLAN MODIFICATION BA 619

**CASE NUMBER 00956291-PTT
TRAFFIC EVALUATION**

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LIST OF ABBREVIATED TERMS

(1)	Reference
AC	Acreage
ADT	Average Daily Traffic
BOA	Buildout Approved
Caltrans	California Department of Transportation
CMP	Congestion Management Program
DU	Dwelling Units
GPN	Great Park Neighborhoods
HCM	Highway Capacity Manual
ICU	Intersection Capacity Utilization
ITAM	Irvine Transportation Analysis Model
ITAM TC	Irvine Transportation Analysis Model, TransCAD Version
ITE	Institute of Transportation Engineers
LOS	Level of Service
NITM	North Irvine Transportation Mitigation
OCTAM	Orange County Transportation Analysis Model
Project	Great Park Neighborhoods Vesting Tentative Tract Maps (VTTMs) 19402, 19403, 19404, 19405, 19406 and Master Plan Modification BA 619
R&D	Research and Development
STIY	Short Term Interim Year
tsf	Thousand Square Feet
TAZ	Traffic Analysis Zone
v/c	Volume-to-Capacity

1 EXECUTIVE SUMMARY

This report presents the results of the Traffic Evaluation (TE) for Great Park Neighborhoods, Vesting Tentative Tract Maps (VTTMs) 19402, 19403, 19404, 19405, 19406 and Master Plan Modification BA 619 (“Project”), which is located in Planning Area 51 in the City of Irvine. The study serves as the basis of design for local roadways and driveway intersections in the immediate vicinity of the Project. The Project is a combination of previously entitled residential units and conversion of previously entitled non-residential uses and does not increase site trip generation (as discussed below), so a Traffic Evaluation is appropriate. This traffic evaluation and access analysis is to verify that overall findings are consistent with prior GPN traffic analyses.

On March 21, 2023 the Irvine City Council approved an update to the City’s Traffic Study Guidelines in order to address both VMT and LOS analyses. Consistent with this Council action, this report analyzes Level of Service (LOS) to evaluate whether improvements to the circulation network are required in order to achieve the LOS standards adopted by the City.

The North Irvine Transportation Mitigation (NITM) Program was established in 2003 to identify mitigation and provide a funding mechanism for transportation improvements and mitigation needed in North Irvine.

Exhibit 1-1 illustrates the basic configuration of project roadways and access locations for Short Term Interim Year (STIY) conditions with Project VTTMs and Master Plan Modification. Exhibit 1-2 shows the traffic evaluation study area intersection analysis locations.

1.1 PROJECT CHARACTERISTICS

The project consists of GPN VTTMs 19402, 19403, 19404, 19405, 19406 and Master Plan Modification BA 619. VTTM 19402 involves replacing 645,700 square feet of office use entitled per VTPM 2021-203 with 310 multi-family dwelling units southwest of Marine Way and northwest of Bake Parkway on Parcel 2.

VTTM 19403 involves replacing 400,000 square feet of office use and 267,000 square feet of warehouse use entitled per VTPM 2021-202 with 329 multi-family dwelling units south of Marine Way on Parcel 7 and on the City-2 parcel north of Marine Way, the assumed transportation center parking is replaced with 145 multi-family dwelling units.

VTTM 19404 (located between the railroad tracks and Barranca Parkway, on both sides of Marine Way) involves replacing 402,000 square feet of medical office use and 106,000 square feet of office use entitled per VTPM 2024-110 with 188 multi-family units on Parcel 10, 117 multi-family units on Parcel 11 and on the City-1 parcel, assumed transportation center parking is replaced by 49 multi-family dwelling units.

For the purposes of this analysis, VTTM 19405 (located north of the railroad tracks) involves replacing 451 multi-family dwelling units and 25,000 square feet of retail entitled per VTTM 19284 with 274 multi-family dwelling units west of Marine Way on Parcel 13 and 147 multi-family dwelling units east of Marine Way on Parcel 14.

EXHIBIT 1-1: PROJECT ROADWAY CONFIGURATION AND TRAFFIC ANALYSIS ZONES

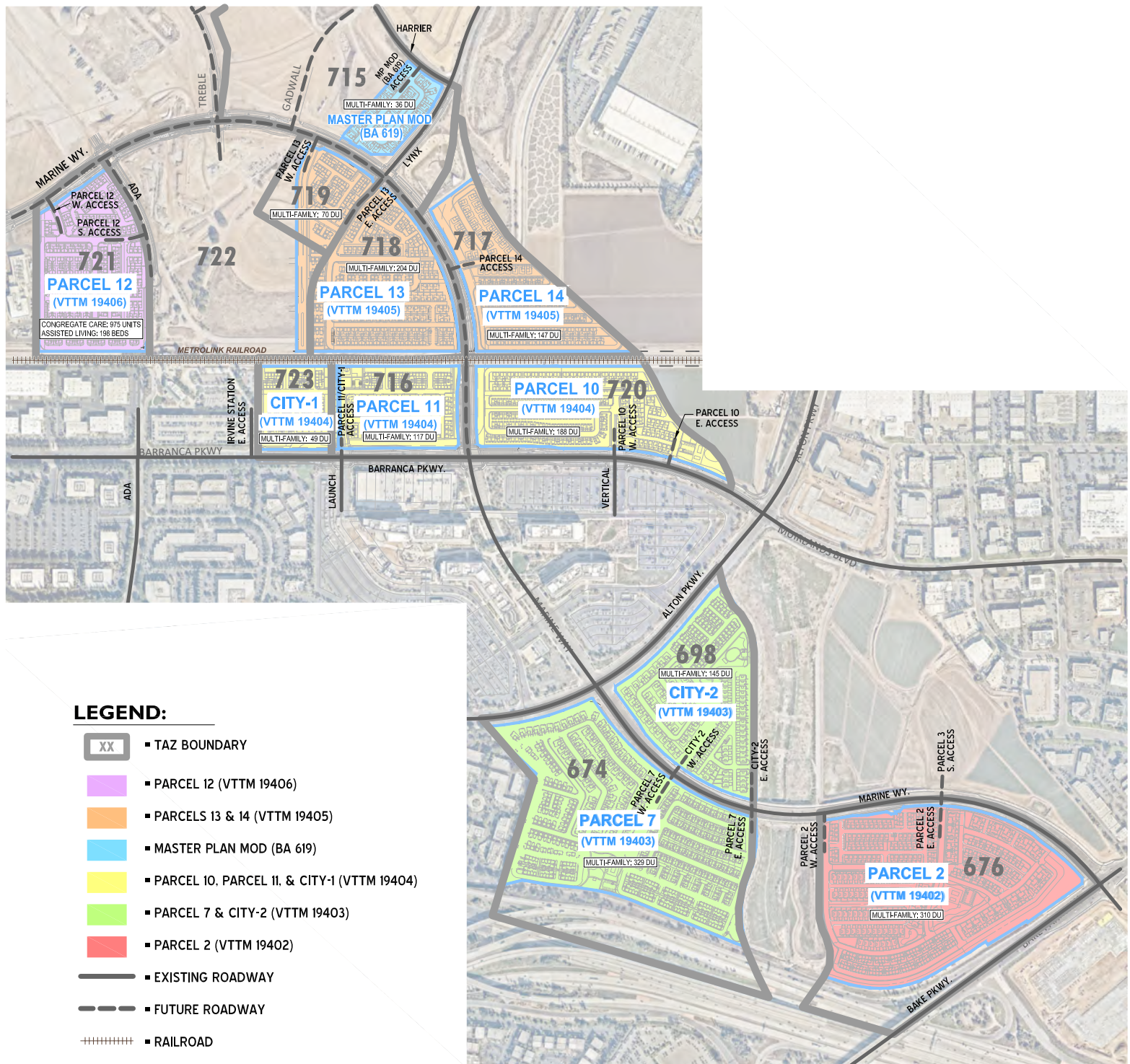
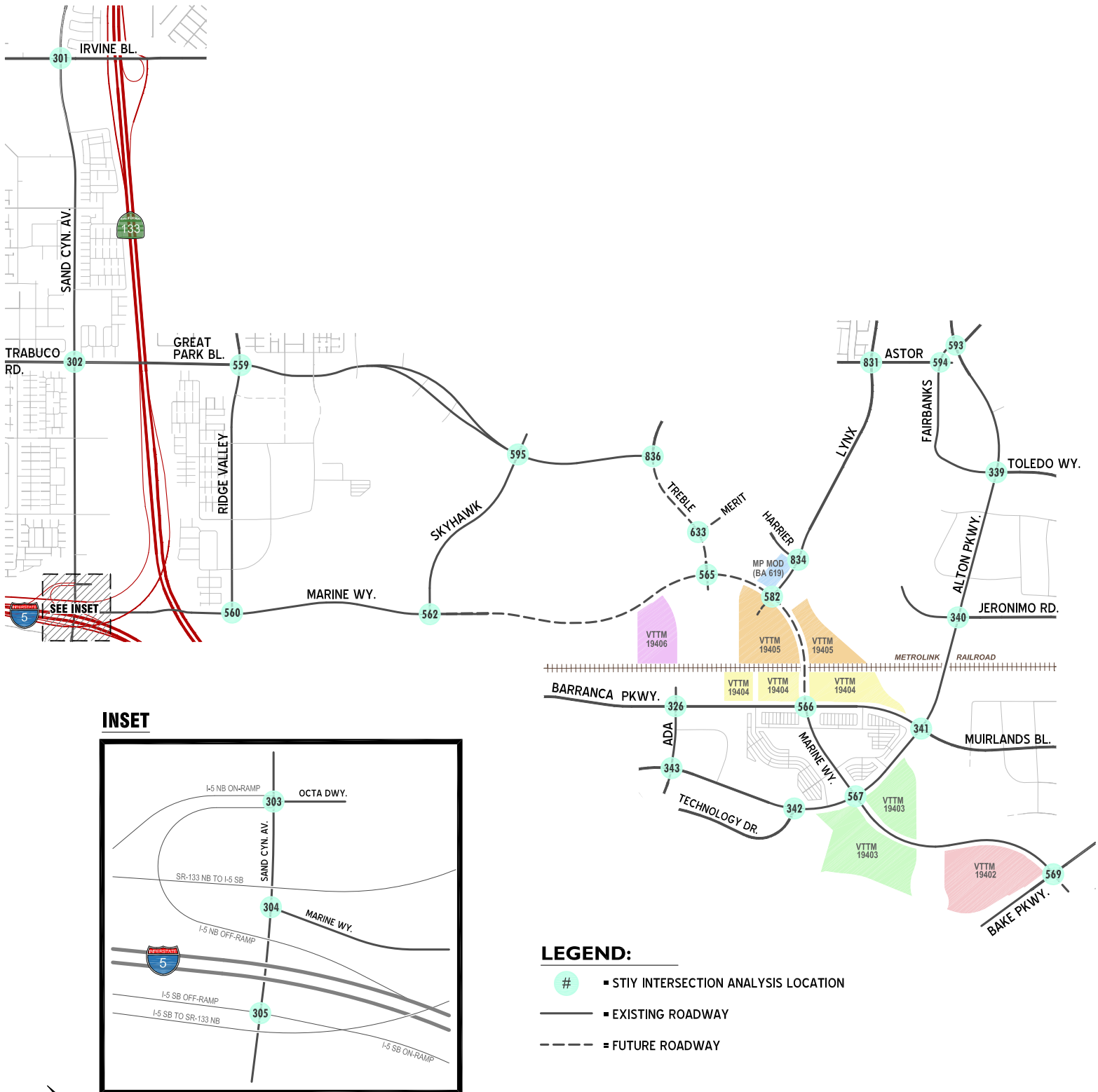


EXHIBIT 1-2: TRAFFIC EVALUATION STUDY AREA



VTTM 19406 involves replacing 198,000 square feet of office use entitled per VTTM 19284 with 219 multi-family dwelling units on Parcel 12. It is anticipated that an application for an alternative land use in the same geographical area as VTTM 19406 will be submitted prior to approval of the VTTM. This alternative use is anticipated to be a continuing care retirement community (“CCRC”) on the above referenced property with approximately 975 congregated care units plus 198 beds for assisted living.

Master Plan Mod BA 619 involves a modification to the District 6 Master Plan by replacing 69 senior affordable dwelling units with 36 multi-family dwelling units.

The total reduction in non-residential land uses is 1,349,700 square feet of office use, 25,000 square feet of retail use, 402,000 square feet of medical office use, and 267,000 square feet of warehouse use.

This project area was previously studied in the following approved technical documents:

- Master Plan Modification VTTM 19284 Access Study (February, 2025)
- District 2 VTPM 2021-202 & VTPM 2021-203 and District 6 VTPM 2024-110 and VTTM 19284 Traffic Analysis (August, 2024)
- Parcel 3, Consolidated Access Assessment (Urban Crossroads, January 18, 2024)
- Great Park Neighborhoods District 2 VTPM 2021-204 & VTPM 2022-163 and District 3 VTPM 2021-201 Traffic Analysis (Urban Crossroads, May 15, 2023)

As shown on Table 4-2, the AM and PM peak hour STIY LOS at the Fairbanks / Astor intersection is projected to be LOS F (using the HCM methodology) without or with the Project. The Project change at this intersection is nominal (less than 1%), and is below the Project impact threshold as discussed in Chapter 2.0. At all other traffic evaluation study area locations, the STIY peak hour intersection LOS is acceptable without or with the Project.

1.2 ACCESS ANALYSIS

The performance of intersections and roadway segments providing access to the Project VTTMs and Master Plan Modification are examined in terms of (1) STIY conditions and, (2) General Plan Buildout (BOA) conditions. Recommendations are provided for lane geometry, left-turn storage requirements, intersection / driveway spacing, driveway lengths, corner clearance, and signalization to accommodate the development maps.

The following project area intersections meet the peak hour warrants for a traffic signal with the Project VTTMs and Master Plan Modification:

- 500. Irvine Station E. Access at Barranca Parkway (if full access)
- 504. Parcel 7 W. Access – City-2 W Access at Marine Way
- 503. Parcel 2 E. Access – Parcel 3 S. Access at Marine Way
- 565. Treble at Marine Way
- 834. Lynx at Harrier (a signal is not recommended and a deviation request is included in Appendix 5.6)
- 582. Lynx – Parcel 13 E. Access at Marine Way

For BOA with Project VTTMs and Master Plan Modification conditions with surrounding unrelated development, intersection 568 – Ada at Marine Way is also anticipated to satisfy traffic signal warrants.

1.3 SPECIAL ISSUES

A number of special issues were evaluated as part of the traffic analysis for the VTTMs and Master Plan Modification, and detailed information pertaining to each of the special issues is provided in Chapter 5 of this report.

Pedestrian and Bicycle Circulation – The Project VTTMs and Master Plan Modification are all connected to the Irvine Station via existing and proposed Class I off-street trails as well as existing and proposed Class II on-street bike lanes. To help promote the use of on-street bike lanes, the proposed sections of Marine Way adjacent to the VTTMs will be construction as protected bike lanes, consistent with those recently constructed by the City along Cadence.

Within the Project VTTMs and Master Plan Modification, goals of the *2045 Irvine General Plan (2024)* for effective non-motorized transportation (Objectives C-3, C-4, C-5, and C-6) are supported via the following planned bike and pedestrian trails:

- Class I Bike & Pedestrian Trail along the north side of Marine Way from west of VTTM 19406 to Treble, transitioning to the south side of Marine Way from Treble to Alton Parkway, and along the north side of Marine Way from Alton Parkway to Bake Parkway.
- Class I Bike & Pedestrian Trail along the north side of Barranca Parkway from Marine Way to Irvine Station.
- Class II On-Street Bike lanes along Marine Way throughout the study area.
- Class II On-Street Bike lanes along Barranca Parkway / Muirlands Boulevard throughout the study area.
- Class II On-Street Bike lanes along Alton Parkway throughout the study area.
- Class II On-Street Bike lanes along Bake Parkway, Lynx, and Treble in the study area.
- Class II On-Street Bike along Ada south of Barranca Parkway.
- Sidewalks along Marine Way, Bake Parkway, Barranca Parkway, Alton Parkway, Gadwall, Harrier, and portions of Lynx, Treble, and Ada in the study area.
- Crosswalks at intersections along Marine Way, Bake Parkway, Barranca Parkway, and Alton Parkway in the study area.

Pedestrian / bicycle access to Irvine Station via the existing Marine Way alignment and City property between VTTM's 19405 and 19406 should be maintained to provide access for all residents, visitors, and employees traveling from north of the railroad tracks. That connection should be by the existing overhead crossing or future Ada grade separated crossing.

Transit – The Project VTTMs and Master Plan Modification are located close to the Irvine Station, which is a passenger rail and bus terminal served by Metrolink commuter rail lines, multiple Orange County Transportation Authority (OCTA) bus routes, and Amtrak. OCTA Stationlink is included along Ada and Alton Parkway.

VTTM's 19404, 19405, and 19406 as well as Master Plan Modification are all within ½ mile of the Irvine Station. Those residents can access the station via the existing pedestrian bridge at the Irvine Station as well as Class I off-street trails along Barranca, the Marine Way undercrossing currently under construction, the future Ada undercrossing. VTTM 19403 is approximately ¾ of a mile from the Irvine Station and VTTM 19402 is approximately 1 mile from the Irvine Station. As stated above, there are existing Stationlink stops along Alton. Those stops are less than ½ mile from VTTM 19403 and VTTM 19402.

CMP Checklist – The Orange County Congestion Monitoring Program (CMP) is in effect in the study area. The study area intersections are not projected to be impacted by the proposed Project VTTMs and Master Plan Modification. The Congestion Management Program checklist is provided in Appendix 5.4.

Non-Residential Conversion – As required by Section 9-51-6Tii of the Zoning Ordinance, part of the 2025 Zone Change, and to the degree residential units are built in the 8.1C Trails and Transit Oriented Development area, a corresponding reduction in allowable non-residential intensity shall occur in terms of equivalent traffic generation based on a.m. peak, p.m. peak, and average daily trips. The residential units within VTTM 19402, VTTM 19403, and a portion of VTTM 19404 are converted from non-residential uses. A summary of that conversion is included in Appendix 5.5.

2 INTRODUCTION

This report presents the results of the Traffic Evaluation (TE) for the Great Park Neighborhoods (GPN) Vesting Tentative Tract Maps (VTTMs) 19402, 19403, 19404, 19405, 19406 and Master Plan Modification BA 619 (Project), which is located in Planning Area 51 in the City of Irvine.

The purpose of this traffic evaluation and access analysis is to verify that overall findings are consistent with prior GPN traffic analyses. Appropriate short term interim year (STIY) improvements and circulation design features are also evaluated for the Project.

2.1 PROJECT OVERVIEW

The roadway configuration, project parcels, and respective traffic analysis zones associated with the project can be seen in Exhibit 1-1 (previously presented).

VTTM 19402 involves replacing 645,700 square feet of office use entitled per VTPM 2021-203 with 310 multi-family dwelling units southwest of Marine Way and northwest of Bake Parkway on Parcel 2.

VTTM 19403 involves replacing 400,000 square feet of office use and 267,000 square feet of warehouse use entitled per VTPM 2021-202 with 329 multi-family dwelling units south of Marine Way on Parcel 7 and on the City-2 parcel north of Marine Way, the assumed transportation center parking is replaced with 145 multi-family dwelling units.

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For the purposes of this analysis, VTTM 19405 (located north of the railroad tracks) involves replacing 451 multi-family dwelling units and 25,000 square feet of retail entitled per VTTM 19284 with 274 multi-family dwelling units west of Marine Way on Parcel 13 and 147 multi-family dwelling units east of Marine Way on Parcel 14.

VTTM 19406 involves replacing 198,000 square feet of office use entitled per VTTM 19284 with 219 multi-family dwelling units on Parcel 12. It is anticipated that an application for an alternative land use in the same geographical area as VTTM 19406 will be submitted prior to approval of the VTTM. This alternative use is anticipated to be a continuing care retirement community ("CCRC") on the above referenced property with approximately 975 congregate care units plus 198 beds for assisted living.

Master Plan Mod BA 619 involves a modification to the District 6 Master Plan by replacing 69 senior affordable dwelling units with 36 multi-family dwelling units.

The total reduction in non-residential land uses is 1,349,700 square feet of office use, 25,000 square feet of retail use, 402,000 square feet of medical office use, and 267,000 square feet of warehouse use.

For the purposes of this conservative analysis, the Project VTTMs and Master Plan Modification propose a total of 1,595 dwelling units, 975 congregate care units and 198 beds for assisted living.

2.2 ANALYSIS SCOPE AND METHODOLOGY

The analysis in this report identifies potential impacts of the Project VTTMs and Master Plan Modification based on STIY future traffic conditions for key roadway segments and intersections in the study area. The future cumulative growth setting (STIY) is based on the existing circulation system plus improvements that are planned to be in place in that time frame and the land use and development growth that is projected to occur in that time frame.

Future traffic conditions have been prepared using the Irvine Transportation Analysis Model, TransCAD Version (ITAMTC).

2.2.1 Traffic Evaluation Scenarios

The following traffic conditions are analyzed:

- Short Term Interim Year without Project (Existing Uses On-Site)
- Short Term Interim Year with Project VTTMs and Master Plan Modification

2.2.2 Traffic Evaluation Study Area

Exhibit 1-2 (previously presented) illustrates the study area defined in the approved Traffic Evaluation Scope of Work, seen in Appendix 1.1, and applied in the analysis that is summarized in this report. Intersection analysis locations for STIY conditions are as follows:

- Sand Canyon Avenue at Irvine Boulevard
- Sand Canyon Avenue at Great Park Boulevard (Trabuco Road)
- Sand Canyon Avenue at I-5 NB Ramps
- Sand Canyon Avenue at Marine Way
- Sand Canyon Avenue at I-5 SB Ramps
- Ridge Valley at Great Park Boulevard
- Ridge Valley at Marine Way
- Skyhawk at Great Park Boulevard
- Skyhawk at Marine Way
- Treble at Great Park Boulevard
- Treble at Merit
- Treble at Marine Way
- Lynx at Harrier
- Lynx at Marine Way
- Marine Way at Barranca Parkway
- Marine Way at Alton Parkway
- Bake Parkway at Marine Way
- Ada at Barranca Parkway
- Alton Parkway at Barranca Parkway
- Lynx at Astor

- Fairbanks at Astor
- Ada at Alton Parkway
- Technology Drive (East) at Alton Parkway
- Alton Parkway at Jeronimo Road
- Alton Parkway at Toledo Way
- Alton Parkway at Fairbanks

2.2.3 Special Issues

A number of special issues are evaluated as part of the traffic analysis for the VTTMs and Master Plan Modification. The special issues, which are discussed in detail in the Special Issues chapter (Chapter 5) of this report, deal with the following subject areas:

Project Access Analysis – Access to Project VTTMs and Master Plan Modification is provided primarily by Marine Way, Lynx, Treble, Harrier, Alton Parkway, Bake Parkway, and Barranca Parkway. Lane geometry, turn lane storage requirements, signalization, driveway lengths, and distances between intersections are addressed. This special issue area provides the specific site access information to support the project application and serves as a basis for the design of vesting tentative parcel map and vesting tentative tract map roadways and intersections. Exhibit 2-1 presents the study area for the access analysis. The Access Analysis was evaluated under both the STIY and the General Plan Buildout (BOA) scenarios.

Pedestrian and Bicycle Circulation – The pedestrian and bicycle circulation and corresponding traffic control measures within the project area are discussed in this section of the report, including how policies of Objective C-3, C-4, C-5, and C-6 of the *2045 Irvine General Plan* (2024) will be met with this project.

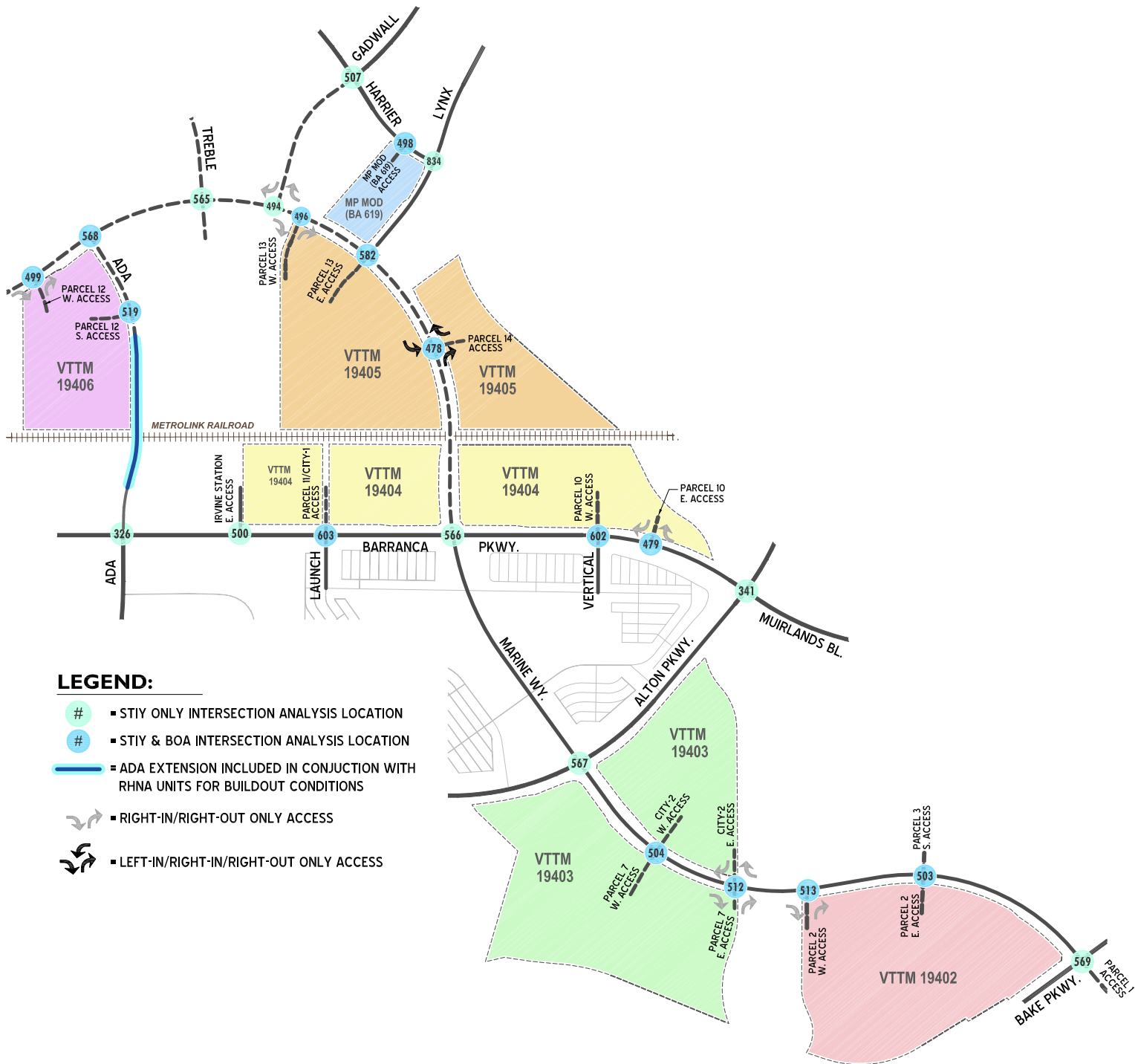
Transit – Existing transit services adjacent to the Project VTTMs and Master Plan Modification are discussed in this section of the report. The Project VTTMs and Master Plan Modification are located close to the Irvine Station, which is a passenger rail and bus terminal served by Metrolink commuter rail lines, multiple Orange County Authority (OCTA) bus routes, and Amtrak. This special issue identifies how the transit services and amenities within the project vicinity reflect the policies of Objective C-7 of the *2045 Irvine General Plan* (2024).

Congestion Management Program (CMP) Checklist – This special issue analyzes CMP facilities in the Traffic Evaluation study area and provides a supporting CMP Monitoring Checklist. Any CMP facility identified as being adversely affected by the proposed project is analyzed consistent with the CMP procedures.

2.2.4 Traffic Model Background

The ITAM TC traffic model is derived from the Orange County Transportation Analysis Model (OCTAM), which is maintained by the OCTA, and has been developed according to the Orange County sub-area traffic modeling guidelines that have been adopted by the OCTA. For descriptive purposes, the modeling processes in ITAM can be divided into the following three general components: (1) Trip Generation, (2) Trip Distribution/Mode Choice, and (3) Traffic Assignment.

EXHIBIT 2-1: ACCESS ANALYSIS LOCATIONS



For trip generation purposes, land use data, which is typically comprised of detailed information by acreage or floor area for non-residential uses and number of dwelling units by density classification for residential uses, which is used in combination with vehicle trip generation rates to produce vehicle trip generation estimates for the ITAM. Socioeconomic data such as population and employment is calculated as an interim step.

In the trip distribution/mode choice component of the ITAM, vehicle trip generation estimates are distributed using regional travel forecast data from the OCTAM model, thereby incorporating regional trip distribution patterns into the ITAM. The regional traffic data is obtained from the OCTAM regional model in the form of vehicle trips, and hence also incorporates mode choice relationships (i.e., vehicle trips, transit trips, etc.) established in the OCTAM regional model. The resulting vehicle trip patterns are converted to actual traffic volumes on the roadway system in the traffic assignment component of the ITAM. The traffic assignment component applies procedures that are sensitive to the capacity of the circulation system network and which are able to forecast peak hour (AM and PM) and average daily traffic (ADT) traffic volumes with reasonable reliability.

2.3 PERFORMANCE CRITERIA

Traffic operations of roadway facilities are described with the term "Level of Service" (LOS). LOS is a qualitative description of traffic flow based on such factors as speed, travel time, delay, and freedom to maneuver. Six levels are defined from LOS "A", representing completely free-flow conditions, to LOS "F", representing breakdown in flow resulting in stop-and-go conditions. LOS "E" represents operations at or near capacity, an unstable level, where vehicles are operating with the minimum spacing for maintaining uniform flow.

For study area intersections, the Level of Service standard is D (peak hour Intersection Capacity Utilization or ICU less than or equal to .90), except for Bake Parkway at Marine Way, where LOS E is acceptable.

The ICU analysis is based on peak hour volumes and uses individual turn movements and the corresponding intersection lane geometry to estimate level of service. Use of the ICU methodology is consistent with the City of Irvine's *Traffic Study Guidelines* (2023), and by practice, the ICU methodology assumes that intersections are signalized. The ICU LOS relationships are summarized in Table 2-1.

TABLE 2-1: ICU LEVEL OF SERVICE RANGES

Level of Service (LOS)	Intersection Capacity Utilization
A	0 – 0.60
B	0.61 – 0.70
C	0.71 – 0.80
D	0.81 – 0.90
E	0.91 – 1.00
F	Above 1.00

In the *Highway Capacity Manual* (HCM), 7th Edition (2022) intersection analysis methodology, the LOS at an intersection location is determined based on the total intersection delay and approach delay of the major and minor streets (in seconds per vehicle). The vehicle delay ranges that correspond to LOS "A" through "F" as specified in the HCM are summarized in Table 2-2.

TABLE 2-2: HCM INTERSECTION DELAY LEVEL OF SERVICE RANGES

Level of Service (LOS)	Unsignalized Intersection Delay (seconds/vehicle)
A	0 - 10.00
B	10.01 - 15.00
C	15.01 - 25.00
D	25.01 - 35.00
E	35.01 - 50.00
F	Above 50.00

The operations of unsignalized intersections have been evaluated using the methodology described in the HCM 7th Edition. The LOS rating is based on the weighted average control delay expressed in seconds per vehicle (see Table 2-2). At two-way or side-street stop-controlled intersections, level of service is calculated for each controlled approach and for the left turn movement from the major street, as well as for the intersection as a whole. For approaches composed of a single lane, the delay is computed as the average of all movements in that lane. For all-way stop controlled intersections, level of service is computed for the intersection as a whole.

2.4 RELATIONSHIP TO OTHER STUDIES

Several recent studies that have been carried out in this area are of relevance to the traffic analysis presented here. The projects and studies briefly summarized below have all been incorporated into the traffic models that are applied in this study.

Traffic Evaluation for District 1 VTTM 19728 & VTPM 2023-142, Urban Crossroads, Inc., October 2023 (Reference 1) – Trip generation and access evaluation of 87,000 square feet of Community Commercial (Retail), 8,000 square feet of Fast Food, and 926 Multi-Family residential dwelling units, along with the removal of Bosque between Great Park Boulevard and Beacon.

District 2 VTPM 2021-204 & VTPM 2022-163 and District 3 VTPM 2021-201 Traffic Analysis, Urban Crossroads, Inc., May 2023 (Reference 2) – This recent traffic study evaluated the potential impacts of locating 650,000 square feet of Warehouse/Industrial (GP) and 600,000 square feet of Office (GP) in District 2, along with 135,000 square feet of Warehouse/Industrial (GP) in District 3. Peak hour volume conditions, intersection configurations and traffic controls are evaluated, and LOS conditions were determined.

Bake Parkway Lane Geometric Alternatives Evaluation, Urban Crossroads, Inc., November 2022 (Reference 3) – This recent evaluation of alternative lane configurations along Bake Parkway between Rockfield Boulevard and the I-5 Northbound Ramps considered lane options related to the connection of Marine Way to Bake Parkway.

VTTM 19130 District 5S/6N Master Plan Access Study, Urban Crossroads, Inc., January 2022 (Reference 4) – This access study was prepared in support of two master plans: 00855280-PMP District 5 South Master Plan consists of 81 units located north of Treble, and 00856741-PMP District 5 South & District 6 North Master Plan which consisted of 1,178 units south of Treble.

District 1 South VTTM 19122 and District 6 VTTM 19121 Traffic Impact Analysis, Urban Crossroads, Inc., May 2021 (Reference 5) – This traffic study evaluated the potential impacts of locating 373 multi-family dwelling units in District 1 South and 400 multi-family dwelling units in District 6. Peak hour volume conditions, intersection configurations and traffic controls are evaluated, and LOS conditions were determined. A special issue addressed the potential addition of Great Park Boulevard from Skyhawk to Treble.

VTPM 2020-147 and VTPM 2019-146 Additive City of Hope Out-Patient Cancer Center and In-Patient Hospital at FivePoint Gateway Campus Traffic Evaluations, Urban Crossroads, Inc., November 2019 and June 2020 (Reference 6) – This traffic study evaluated the potential impacts of locating a 360,000 square foot City of Hope Outpatient Cancer Center and Hospital within the existing FivePoint Gateway Campus in GPN. Peak hour volume conditions, intersection configurations and traffic controls are evaluated, and LOS conditions were determined.

Traffic Evaluation for GP-3 Circulation, Urban Crossroads, Inc., July 2017 (Reference 7) – The couplet roadway configuration referenced as GP-2&3 between Bosque and GP-1 in the Orange County Great Park (OCGP) was studied to determine nearby LOS, traffic control measures and intersection turn lane lengths for study area roadways with the GP-2/GP-3 couplet.

Great Park Neighborhoods Districts 5 and 6 North VTTM 17940 Traffic Impact Analysis, Urban Crossroads, Inc., December 2015 (Reference 8) – The purpose of the traffic impact analysis was to evaluate the potential traffic and circulation impacts with VTTM 17940 in GPN Districts 5 and 6 North, and determine appropriate off-site mitigation measures and on-site circulation design features for the Project VTTM separately and combined with District 1 West VTTM 17939 and AVTTM 17368.

2020 Citywide Circulation Phasing Analysis, LSA, March 2020 (Reference 9) – This 2020 analysis report was prepared with oversight from the City of Irvine Circulation Phasing Task Force. Both existing and short term interim year traffic conditions were evaluated to develop recommendations for phasing of roadway and intersection improvement projects.

Heritage Fields Project 2012 General Plan Amendment / Zone Change TIA, Urban Crossroads, Inc., October 2012 (Reference 10) – This 2012 report presents the results of the traffic impact analysis (TIA) for the proposed Heritage Fields Project 2012 General Plan Amendment/Zone Change (the “2012 Modified Project”), which modifies the previously approved Heritage Fields/GPN project (the “2011 Approved Project”). The 2012 Modified Project amended the General Plan and zoning to combine Planning Areas 30 and 51. The combined Planning Area 51 consists of all of existing Planning Areas 30 and 51 plus approximately 11 acres between the current western boundary of Planning Area 51 and SR-133 between Trabuco Road and Irvine Blvd. The 2012 Modified Project includes 9,500 dwelling units within the 8.1 zoning, consisting of 3,625 previously approved dwelling units and 1,269 previously approved density bonus units, plus 3,412 dwelling units and 1,194 density bonus units (35% of 3,412) granted pursuant to state law.

NITM Five Year Study Update, City of Irvine, November 2021 (Reference 11) – This document summarized the results of a comprehensive NITM Program review. The circulation system improvements that are programmed to be fully funded by the NITM Program have been included in the STIY scenario analyzed in this study.

2.5 REFERENCES

1. "Traffic Evaluation for District 1 VTTM 19728 & VTPM 2023-142", Urban Crossroads, Inc., October 2023.
2. "District 2 VTPM 2021-204 & VTPM 2022-163 and District 3 VTPM 2021-201 Traffic Analysis", Urban Crossroads, Inc., May 2023.
3. "Bake Parkway Lane Geometric Alternatives Evaluation", Urban Crossroads, Inc., November 2022.
4. "VTTM 19130 District 5S/6N Master Plan Access Study", Urban Crossroads, Inc., January 2022
5. "District 1 South VTTM 19122 and District 6 VTTM 19121 Traffic Impact Analysis", Urban Crossroads, Inc., May 2021.
6. "VTPM 2019-146 Additive City of Hope Out-Patient Cancer Center and In-Patient Hospital at FivePoint Gateway Campus", Urban Crossroads, Inc., November 2019 and "VTPM 2020-147 Additive City of Hope Out-Patient Cancer Center and In-Patient Hospital at FivePoint Gateway Campus", Urban Crossroads, Inc., June 2020.
7. "Traffic Evaluation for GP-3 Circulation", Urban Crossroads, Inc., July 2017.
8. "Great Park Neighborhoods Districts 5 and 6 North VTTM 17940 Traffic Impact Analysis", Urban Crossroads, Inc., December 2015.
9. "2020 Citywide Circulation Phasing Analysis Report", LSA, March 2020.
10. "Heritage Fields Project 2012 General Plan Amendment and Zone Change Traffic Impact Analysis", Urban Crossroads, Inc., October 2012.
11. "NITM Five Year Study Update," City of Irvine, November 2021.
12. "Transportation Design Procedures," City of Irvine, February 2007.
13. "Traffic Study Guidelines," City of Irvine, March 21, 2023.
14. "City of Irvine Transportation Guidelines," City of Irvine, July 30, 1993.
15. "Highway Capacity Manual 7th Edition," Transportation Research Board, National Research Council, 2022.
16. "2045 Irvine General Plan," City of Irvine, 2024.
17. "2023 Orange County Congestion Management Program," Orange County Transportation Authority, November 2023.

3 PROJECT DESCRIPTION

This chapter describes the traffic characteristics of the Project VTTMs and Master Plan Modification, and the procedures used to develop project traffic forecasts. The results are used to evaluate potential impacts the Project VTTMs and Master Plan Modification would have on the surrounding roadway system under STIY conditions.

The amount of traffic added to the roadway system by the project is estimated using a three-step process: (1) trip generation, (2) trip distribution, and (3) trip assignment. As indicated in Chapter 2.2 Analysis Scope and Methodology, future traffic conditions have been prepared using ITAM TC. The first step estimates the amount of traffic which is attracted and produced by a project. The second step estimates directional orientation of traffic to and from the project. The last step includes the assignment of traffic from the site to the adjoining roadway system. This step is based upon the site's trip generation, trip distribution pattern, and proposed arterial highway and local street systems assumed to be in place under STIY conditions.

3.1 PROJECT SITE LAND USES

The project consists of GPN VTTMs 19402, 19403, 19404, 19405, 19406 and Master Plan Modification BA 619.

VTTM 19402 involves replacing 645,700 square feet of office use entitled per VTPM 2021-203 with 310 multi-family dwelling units southwest of Marine Way and northwest of Bake Parkway on Parcel 2.

VTTM 19403 involves replacing 400,000 square feet of office use and 267,000 square feet of warehouse use entitled per VTPM 2021-202 with 329 multi-family dwelling units south of Marine Way on Parcel 7 and on the City-2 parcel north of Marine Way, the assumed transportation center parking is replaced with 145 multi-family dwelling units.

VTTM 19404 (located between the railroad tracks and Barranca Parkway, on both sides of Marine Way) involves replacing 402,000 square feet of medical office use and 106,000 square feet of office use entitled per VTPM 2024-110 with 188 multi-family units on Parcel 10, 117 multi-family units on Parcel 11 and on the City-1 parcel, assumed transportation center parking is replaced by 49 multi-family dwelling units.

For the purpose of this analysis, VTTM 19405 (located north of the railroad tracks) involves replacing 451 multi-family dwelling units and 25,000 square feet of retail entitled per VTTM 19284 with 274 multi-family dwelling units west of Marine Way on Parcel 13 and 147 multi-family dwelling units east of Marine Way on Parcel 14.

VTTM 19406 involves replacing 198,000 square feet of office use entitled per VTTM 19284 with 219 multi-family dwelling units on Parcel 12. It is anticipated that an application for an alternative land use in the same geographical area as VTTM 19406 will be submitted prior to approval of the VTTM. This alternative use is anticipated to be a continuing care retirement community ("CCRC") on the above referenced property with approximately 975 congregate care units plus 198 beds for assisted living.

Master Plan Mod BA 619 involves a modification to the District 6 Master Plan by replacing 69 senior affordable dwelling units with 36 multi-family dwelling units.

The total reduction in non-residential land uses is 1,349,700 square feet of office use, 25,000 square feet of retail use, 402,000 square feet of medical office use, and 267,000 square feet of warehouse use. Proposed land use quantities for the Project VTTMs and Master Plan Modification are presented in Table 3-1.

For the purposes of this conservative analysis, the Traffic Evaluation analyzes the Project VTTMs and Master Plan Modification as a proposed total of 1,595 dwelling units, 975 congregate care units and 198 beds for assisted living.

3.2 PROJECT-AREA ROADWAYS

Exhibit 3-1 identifies the street classifications for the network in the immediate vicinity of the Project VTTMs and Master Plan Modification. Regional access is provided via the I-5 Freeway in the Project area, with an existing interchange at Bake Parkway. The existing facilities, previously approved roadway classifications and proposed roadway classifications of the project backbone roadways are described below:

Alton Parkway is a 6-lane divided Major Highway in the study area.

Barranca Parkway / Muirlands Boulevard is a 4-lane Primary Highway in the study area.

Marine Way is a future 4-lane Primary Highway that currently exists from Barranca Parkway to Alton Parkway, but is currently under construction from Alton Parkway to Bake Parkway. The southerly portion of Marine Way acts as the northeast boundary of VTTM 19402 and travels through VTTM 19403. In addition, Marine Way will be extended across the Metrolink tracks (from Barranca Parkway south of the Metrolink rail line to west of Treble north of the rail line) with or without the Project. These improvements are assumed to take place prior to STIY conditions.

Bake Parkway is a six- to eight-lane Major Highway from north of Marine Way to south of Marine Way.

Treble is a 2-lane Commuter located north of Marine Way.

Harrier is a 2-lane Local Collector from west of Gadwall to Lynx in the project area.

Lynx is a 2-lane Commuter from Marine Way to north of Astor in the project area.

Gadwall is a 2-lane Local north of Harrier and a 2-lane Local Collector from Harrier to Marine Way in the project area.

Ada exists as a four-lane Primary Highway between Barranca Parkway and Alton Parkway. A potential future extension of Ada across the Metrolink Railroad tracks is included for BOA conditions analyzed in the Project Access Analysis section of this Traffic Evaluation.

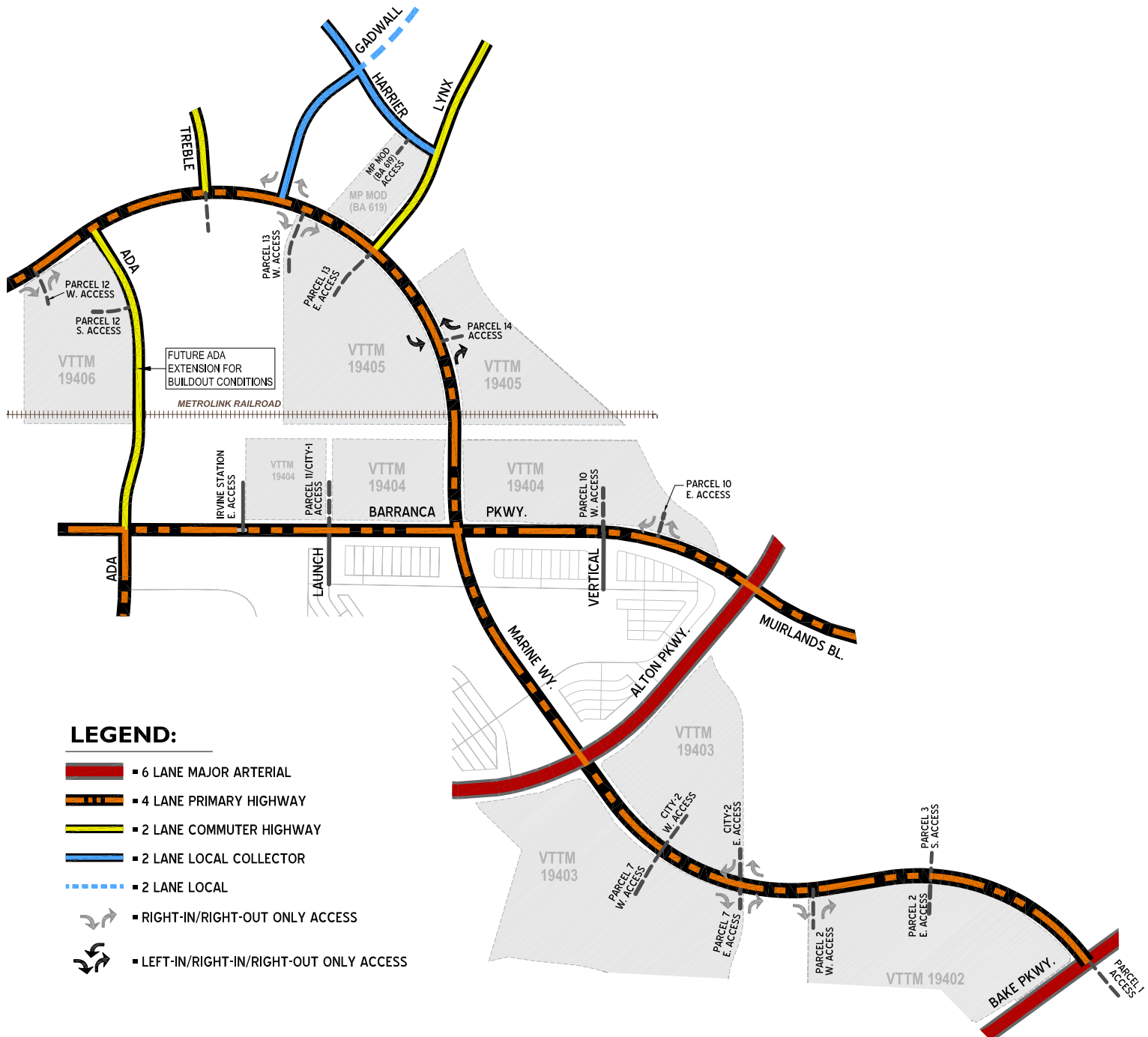
TABLE 3-1: BUILDOUT PROJECT LAND USE DATA

VTTM	Parcel	ITAM TC TAZ	ITAM 15 TAZ	Code	Units	Description	BOA Without Project	With Project
VTTM 19403	City-2	698	990	272	DU	Multi-Family (GP)	0	145
VTTM 19403	7	674	920	269	TSF	Office (GP)	400	0
VTTM 19403	7	674	920	275	TSF	Warehouse/Industrial (GP)	267	0
VTTM 19403	7	674	920	272	DU	Multi-Family (GP)	0	329
VTTM 19404	10	720	613	269	TSF	Office (GP)	106	0
VTTM 19404	10	720	613	318	TSF	Medical Office-GP	212	0
VTTM 19404	10	720	613	272	DU	Multi-Family (GP)	0	188
VTTM 19404	11	716	612	318	TSF	Medical Office-GP	190	0
VTTM 19404	11	716	612	272	DU	Multi-Family (GP)	0	117
VTTM 19404	City-1	723	925	272	DU	Multi-Family (GP)	0	49
VTTM 19405	13	721	609	253	TSF	Retail (GP)	25	0
VTTM 19405	13	719	610	272	DU	Multi-Family (GP)	231	70
VTTM 19405	13	718	611	272	DU	Multi-Family (GP)	220	204
VTTM 19405	14	717	947	272	DU	Multi-Family (GP)	0	147
VTTM 19402	2	676	919	269	TSF	Office (GP)	645.7	0
VTTM 19402	2	676	919	272	DU	Multi-Family (GP)	0	310
MP Mod BA619		715	975	256	DU	Affordable	69	0
MP Mod BA619		715	975	272	DU	Multi-Family (GP)	0	36
VTTM 19406	12	721	609	269	TSF	Office (GP)	198	0
VTTM 19406	12	721	609	107	Units	Congregate Care	0	975
VTTM 19406	12	721	609	105	Beds	Assisted Living	0	198

Note: As proposed per City of Irvine Zoning Ordinance Section 9-51-6, non-residential uses can be converted to exceed 10,556 dwelling units. Remaining non-residential entitlement is assumed in TAZ's 701, 702, 703 and 704. Remaining HFET Entitlement is assumed in those TAZ for Buildout analysis purposes only. Ultimate allocation of this entitlement can only be made in writing by HFET, as Declarant, per a recorded Development Declaration and CC&Rs (or an amendment to a previously existing recorded Development Declaration and CC&Rs).

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EXHIBIT 3-1: PROJECT AREA STREET CLASSIFICATIONS



3.3 PROJECT TRIP GENERATION

ITAM TC production attraction trip generation rates and time of day trip table factors are referenced in various traffic impact analyses in the City of Irvine. ITAM converts production-attraction trip tables to directional origin-destination tables by time period, using Vehicle Trips in Motion factors.

Table 3-2 provides a comparison of land uses and trip generation for the project area under “without project (ground)” and “proposed with Project VTTMs and Master Plan Modification” for STIY conditions, resulting in net additional Project trip generation of 10,042 daily trips.

3.4 PROJECT TRIP DISTRIBUTION

Trip distribution patterns for the project VTTMs and Master Plan Modification were developed using the ITAM traffic model and are presented in Exhibits 3-2 to 3-4 for STIY conditions. These percentages shown differ slightly in the peak hours, and the traffic model uses the individual peak hour distribution patterns to assign peak hour trips. General Plan buildout peak hour trip distributions are shown on Exhibits 3-5 to 3-7.

TABLE 3-2: ITAM TC DERIVED STIY TRIP END SUMMARY

Without Project (STIY Ground)							Trip Generation				
TAZ	VTTM	Parcel	ITAM Code	Units	Description	Land Use Quantity	ADT	AM In	AM Out	PM In	PM Out
698	VTTM 19403	City-2	262	ACRE	Agriculture	19.5	39	3	1	1	3
674	VTTM 19403	7	262	ACRE	Agriculture	37.3	75	6	1	2	5
720	VTTM 19404	10	262	ACRE	Agriculture	18.3	37	3	1	1	2
716	VTTM 19404	11	262	ACRE	Agriculture	10.3	21	2	0	1	1
718/719	VTTM 19405	13	272	DU	Multi-Family (GP)	231	1,652	28	129	99	53
718/719	VTTM 19405	13	272	DU	Multi-Family (GP)	220	1,573	26	123	95	51
717	VTTM 19405	14	262	ACRE	Agriculture	12.5	25	2	1	1	2
717	VTTM 19405	14	249	ACRE	Open Space	54.5	0	0	0	0	0
676	VTTM 19402	2	262	ACRE	Agriculture	36.2	73	6	1	2	5
715	MP Mod BA619		256	DU	Affordable	69	353	7	23	20	12
721	VTTM 19406				None	--	0	0	0	0	0
Without Project (STIY Ground) Total							3,848	83	280	222	134

With Project							Trip Generation				
TAZ	VTTM	Parcel	ITAM Code	Units	Description	Land Use Quantity	ADT	AM In	AM Out	PM In	PM Out
698	VTTM 19403	City-2	272	DU	Multi-Family (GP)	145	1,037	17	81	62	33
674	VTTM 19403	7	272	DU	Multi-Family (GP)	329	2,352	39	184	141	76
720	VTTM 19404	10	272	DU	Multi-Family (GP)	188	1,344	23	105	81	43
716	VTTM 19404	11	272	DU	Multi-Family (GP)	117	837	14	66	50	27
723	VTTM 19404	City-1	272	DU	Multi-Family (GP)	49	350	6	27	21	11
719	VTTM 19405	13	272	DU	Multi-Family (GP)	70	501	8	39	30	16
718	VTTM 19405	13	272	DU	Multi-Family (GP)	204	1,459	24	114	88	47
717	VTTM 19405	14	272	DU	Multi-Family (GP)	147	1,051	18	82	63	34
676	VTTM 19402	2	272	DU	Multi-Family (GP)	310	2,217	37	174	133	71
715	MP Mod BA619		272	DU	Multi-Family (GP)	36	257	4	20	15	8
721	VTTM 19406	12	107	Units	Congregate Care	975	1,970	39	29	98	78
721	VTTM 19406	12	105	Beds	Assisted Living	198	515	24	14	14	20
OVERALL TOTAL						1,595*	13,890	253	935	796	464

* Of the 1,595 dwelling units (1,814 with the residential version of VTTM 19406), 691 are from a previous entitlement.

The remaining 904 dwelling units (1,123 with the residential version of VTTM 19406) are converted from non-residential uses. The conversion is summarized in Special Issues Section E and consistent with Zoning Ordinance 9-51-6-Tii.

F:\UXRjobs\16100-16500\16500\16539\02_LOS\ITAM\16539 Land Uses - Ground.xlsx\Trip End Summary

EXHIBIT 3-2: STIY ADT TRIP DISTRIBUTION

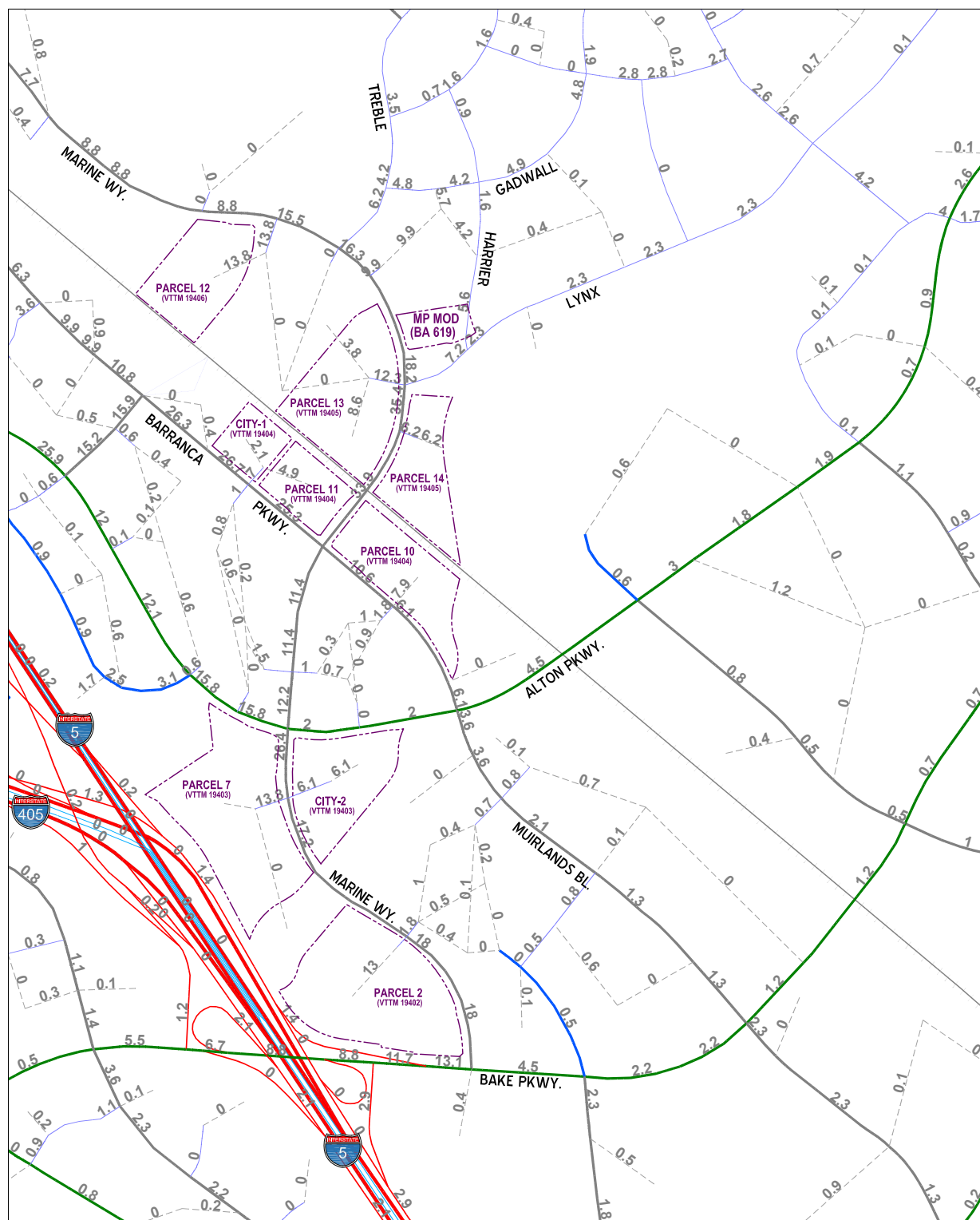


EXHIBIT 3-3: STIY AM PEAK TRIP DISTRIBUTION

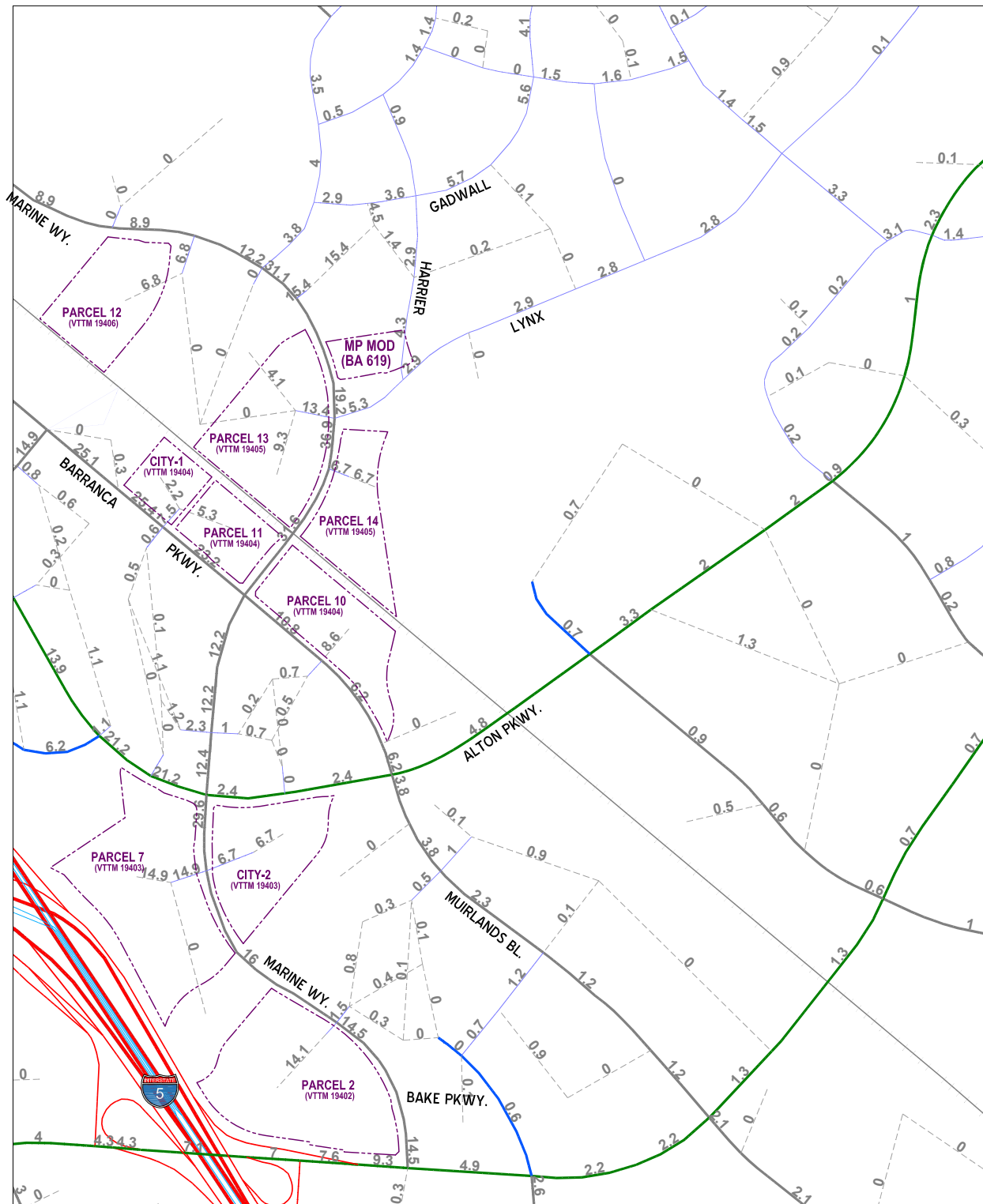


EXHIBIT 3-4: STIY PM PEAK TRIP DISTRIBUTION

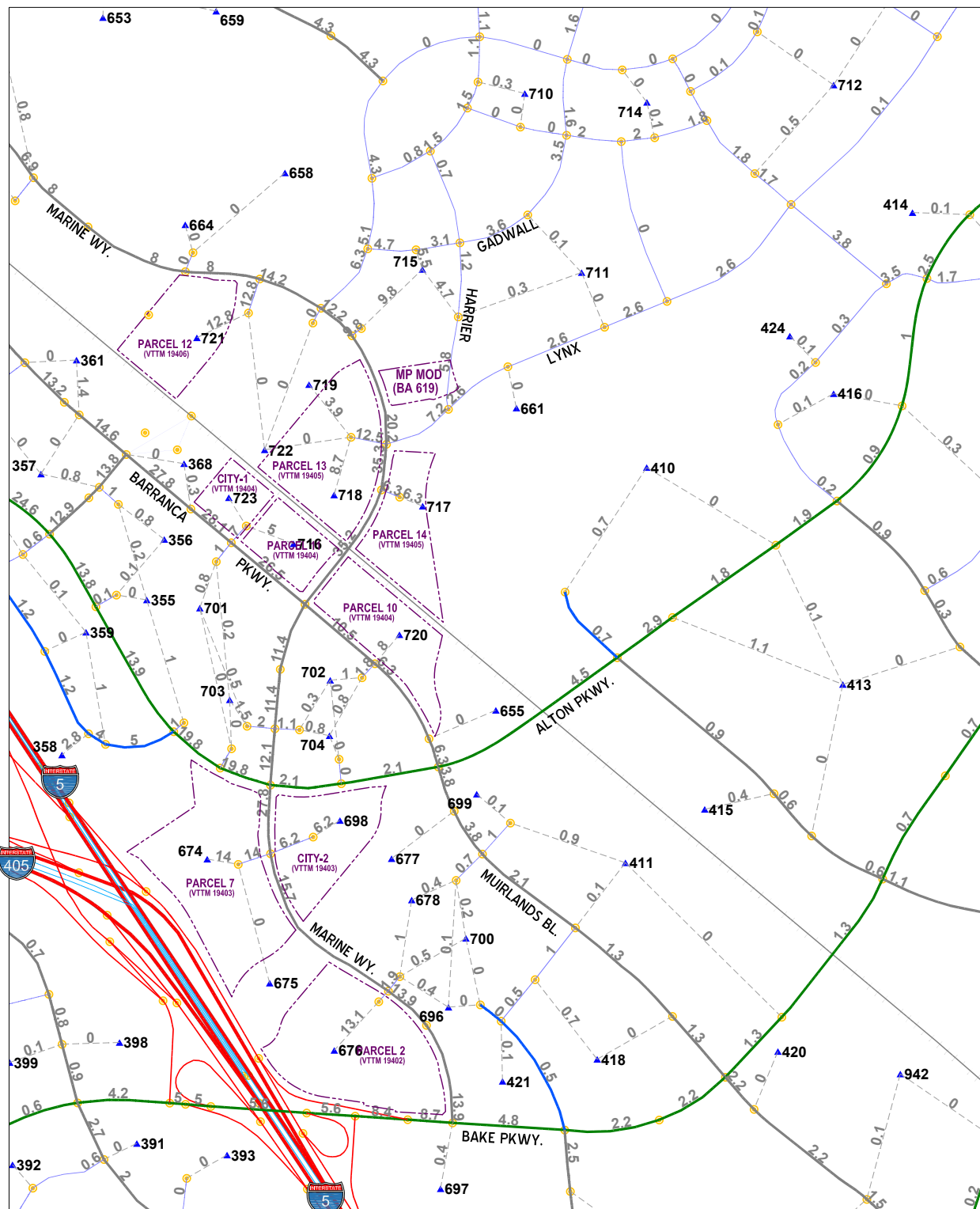


EXHIBIT 3-5: BOA ADT TRIP DISTRIBUTION

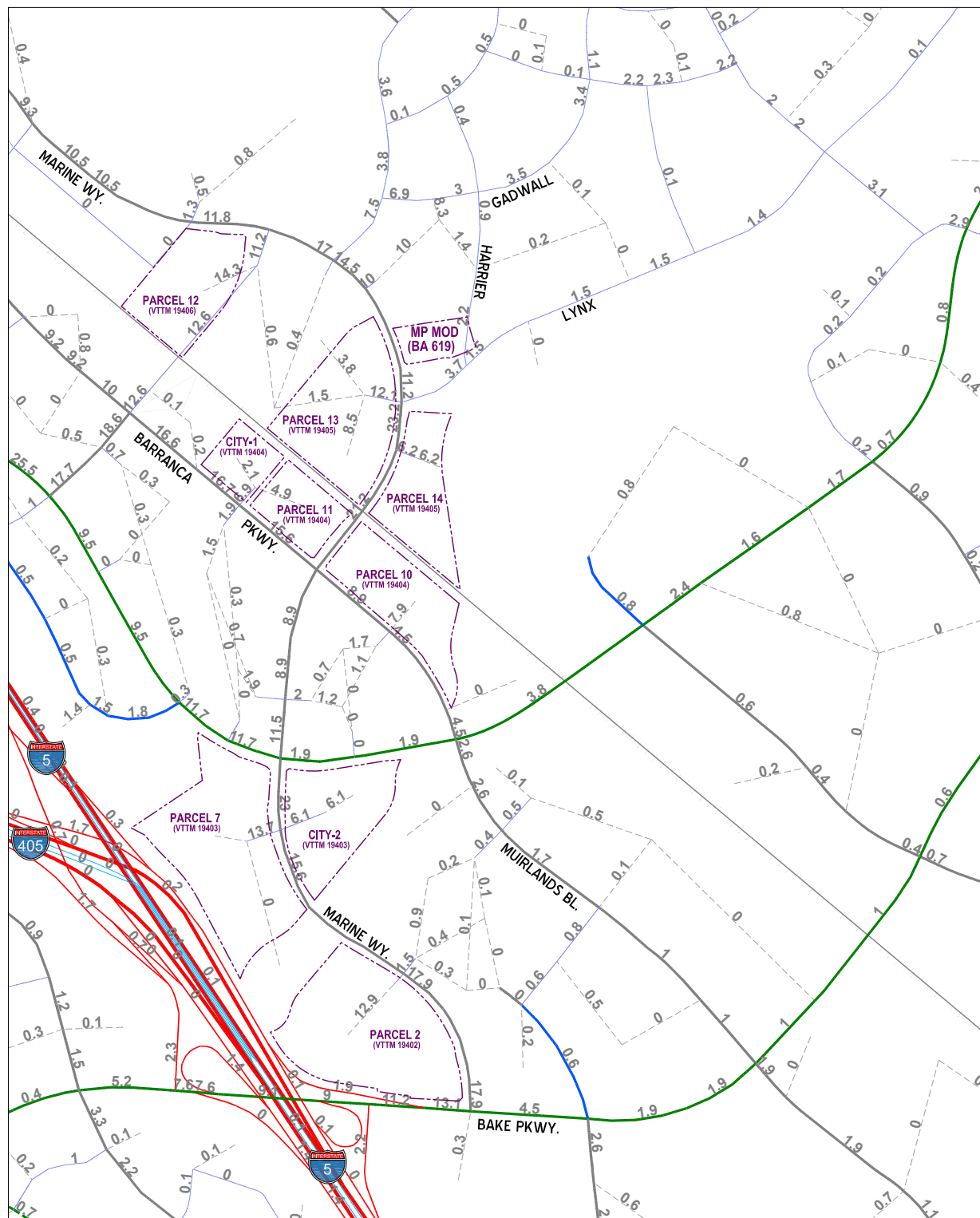


EXHIBIT 3-6: BOA AM PEAK HOUR TRIP DISTRIBUTION

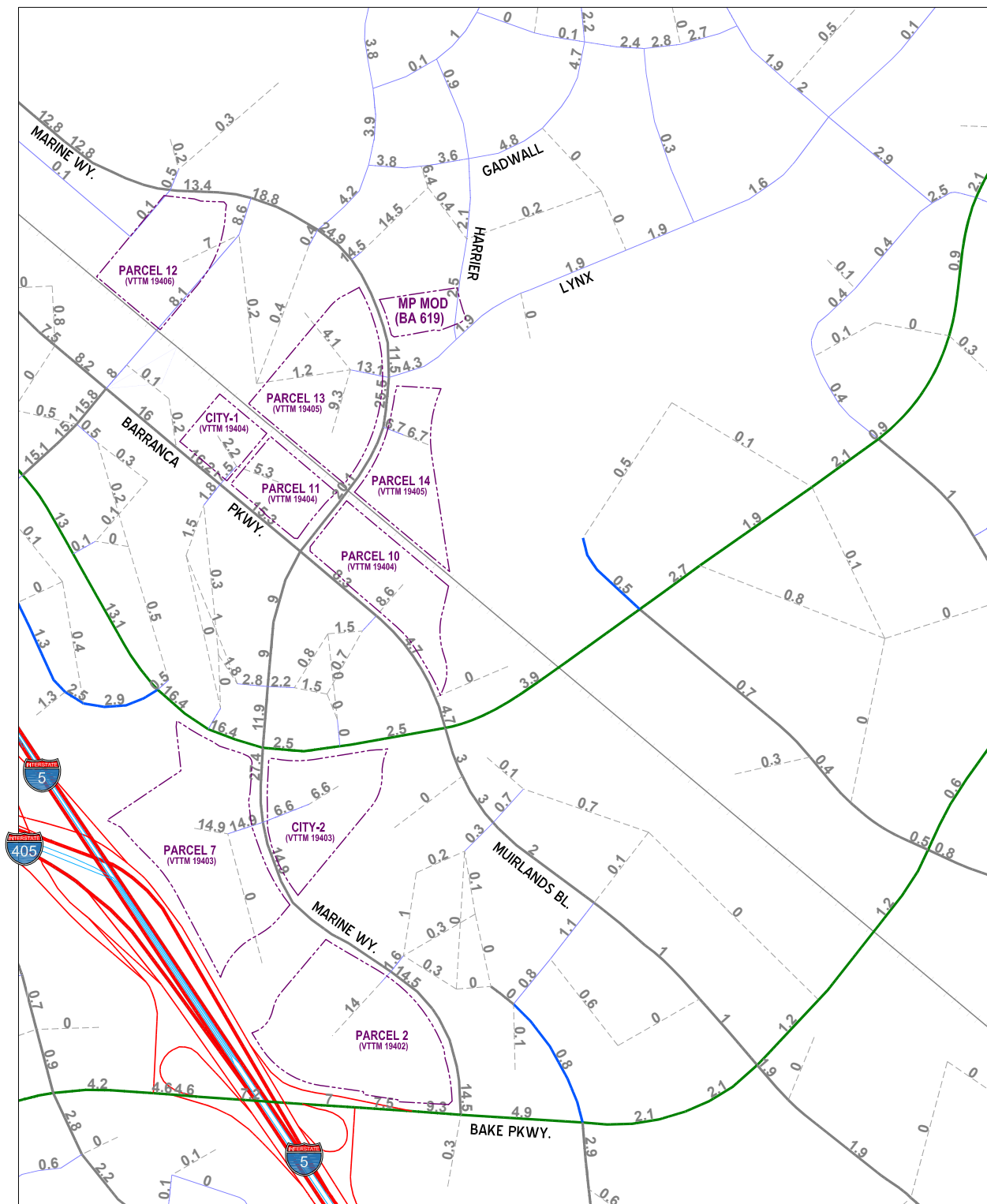
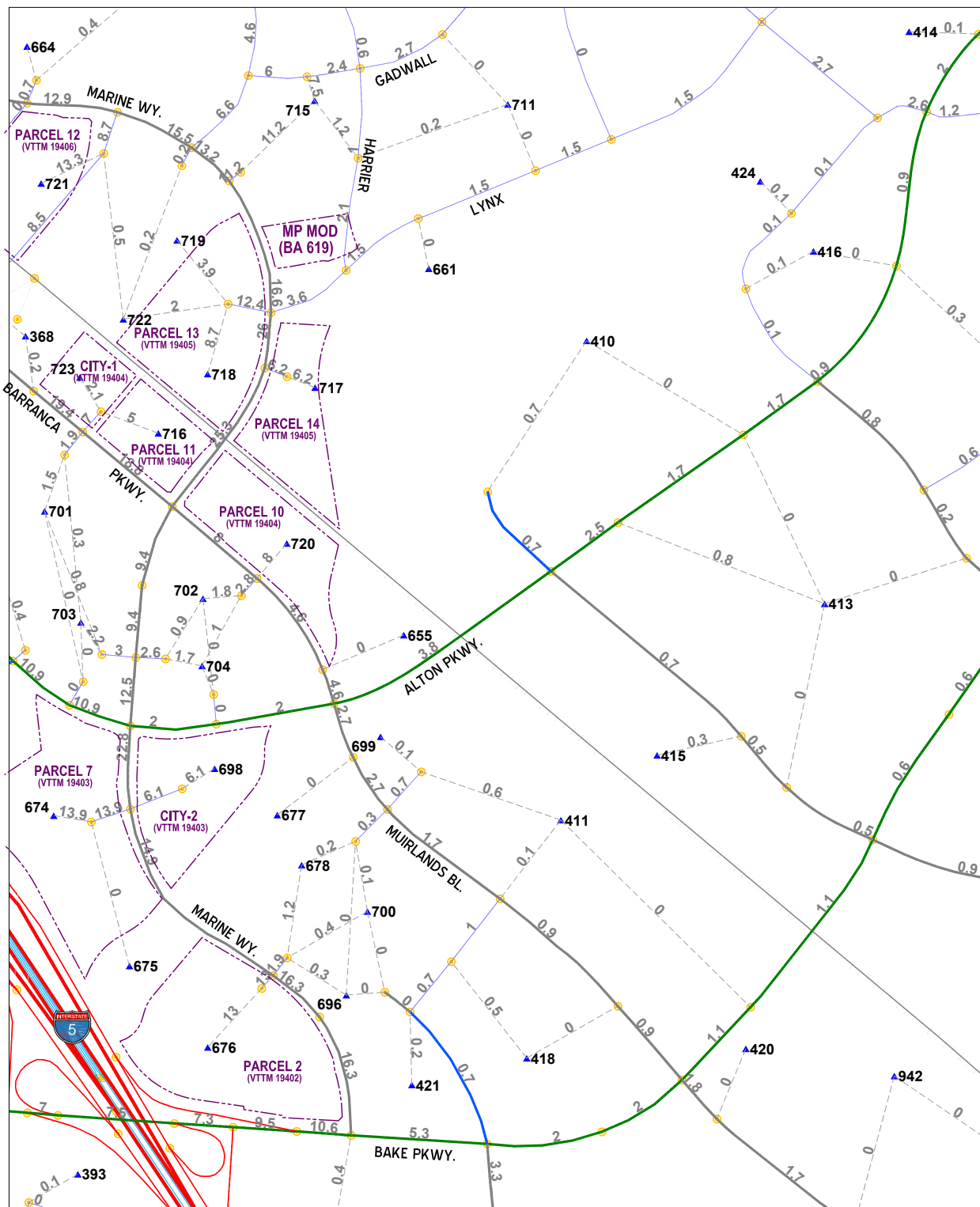


EXHIBIT 3-7: BOA PM PEAK HOUR TRIP DISTRIBUTION



4 TRAFFIC ANALYSIS

The ITAM STIY scenario is used as the baseline for this evaluation.

VTTM 19402 involves replacing 645,700 square feet of office use entitled per VTPM 2021-203 with 310 multi-family dwelling units southwest of Marine Way and northwest of Bake Parkway on Parcel 2.

VTTM 19403 involves replacing 400,000 square feet of office use and 267,000 square feet of warehouse use entitled per VTPM 2021-202 with 329 multi-family dwelling units south of Marine Way on Parcel 7 and on the City-2 parcel north of Marine Way, the assumed transportation center parking is replaced with 145 multi-family dwelling units.

VTTM 19404 (located between the railroad tracks and Barranca Parkway, on both sides of Marine Way) involves replacing 402,000 square feet of medical office use and 106,000 square feet of office use entitled per VTPM 2024-110 with 188 multi-family units on Parcel 10, 117 multi-family units on Parcel 11 and on the City-1 parcel, assumed transportation center parking is replaced by 49 multi-family dwelling units.

For the purposes of this analysis, VTTM 19405 (located north of the railroad tracks) involves replacing 451 multi-family dwelling units and 25,000 square feet of retail entitled per VTTM 19284 with 274 multi-family dwelling units west of Marine Way on Parcel 13 and 147 multi-family dwelling units east of Marine Way on Parcel 14.

VTTM 19406 involves replacing 198,000 square feet of office use entitled per VTTM 19284 with 219 multi-family dwelling units on Parcel 12. It is anticipated that an application for an alternative land use in the same geographical area as VTTM 19406 will be submitted prior to approval of the VTTM. This alternative use is anticipated to be a continuing care retirement community ("CCRC") on the above referenced property with approximately 975 congregate care units plus 198 beds for assisted living facilities.

Master Plan Mod BA 619 involves a modification to the District 6 Master Plan by replacing 69 senior affordable dwelling units with 36 multi-family dwelling units.

Table 4-1 provides a summary of Project land uses for STIY conditions. The total reduction in non-residential land uses is 1,349,700 square feet of office use, 25,000 square feet of retail use, 402,000 square feet of medical office use, and 267,000 square feet of warehouse use. For the purposes of this conservative analysis, the Project VTTMs and Master Plan Modification propose a total of 1,595 dwelling units, 975 congregate care units and 198 beds for assisted living.

This project area was previously studied in the following approved technical documents:

- Master Plan Modification VTTM 19284 Access Study (February, 2025)
- District 2 VTPM 2021-202 & VTPM 2021-203 and District 6 VTPM 2024-110 and VTTM 19284 Traffic Analysis (August, 2024)
- Parcel 3, Consolidated Access Assessment (Urban Crossroads, January 18, 2024)
- Great Park Neighborhoods District 2 VTPM 2021-204 & VTPM 2022-163 and District 3 VTPM 2021-201 Traffic Analysis (Urban Crossroads, May 15, 2023)

TABLE 4-1: ITAM TC STIY LAND USE WITH PROJECT

TAZ	VTTM	Parcel	ITAM Code	Units	Description	Land Use Quantity
698	VTTM 19403	City-2	272	DU	Multi-Family (GP)	145
674	VTTM 19403	7	272	DU	Multi-Family (GP)	329
720	VTTM 19404	10	272	DU	Multi-Family (GP)	188
716	VTTM 19404	11	272	DU	Multi-Family (GP)	117
723	VTTM 19404	City-1	272	DU	Multi-Family (GP)	49
719	VTTM 19405	13	272	DU	Multi-Family (GP)	70
718	VTTM 19405	13	272	DU	Multi-Family (GP)	204
717	VTTM 19405	14	272	DU	Multi-Family (GP)	147
676	VTTM 19402	2	272	DU	Multi-Family (GP)	310
715	MP Mod BA619		272	DU	Multi-Family (GP)	36
721	VTTM 19406	12	107	Units	Congregate Care	975
721	VTTM 19406	12	105	Beds	Assisted Living	198
OVERALL TOTAL						1,595*

* Of the 1,595 dwelling units (1,814 with the residential version of VTTM 19406), 691 are from a previous entitlement. The remaining 904 dwelling units (1,121 with the residential version of VTTM 19406) are converted from non-residential uses. The conversion is summarized in Special Issues Section E and consistent with Zoning Ordinance 9-51-6-Tii.

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4.1 PROJECT CIRCULATION FEATURES

The backbone roadway network for the Project VTTMs and Master Plan Modification, shown previously on Exhibit 1-1, is designed to connect the Project VTTMs and Master Plan Modification and the surrounding area, while minimizing intersections with the arterial highway system. Key access streets include Lynx, Treble, Harrier, Barranca Parkway, Bake Parkway, Alton Parkway, and Marine Way.

Barranca Parkway/Muirlands Boulevard is a 4-lane Primary Highway in the Project area. Alton Parkway and Bake Parkway are 6-lane Major Highways in the Project area. Marine Way currently exists from Barranca Parkway to Alton Parkway as a 4-lane divided Primary Highway, and is currently under construction from Alton Parkway to Bake Parkway to become a 4-lane Primary Highway opening prior to STIY conditions. The southerly portion of Marine Way acts as the northeast boundary of VTTM 19402 and travels through VTTM 19403. In addition, Marine Way will be extended across the Metrolink tracks (from Barranca Parkway south of the Metrolink rail line to west of Treble north of the rail line) with or without the Project. Ada exists as a 4-lane Primary Highway between Barranca Parkway and Alton Parkway. A potential future extension of Ada across the Metrolink Railroad tracks is included for buildout conditions evaluated in the Access Analysis portion of the Traffic Evaluation.

VTTM 19402 is connected via one full access driveway to Marine Way across from Parcel 3 South Access and one right in/out only access. VTTM 19403 is connected via one full access intersection (north and south legs) at Marine Way and two right in/out only driveways at Marine Way.

VTTM 19404 connects via two full access driveways at Barranca Parkway (one driveway across from Launch, one driveway across from Vertical) and one right in/out only driveway east of Vertical.

VTTM 19405 connects via one full access driveway as the south leg of Lynx at Marine Way, one right in/out only driveway just east of Gadwall at Marine Way, and one left in / right in/out driveway at Marine Way east of Lynx.

VTTM 19406 connects via one full access driveway at Ada which coincides with the potential Ada extension. An additional right in/out only access is included at Marine Way.

Master Plan Modification BA 619 connects via one full access driveway at Harrier.

4.2 STIY PEAK HOUR INTERSECTION LOS

Exhibit 1-2 (shown previously) depicts the intersection analysis locations for STIY conditions throughout the traffic evaluation study area. Table 4-2 presents the AM and PM peak hour ICU and LOS results for the study area intersections with and without the Project VTTMs and Master Plan Modification during the STIY conditions.

TABLE 4-2: STIY INTERSECTION LOS SUMMARY

ID#	Signalized Intersections (ICU Methodology)	Juris.	Traffic Control ¹	Ground				With Project			
				AM		PM		AM		PM	
				ICU	LOS	ICU	LOS	ICU	LOS	ICU	LOS
301	Sand Canyon Av. / Irvine Bl.	Irv	TS	0.51	A	0.56	A	0.49	A	0.55	A
302	Sand Canyon Av. / Great Park Bl. (Trabuco Rd.)	Irv	TS	0.57	A	0.57	A	0.57	A	0.58	A
303	Sand Canyon Av. / I-5 NB Ramps	Irv	TS	0.59	A	0.66	B	0.57	A	0.66	B
304	Sand Canyon Av. / Marine Wy. (Existing)	Irv	TS	0.58	A	0.65	B	0.58	A	0.65	B
305	Sand Canyon Av. / I-5 SB Ramps	Irv	TS	0.53	A	0.64	B	0.54	A	0.64	B
326	Ada / Barranca Pkwy.	Irv	TS	0.46	A	0.53	A	0.46	A	0.55	A
339	Alton Pkwy. / Toledo Wy.	Irv	TS	0.61	B	0.48	A	0.61	B	0.49	A
340	Alton Pkwy. / Jeronimo Rd.	Irv	TS	0.51	A	0.45	A	0.51	A	0.46	A
341	Alton Pkwy. / Barranca Pkwy.	Irv	TS	0.52	A	0.61	B	0.52	A	0.61	B
342	Technology Dr. E / Alton Pkwy.	Irv	TS	0.43	A	0.50	A	0.46	A	0.52	A
343	Alton Pkwy. / Ada	Irv	TS	0.45	A	0.46	A	0.46	A	0.46	A
559	Ridge Valley / Great Park Bl.	Irv	TS	0.40	A	0.45	A	0.39	A	0.44	A
560	Ridge Valley / Marine Wy.	Irv	TS	0.36	A	0.32	A	0.35	A	0.33	A
562	Skyhawk / Marine Wy.	Irv	TS	0.25	A	0.29	A	0.25	A	0.29	A
565	Treble / Marine Wy.	Irv	TS	0.43	A	0.52	A	0.43	A	0.52	A
566	Marine Wy. / Barranca Pkwy.	Irv	TS	0.55	A	0.82	D	0.53	A	0.83	D
567	Marine Wy. / Alton Pkwy.	Irv	TS	0.54	A	0.45	A	0.58	A	0.47	A
569	Bake Pkwy. / Marine Wy.	Irv	TS	0.80	C	0.75	C	0.80	C	0.75	C
582	Lynx / Marine Wy.	Irv	TS	0.85	D	0.83	D	0.81	D	0.82	D
593	Alton Pkwy. / Fairbanks	Irv	TS	0.82	D	0.56	A	0.83	D	0.56	A
831	Lynx / Astor	Irv	TS	0.79	C	0.63	B	0.79	C	0.64	B
836	Treble / Great Park Bl.	Irv	TS	0.72	C	0.68	B	0.73	C	0.68	B
ID#	Unsignalized Intersections ² (HCM Methodology)	Juris.	Traffic Control ¹	Ground				With Project			
				AM		PM		AM		PM	
				Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
594	Fairbanks / Astor	Irv	CSS	>80	F	>80	F	>80	F	>80	F
595	Skyhawk / Great Park Bl.	Irv	RDB	7.4	A	9.7	A	7.3	A	9.6	A
633	Treble / Merit	Irv	CSS	24.2	C	22.7	C	24.3	C	22.7	C
834	Lynx / Harrier	Irv	CSS	34.9	D	21.2	C	34.8	D	20.0	C

¹ TS = Traffic Signal; CSS = Cross Street Stop; RDB = Roundabout

² For unsignalized intersections, the Highway Capacity Manual 7th Edition (HCM7) is utilized. The overall average intersection delay and level of service are shown for intersections with an all-way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown. Delay and level of service calculated using Synchro 12 analysis software.

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Peak hour turn volumes, lane geometrics HCM results and ICU calculation worksheets for STIY conditions with and without the Project VTTMs and Master Plan Modification are included in Appendices 4.1 and 4.2. As shown on Table 4-2, the AM and PM peak hour STIY LOS at the Fairbanks / Astor intersection is projected to be LOS F (using the HCM methodology) without or with the Project. The Project change at this intersection is nominal (less than 1%), and is below the Project impact threshold as discussed in Chapter 2.0. At all other traffic evaluation study area locations, the STIY peak hour intersection LOS is acceptable without or with the Project.

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5 SPECIAL ISSUES

This chapter summarizes the special issues that were analyzed as part of the Traffic Evaluation for the Project VTTMs and Master Plan Modification. The special issues addressed in this chapter address the following subject areas:

Project Access Analysis – Access to Project VTTMs and Master Plan Modification is provided primarily by Marine Way, Lynx, Treble, Harrier, Alton Parkway, Bake Parkway, and Barranca Parkway. Lane geometry, turn lane storage requirements, signalization, driveway lengths, and distances between intersections are addressed. This special issue area provides the specific site access information to support the project application and serves as a basis for the design of vesting tentative parcel map and vesting tentative tract map roadways and intersections. The Access Analysis was performed for both the STIY and the BOA scenarios.

Pedestrian and Bicycle Circulation – The pedestrian and bicycle circulation and corresponding traffic control measures within the project area are discussed in this section of the report, including how policies of Objective C-3, C-4, C-5, and C-6 of the *2045 Irvine General Plan* (2024) will be met with this project.

Transit – Existing transit services adjacent to the Project VTTMs and Master Plan Modification are discussed in this section of the report. The Project VTTMs and Master Plan Modification are located close to the Irvine Station, which is a passenger rail and bus terminal served by Metrolink commuter rail lines, multiple Orange County Authority (OCTA) bus routes, and Amtrak. This special issue identifies how the transit services and amenities within the project vicinity reflect the policies of Objective C-7 of the *2045 Irvine General Plan* (2024).

CMP Checklist – This special issue analyzes CMP facilities in the Traffic Evaluation study area and provides a supporting CMP Monitoring Checklist. Any CMP facility identified as being adversely affected by the proposed project is analyzed consistent with the CMP procedures.

5.1 PROJECT ACCESS ANALYSIS

The subjects covered in this special issue area include STIY and BOA conditions at key study area intersections with the Project VTTMs and Master Plan Modification. Lane geometry, turn lane storage requirements, signalization, and distances between intersections are addressed. This special issue area provides specific site access information to support the project application and serves as a basis for the design of VTTM and Master Plan Modification roadways and intersections.

The backbone roadway network for the project VTTMs and Master Plan Modification, shown previously on Exhibit 3-1 (STIY scenario), is designed to connect the project VTTMs and Master Plan Modification and the surrounding area. Key streets include Lynx, Treble, Harrier, Alton Parkway, Bake Parkway, Barranca Parkway, and Marine Way.

VTTM 19402 is connected via Parcel 2 West Access (right turn in/out only) driveway to Marine Way and Parcel 2 East Access (full access) driveway to Marine Way across from Parcel 3 South Access. This section of Marine Way, between Alton Parkway and Bake Parkway, is currently under construction and is planned to open as a 4-lane Primary Highway before the STIY conditions. Marine

Way will be extended across the Metrolink tracks (from Barranca Parkway south of the Metrolink rail line to Lynx north of the rail line) as a 4-lane Primary Highway with or without the Project.

VTTM 19403 is connected via City-2 West Access / Parcel 7 West Access (full access) driveway to Marine Way and City-2 East Access / Parcel 7 East Access (right turn in/out only) driveway to Marine Way.

VTTM 19404 is connected via Parcel 11/City-1 Access (full access) driveway to Barranca Parkway across from Launch, Parcel 10 West Access (full access) driveway to Barranca Parkway across from Vertical, and Parcel 10 East Access (right turn in/out only) driveway to Barranca Parkway.

VTTM 19405 is connected via Parcel 13 West Access (right turn in/out only) driveway to Marine Way east of Gadwall, Parcel 13 East Access (full access) driveway to Marine Way across from Lynx, and Parcel 14 Access (left in / right in/out) driveway to Marine Way.

VTTM 19406 is connected via Parcel 12 West Access (right turn in/out only) driveway to Marine Way and Parcel 12 South Access (full access) driveway to Ada.

Master Plan Modification (BA 619) is connected via MP Mod (BA 619) Access (full access) driveway to Harrier.

Barranca Parkway/Muirlands Boulevard is a 4-lane Primary Highway in the Project area. Alton Parkway and Bake Parkway are 6-lane Major Highways in the Project area.

Treble and Lynx are 2-lane Commuter roadways in the Project area. Harrier is a 2-lane Local Collector. Gadwall varies from a 2-lane Local Roadway to a Local Collector in the Project area.

5.1.1 HCM-based Intersection Service Levels

The updated ITAM volume projections discussed in Chapter 4 have been assigned to individual driveways for the project in order to determine peak hour turning movements at local intersections throughout the Project VTTMs and Master Plan Modification street network.

Volume adjustments were made to conserve volume flow across the various intersections. Exhibit 5-1 presents AM peak hour intersection design volumes for the STIY with Project VTTMs and Master Plan Modification conditions, for the study area. The design volumes were developed based on ITAM volumes with volume shift adjustments to capture anticipated driveway activity. Exhibit 5-2 presents PM peak hour intersection design volumes for the STIY with Project VTTMs and Master Plan Modification conditions, for the study area.

Exhibit 5-3 presents AM peak hour intersection design volumes for the BOA with Project VTTMs and Master Plan Modification conditions, for the study area. Exhibit 5-4 presents PM peak hour intersection design volumes for the BOA with Project VTTMs and Master Plan Modification conditions, for the study area.

EXHIBIT 5-1: STIY PROJECT AREA AM PEAK HOUR VOLUMES WITH PROJECT VTTMs AND MASTER PLAN MODIFICATION

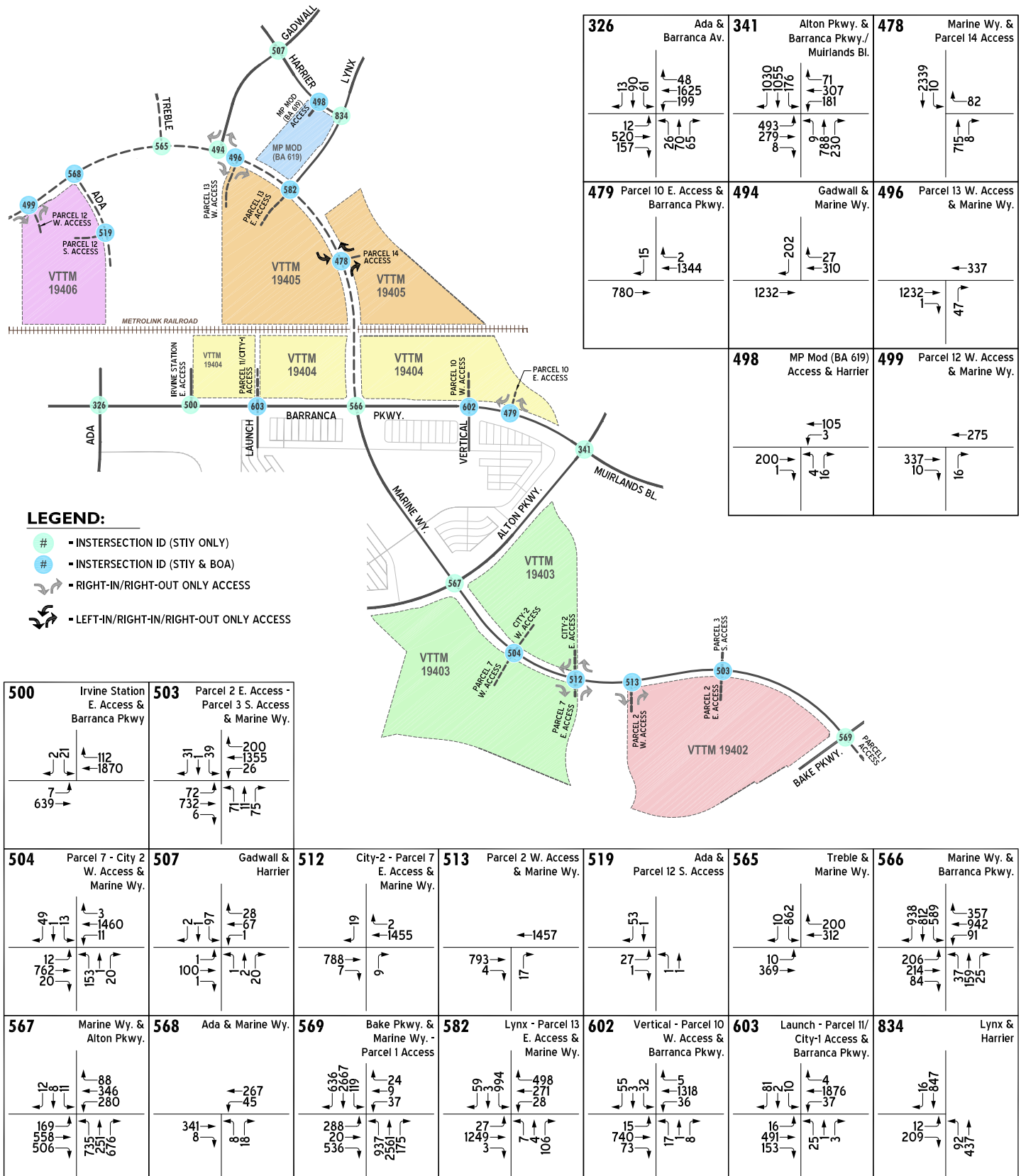


EXHIBIT 5-2: STIY PROJECT AREA PM PEAK HOUR VOLUMES WITH PROJECT VTTMs AND MASTER PLAN MODIFICATION

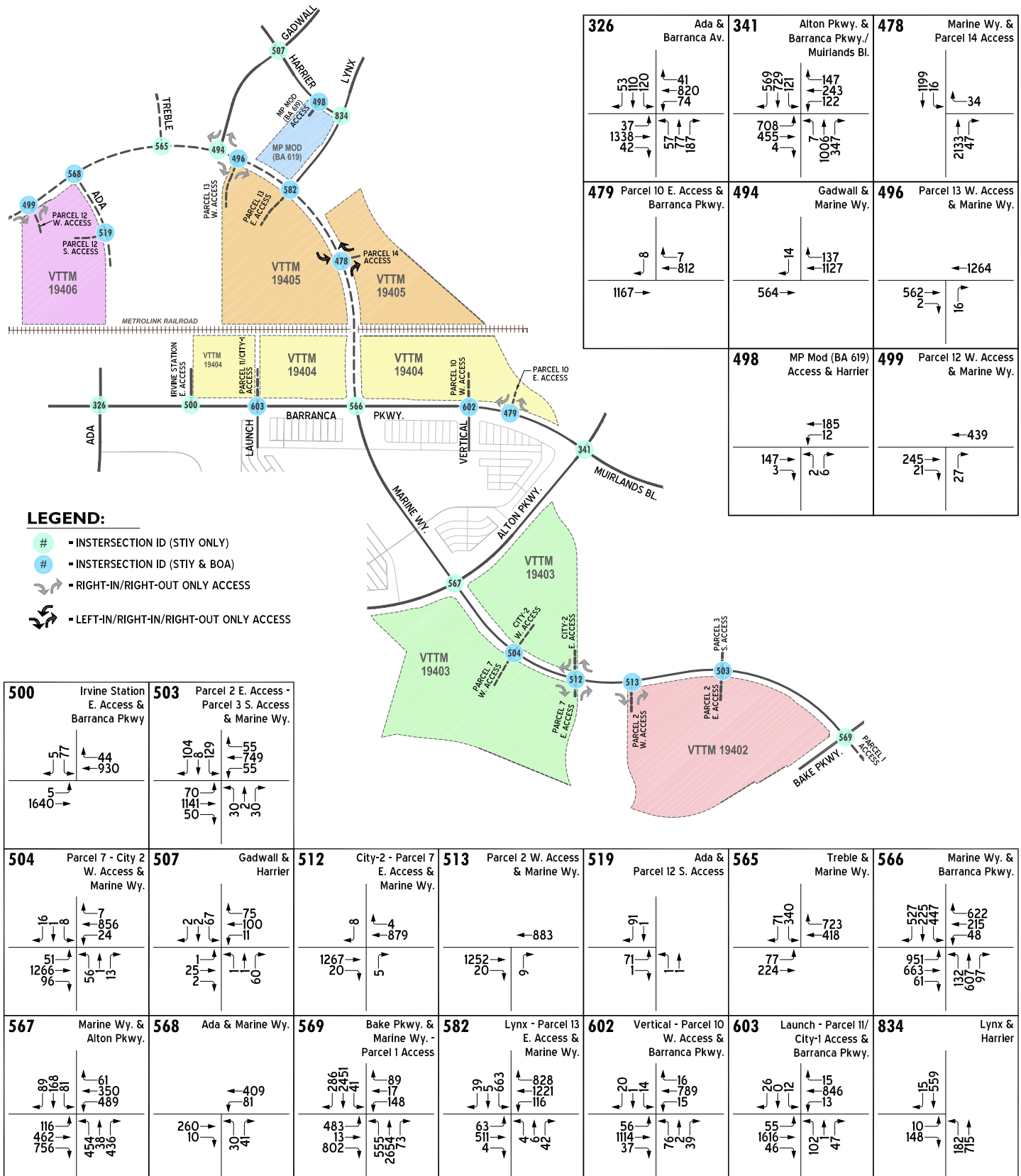
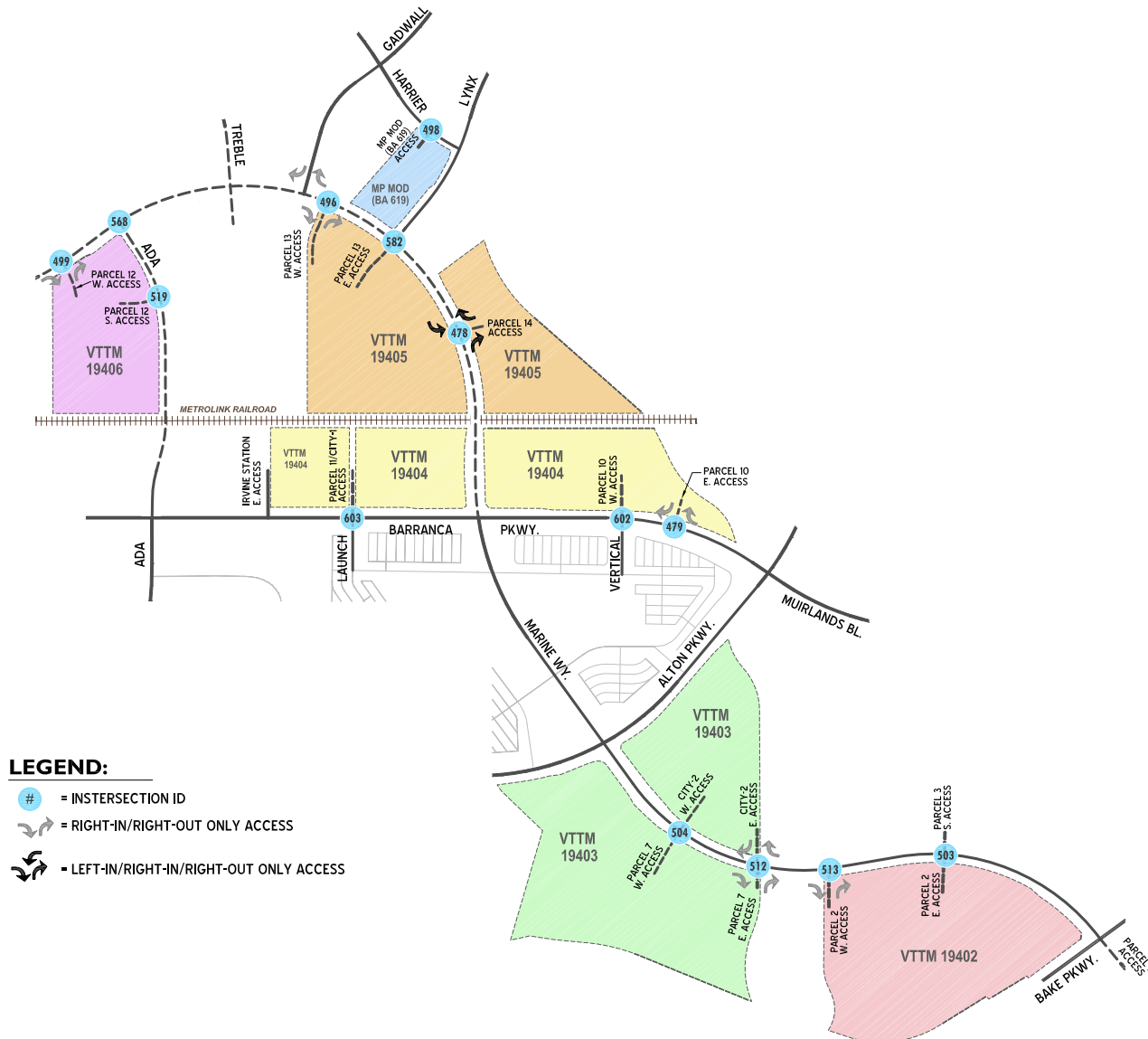
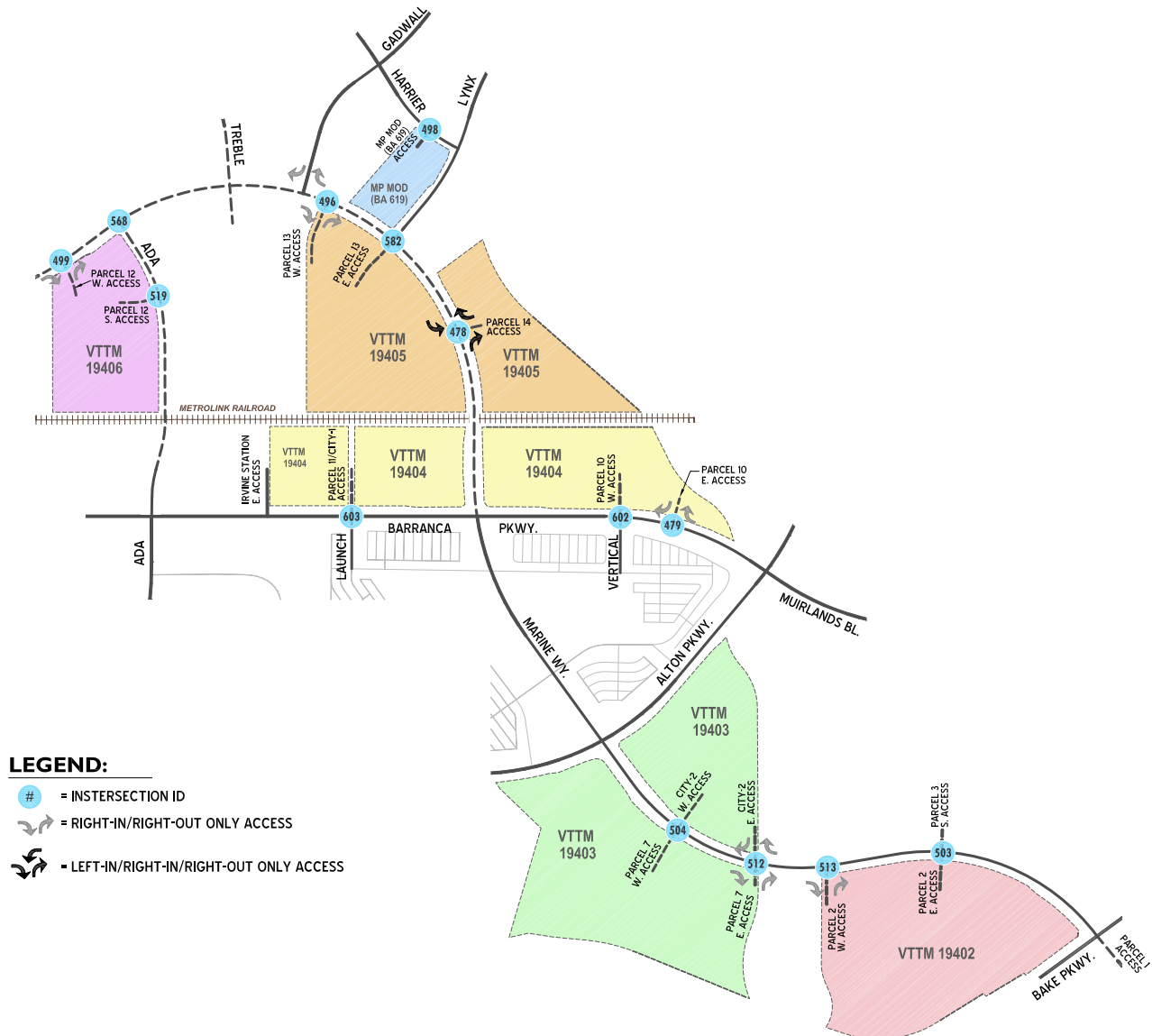


EXHIBIT 5-3: BOA PROJECT AREA AM PEAK HOUR VOLUMES WITH PROJECT VTTMs AND MASTER PLAN MODIFICATION



478 Marine Wy. & Parcel 14 Access 	479 Parcel 10 E. Access & Barranca Pkwy. 	496 Parcel 13 W. Access & Marine Wy. 	498 MP Mod (BA 619) Access & Harrier 	499 Parcel 12 W. Access & Marine Wy. 	503 Parcel 2 E. Access - Parcel 3 S. Access & Marine Wy. 	504 Parcel 7 - City 2 W. Access & Marine Wy.
512 City-2 - Parcel 7 E. Access & Marine Wy. 	513 Parcel 2 W. Access & Marine Wy. 	519 Ada & Parcel 12 S. Access 	568 Ada & Marine Wy. 	582 Lynx - Parcel 13 E. Access & Marine Wy. 	602 Vertical - Parcel 10 W. Access & Barranca Pkwy. 	603 Launch - Parcel 11/ City-1 Access & Barranca Pkwy.

EXHIBIT 5-4: BOA PROJECT AREA PM PEAK HOUR VOLUMES WITH PROJECT VTTMs AND MASTER PLAN MODIFICATION



478 Marine Wy. & Parcel 14 Access 	479 Parcel 10 E. Access & Barranca Pkwy. 	496 Parcel 13 W. Access & Marine Wy. 	498 MP Mod (BA 619) Access & Harrier 	499 Parcel 12 W. Access & Marine Wy. 	503 Parcel 2 E. Access - Parcel 3 S. Access & Marine Wy. 	504 Parcel 7 - City 2 W. Access & Marine Wy.
512 City-2 - Parcel 7 E. Access & Marine Wy. 	513 Parcel 2 W. Access & Marine Wy. 	519 Ada & Parcel 12 S. Access 	568 Ada & Marine Wy. 	582 Lynx - Parcel 13 E. Access & Marine Wy. 	602 Vertical - Parcel 10 W. Access & Barranca Pkwy. 	603 Launch - Parcel 11/ City-1 Access & Barranca Pkwy.

Recommended traffic control measures and lane geometries with the Project VTTMs and Master Plan Modification include a combination of cross-street stop signs and traffic signals, as indicated on Exhibits 5-5 and 5-6 for the STIY with Project VTTMs and Master Plan Modification and the BOA with Project VTTMs and Master Plan Modification scenarios, respectively.

The HCM 7 average delay values for the study area intersections are presented in Table 5-1 for both STIY and BOA conditions with the project VTTMs and Master Plan Modification. LOS worksheets for STIY conditions with Project VTTMs and Master Plan Modification are included in Appendix 5.1. LOS worksheets for BOA with Project VTTMs and Master Plan Modification conditions are included in Appendix 5.2.

For STIY with Project VTTMs and Master Plan Modification conditions, the intersection of Irvine Station East Access at Barranca Parkway has been evaluated for three conditions (cross-street stop control, traffic signal control, and restriction to right in/out only). For the cross-street stop control condition, the southbound left turn for the intersection of Irvine Station East Access at Barranca Parkway is projected to operate at LOS F in the AM peak period using the HCM methodology. At this location, the City may ultimately decide to provide traffic signal control or restrict the left turn maneuvers at this intersection and reconfigure this intersection for right turns in/out only. If in the future, traffic signal control is considered, evaluation of Transportation Guidelines would be appropriate at that time. Suggestions for improvements that the City can explore are discussed in each applicable Transportation Guideline below.

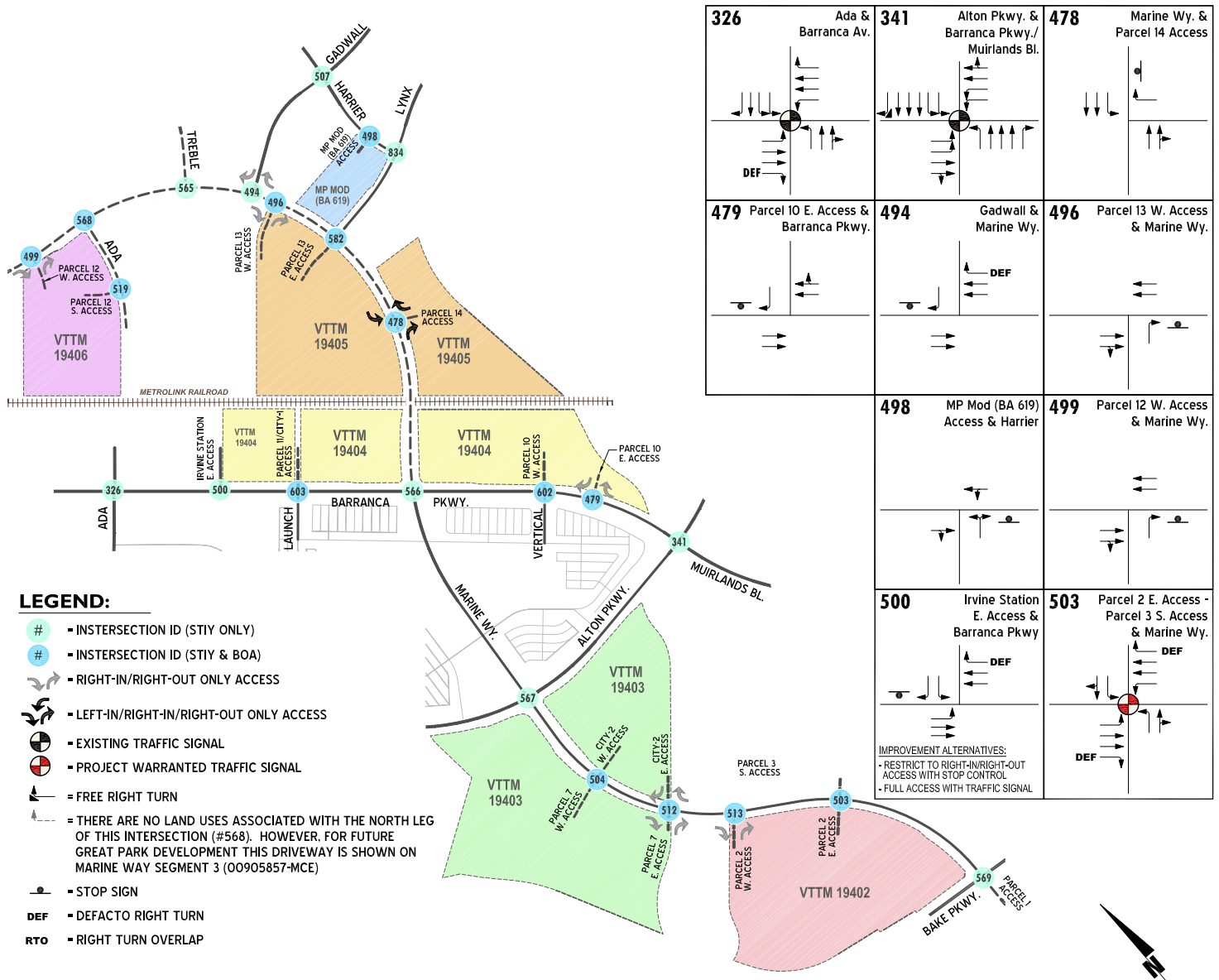
For BOA with Project VTTMs and Master Plan Modification conditions, increases in the northbound right and westbound left AM peak hour turning movement volumes result in LOS F intersection operations at the Lynx / Marine Way intersection. It should be noted that these morning peak hour volume increases are tied to a significant increase in residential development assumed to occur in ITAM TAZ 722. This LOS issue occurs for BOA conditions due to the ITAM TAZ 722 residential uses taking access to adjacent streets, which include a connection through Parcel 13 to the south leg of the Lynx / Marine Way intersection. Therefore, this LOS deficiency will need to be further evaluated at the time that the BOA residential development included in TAZ 722 is processed for development.

5.1.2 Signalization

Per the Transportation Guidelines (TG-13), traffic signal warrants based on peak hour volumes as adopted by the Federal Highway Administration and Caltrans were used here to determine the need for signalization. Determining the major street approach for the signal warrant involves calculating the number of vehicles approaching the intersection on both major street legs. The highest total volume for either the continuous east and west approach or the north and south approach during either AM or PM is determined to be the major street approach for both peak hours. The minor street peak hour signal warrant volume is the number of peak hour vehicles approaching the intersection on only the highest volume leg. The highest volume for either the AM or PM determines the minor approach for each peak hour. The peak hour volumes used in the warrant analysis for the major street and minor street are taken from the same hour of the day.

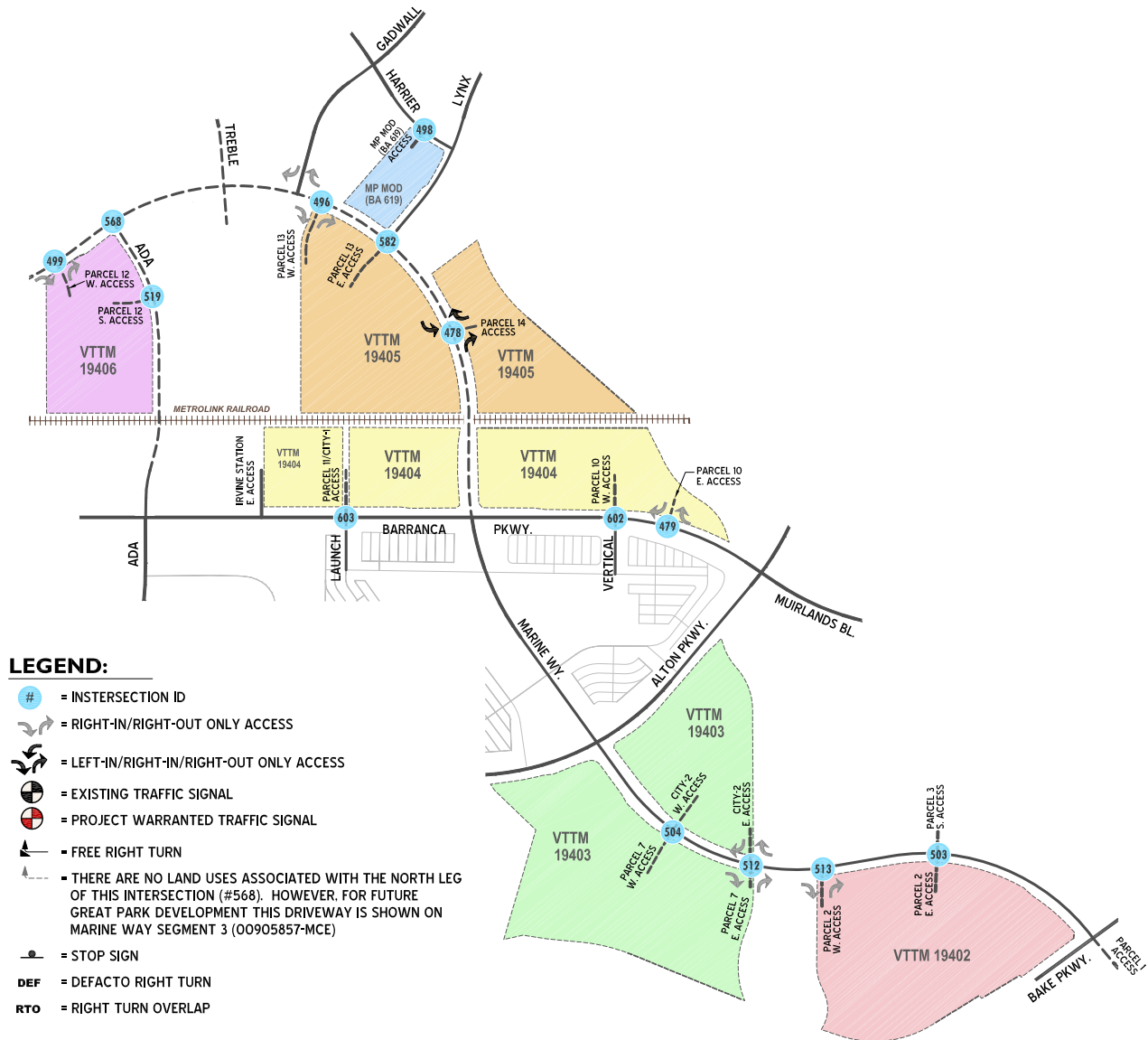
Table 5-2 presents signal warrant analysis for the STIY with Project VTTMs and Master Plan Modification and BOA with Project VTTMs and Master Plan Modification conditions. Under the STIY with Project VTTMs and Master Plan Modification conditions, the following project area intersections meet the peak hour warrants for a traffic signal as indicated on Table 5-2:

EXHIBIT 5-5: RECOMMENDED PROJECT AREA VTTMs AND MASTER PLAN MODIFICATION LANE GEOMETRICS AND TRAFFIC CONTROLS, STIY CONDITIONS



504 Parcel 7 - City 2 W. Access & Marine Wy. 	507 Gadwall & Harrier 	512 City-2 - Parcel 7 E. Access & Marine Wy. 	513 Parcel 2 W. Access & Marine Wy. 	519 Ada & Parcel 12 S. Access 	565 Treble & Marine Wy. 	566 Marine Wy. & Barranca Pkwy.
567 Marine Wy. & Alton Pkwy. 	568 Ada & Marine Wy. 	569 Bake Pkwy. & Marine Wy. - Parcel 1 Access 	582 Lynx - Parcel 13 E. Access & Marine Wy. 	602 Vertical - Parcel 10 W. Access & Barranca Pkwy. 	603 Launch - Parcel 11/ City-1 Access & Barranca Pkwy. 	834 Lynx & Harrier

EXHIBIT 5-6: RECOMMENDED PROJECT AREA VTTMs AND MASTER PLAN MODIFICATION LANE GEOMETRICS AND TRAFFIC CONTROLS, BOA CONDITIONS



478 Marine Wy. & Parcel 14 Access 	479 Parcel 10 E. Access & Barranca Pkwy. 	496 Parcel 13 W. Access & Marine Wy. 	498 MP Mod (BA 619) Access & Harrier 	499 Parcel 12 W. Access & Marine Wy. 	503 Parcel 2 E. Access - Parcel 3 S. Access & Marine Wy. 	504 Parcel 7 - City 2 W. Access & Marine Wy.
512 City-2 - Parcel 7 E. Access & Marine Wy. 	513 Parcel 2 W. Access & Marine Wy. 	519 Ada & Parcel 12 S. Access 	568 Ada & Marine Wy. 	582 Lynx - Parcel 13 E. Access & Marine Wy. 	602 Vertical - Parcel 10 W. Access & Barranca Pkwy. 	603 Launch - Parcel 11/ City-1 Access & Barranca Pkwy.

**TABLE 5-1: FOCUSED ANALYSIS AREA STIY AND BOA INTERSECTION LOS SUMMARY (HCM METHODOLOGY)
WITH PROJECT VTTMS AND MASTER PLAN MODIFICATION**

ID	Intersection	STIY WP						BOA WP			
		Traffic Control ¹	Delay (Secs) ²		Level of Service ²		Traffic Control ¹	Delay (Secs) ²		Level of Service ²	
			AM	PM	AM	PM		AM	PM	AM	PM
326	Ada & Barranca Av.	TS	23.1	20.5	C	C	--	--	--	--	--
341	Alton Pkwy. & Barranca Pkwy./Muirlands Bl.	TS	40.0	41.5	D	D	--	--	--	--	--
478	Marine Wy. & Parcel 14 Access	CSS	11.5	25.4	B	D	CSS	10.7	23.7	B	C
479	Parcel 10 E. Access & Barranca Pkwy.	CSS	14.4	11.2	B	B	CSS	14.3	11.7	B	B
494	Gadwall & Marine Wy.	CSS	10.4	12.9	B	B	--	--	--	--	--
496	Parcel 13 W. Access & Marine Wy.	CSS	14.3	10.2	B	B	CSS	13.9	10.5	B	B
498	MP Mod (BA 619) Access & Harrier	CSS	9.6	9.5	A	A	CSS	9.4	9.0	A	A
499	Parcel 12 W. Access & Marine Wy.	CSS	9.4	9.2	A	A	CSS	12.7	16.4	B	C
500	Irvine Station E. Access & Barranca Pkwy	CSS	>80	34.9	F	D	--	--	--	--	--
	- With Right-In/Right-Out (RIRO) restriction	CSS	19.8	11.0	C	B	--	--	--	--	--
	- with Traffic Signal Improvement	TS	3.1	6.5	A	A	--	--	--	--	--
503	Parcel 2 E. Access - Parcel 3 S. Access & Marine	TS	15.3	21.7	B	C	TS	16.0	20.5	B	C
504	Parcel 7 - City 2 W. Access & Marine Wy.	TS	17.2	13.2	B	B	TS	16.4	13.3	B	B
507	Gadwall & Harrier	CSS	10.5	10.5	B	B	--	--	--	--	--
512	City-2 E. Access & Marine Wy.	CSS	15.4	13.8	C	B	CSS	15.6	14.9	C	B
513	Parcel 2 W. Access & Marine Wy.	CSS	11.2	13.7	B	B	CSS	13.7	14.9	B	B
519	Ada & Parcel 12 S. Access	CSS	8.8	9.1	A	A	CSS	16.8	23.7	C	C
565	Treble & Marine Wy.	TS	21.8	15.9	C	B	--	--	--	--	--
566	Marine Wy. & Barranca Pkwy.	TS	54.6	47.6	D	D	--	--	--	--	--
567	Marine Wy. & Alton Pkwy.	TS	30.0	34.3	C	C	--	--	--	--	--
568	Ada & Marine Wy.	TS	10.3	11.9	B	B	TS	35.9	51.4	D	D
569	Bake Pkwy. & Marine Wy.-Parcel 1 Access	TS	29.9	47.5	C	D	--	--	--	--	--
582	Lynx - Parcel 13 E Access & Marine Wy.	TS	42.2	34.3	D	C	TS	>80	39.9	F	D
602	Vertical - Parcel 10 W. Access & Barranca Pkwy.	TS	8.1	7.3	A	A	TS	17.2	19.2	B	B
603	Launch - Parcel 11/City-1 Access & Barranca Pkwy	TS	3.9	14.8	A	B	TS	7.1	17.6	A	B
834	Lynx & Harrier	CSS	33.5	19.7	D	C	--	--	--	--	--

¹ TS = Existing Traffic Signal; **TS** = Proposed Traffic Signal; CSS = Cross Street Stop

² Per the Highway Capacity Manual 7th Edition (HCM7), overall average intersection delay and level of service are shown for intersections with an all-way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown. Delay and level of service calculated using Synchro 12 analysis software.

-- = Not Evaluated

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TABLE 5-2: STIY AND BOA TRAFFIC SIGNAL WARRANT SUMMARY¹
WITH PROJECT VTTMs AND MASTER PLAN MODIFICATION

ID	Intersection	Peak Hour Warrant ^{1,2}	
		STIY w/ Project VTTMs and Master Plan Modification	BOA w/ Project VTTMs and Master Plan Modification
478	Marine Wy. & Parcel 14 Access	RIRO/LI	RIRO/LI
479	Parcel 10 E. Access & Barranca Pkwy.	RIRO	RIRO
494	Gadwall & Marine Wy.	RIRO	n/a
496	Parcel 13 W. Access & Marine Wy.	RIRO	RIRO
498	MP Mod (BA 619) Access & Harrier	--	--
499	Parcel 12 W. Access & Marine Wy.	RIRO	RIRO
500	Irvine Station E. Access & Barranca Pkwy	X	n/a
503	Parcel 2 E. Access - Parcel 3 S. Access & Marine Wy.	X	X
504	Parcel 7 - City 2 W. Access & Marine Wy.	X	X
507	Gadwall & Harrier	--	n/a
512	City-2 E. Access & Marine Wy.	RIRO	RIRO
513	Parcel 2 W. Access & Marine Wy.	RIRO	RIRO
519	Ada & Parcel 12 S. Access	--	--
565	Treble & Marine Wy.	X	n/a
568	Ada & Marine Wy.	--	X
582	Lynx - Parcel 13 E Access & Marine Wy.	X	n/a
834	Lynx & Harrier	X	n/a

¹ **X** = Intersection meets respective traffic signal warrant criteria; RIRO/LI = Right-In/Right-Out/Left-In Only Access; RIRO = Right-In/Right-Out;

-- = Traffic signal warrant not met; n/a = Not Applicable (not evaluated for BOA)

² Peak hour volume based traffic signal warrant uses the sum of all the approach volumes on the major road and the sum of the highest approach volume on the minor leg.

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- 500. Irvine Station E. Access at Barranca Parkway (if full access, traffic signal or restriction to right-in/right-out for future consideration by the City).
- 504. Parcel 7 W. Access – City-2 W Access at Marine Way
- 503. Parcel 2 E. Access – Parcel 3 S. Access at Marine Way
- 565. Treble at Marine Way
- 834. Lynx at Harrier (a signal is not recommended and a deviation request is included in Appendix 5.6)
- 582. Lynx – Parcel 13 E. Access at Marine Way

For BOA with Project VTTMs and Master Plan Modification conditions with surrounding unrelated development, intersection 568 – Ada at Marine Way is also anticipated to satisfy traffic signal warrants. The signal warrant worksheets for STIY and BOA conditions with the Project VTTMs and Master Plan Modification are included in Appendix 5.3 of this traffic study.

5.1.3 Signal Spacing

According to the Transportation Guidelines (TG-7), the recommended signal spacing on a Primary Highway is 2,640', while the minimum is 1,320'.

The distance along Marine Way between Parcel 2 E. Access and Bake Parkway is 1,150', which is less than the minimum signal spacing on a Primary, according to TG-7 and a deviation is requested (see Appendix 5.6).

The distance along Marine Way between Parcel 7 W. Access and Alton Parkway is 680', which is less than the minimum signal spacing on a Primary, according to TG-7 and a deviation is requested (see Appendix 5.6).

The distance along Marine Way between Ada and Treble is 740', which is less than the minimum signal spacing on a Primary and a deviation is requested (see Appendix 5.6).

The other study area traffic signal locations are unchanged from prior approvals.

5.1.4 Distance between Driveways and Intersections

Distances between driveways and intersections are based on the TG-8 guideline. According to TG-8, the recommended minimum separation between a driveway and an intersection or two driveways is:

- | | |
|---------------------------|--------------------------|
| • 335 feet on a Major | • 150 feet on a Commuter |
| • 230 feet on a Primary | • 105 feet on a Local |
| • 185 feet on a Secondary | |

The Project driveways spacing is shown on Exhibits 5-7 and 5-8. The distance between driveways for Marine Way (a Primary Highway) in the study area range from 435' to 805'. The minimum separation for driveways along Marine Way and Barranca Parkway (Primary Highways) is 230 feet, while the minimum separation for driveways along Harrier (Local Roadway) is 105 feet. In the BOA with Project VTTMs and Master Plan Modification scenario, the minimum separation for driveways along the Ada extension (Commuter Highway) is 150 feet. All study area distances between Project VTTMs and Master Plan Modification driveways meet the minimum spacing required by TG-8.

EXHIBIT 5-7: DISTANCES BETWEEN INTERSECTIONS AND DRIVEWAY LENGTHS
(VTTM 19404, VTTM 19405, VTTM 19406, AND MP MOD - BA 619)

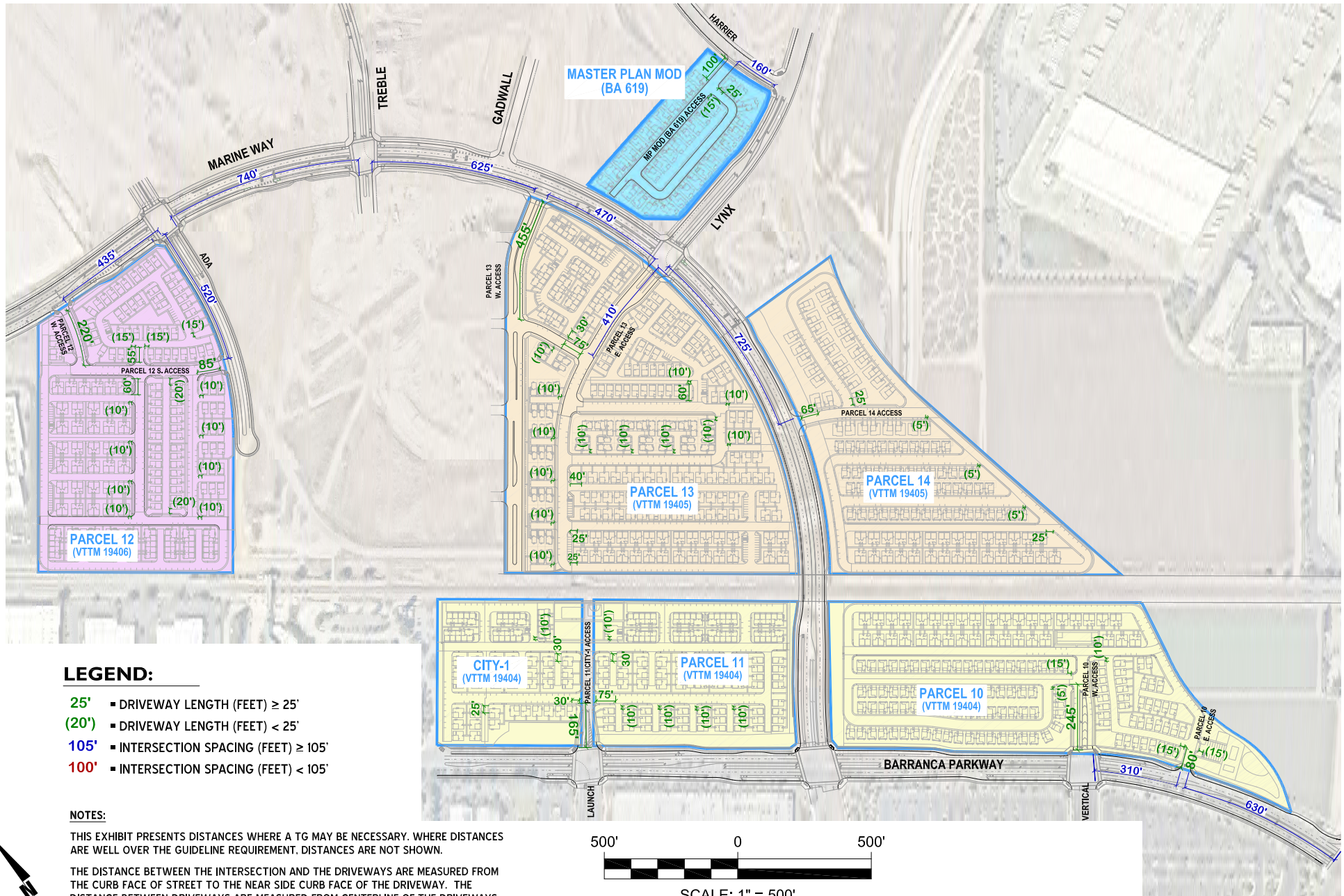
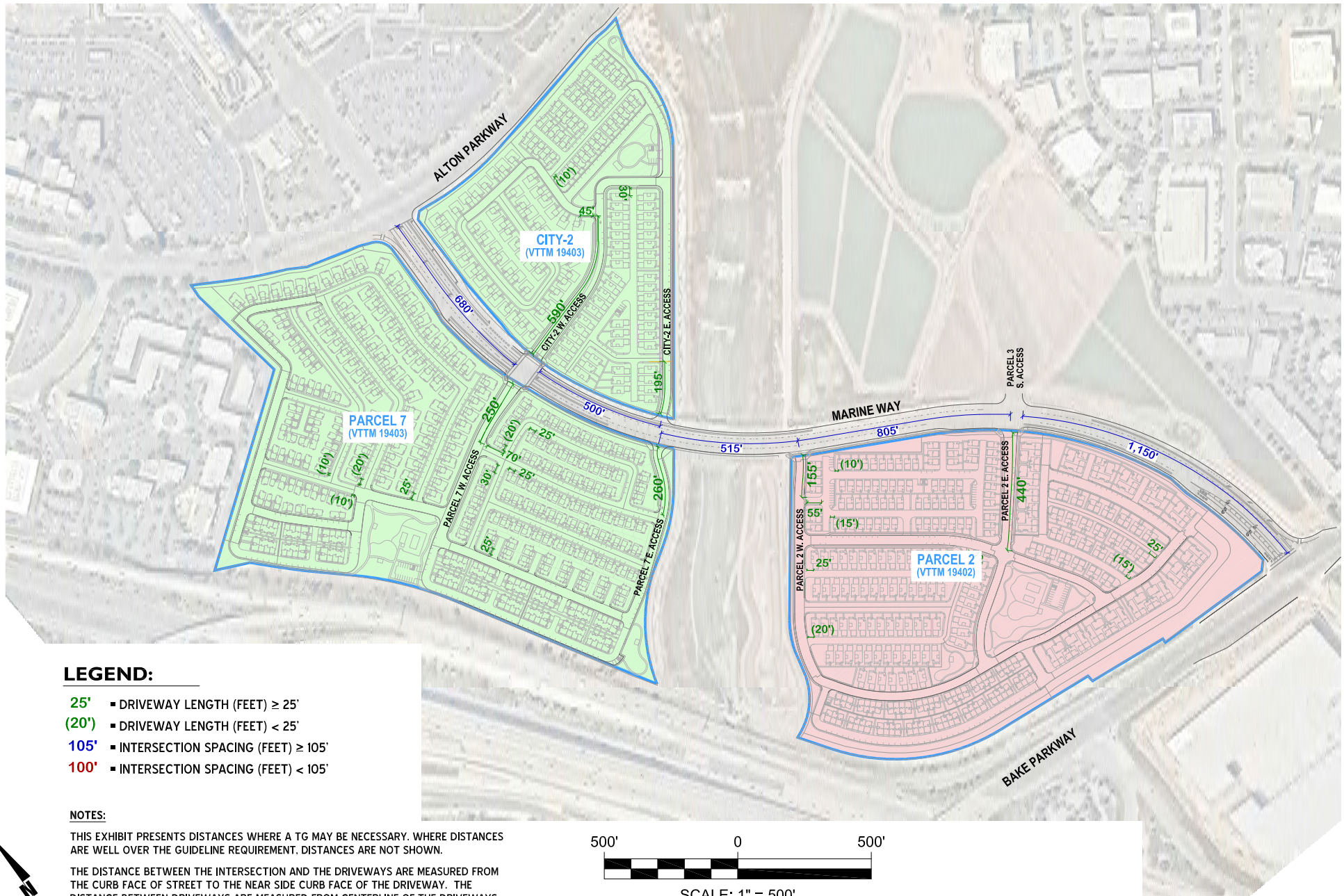


EXHIBIT 5-8: DISTANCES BETWEEN INTERSECTIONS AND DRIVEWAY LENGTHS (VTTM 19402 AND VTTM 19403)



5.1.5 Left-Turn In/Out Access

Guidelines about whether or not to allow left turn in/out access at driveways are included in TG-10. The basis for allowing left turns at driveways is dependent on the entering and/or exiting volumes in relationship to the conflicting volumes on the roadway. Pursuant to the guideline, left turn access is acceptable when the left turn volume and the sum of the conflicting volumes lie below the guideline.

TG-10 applies to each driveway along a Major, Primary, Secondary, or Commuter Street. Table 5-3 contains the left turn in/out access information for relevant driveways.

For Parcel 14 Access at Marine Way, left turn in access is proposed but is not recommended for PM peak hour conditions (for STIY with Project VTTMs and Master Plan Modification and BOA with Project VTTMs and Master Plan Modification conditions), according to TG-10. Because left turn in access does not satisfy the TG-10 guideline, a deviation request is included in Appendix 5.6.

For Parcel 12 South Access at Ada, left turn in/out access is proposed but left turn out access is not recommended for AM and PM peak hour conditions (for BOA with Project VTTMs and Master Plan Modification conditions), according to TG-10. Because left-turn out access does not satisfy the TG-10 guideline, a deviation request is included in Appendix 5.6.

For Irvine Station East Access at Barranca Parkway, left turn in/out access currently exists. Peak hour left turn maneuvers are projected to become more difficult at this location, with or without the Project. Alternatives to address left-in/left-out challenges include installation of a traffic signal and restricting access to right-in/right-out. Since project traffic does not utilize this driveway, the City can consider additional analysis outside of this Traffic Evaluation to determine how to best mitigate this left-turn in/out not meeting TG-10.

5.1.6 Right Turn Lanes at Driveways

Guidelines about whether or not right turn lanes are required at unsignalized driveways are included in TG-11. Right-turn lanes at driveways are required when the turn volumes and through volumes could conflict and increase the potential for accidents. Per TG-11 criteria, a right turn lane should be provided for Primary roadways if the peak hour right turn volume is more 100 vehicles and at Secondary roadways if the peak hourly right turn volume is more 200 vehicles, but are not required for Commuters.

All unsignalized Project VTTMs and Master Plan Modification driveways do not meet the requirements dedicated right-turn lanes. Right turns from Barranca Parkway to Irvine Station E. Access is expected to need a right-turn lane. The City can consider additional analysis outside of this Traffic Evaluation to determine how to best address this right-turn lane requirement.

5.1.7 Left-Turn and Right Turn Storage

Left-turn pocket lengths for unbuilt project access intersections with exclusive turn lanes were estimated based on the peak hour volumes utilized for traffic access analysis purposes and provided in the appendices 5.1 and 5.2 traffic operations worksheets. Where pocket lengths exceed the standard 150 feet for public arterials or 90 feet for lower classification roadways, the length is based on one foot per peak hour left-turn volume (highest of AM and PM) and rounded up into increments

TABLE 5-3: LEFT TURN IN/OUT ACCESS REVIEW

Left Turn In Access

Parcel 14 Access at Marine Way						Parcel 12 S Access at Ada (TAZ 721 Access Roadway)					
	SB LT In	NBT	NBR	NB Tot	TG Rec LT?		NB LT In	SBT	SBR	SB Tot	TG Rec LT?
STIY AM	10	715	8	723	Y	STIY AM	1	1	53	54	Y
STIY PM	16	2,133	47	2,180	N	STIY PM	1	1	91	92	Y
BOA AM	11	555	7	562	Y	BOA AM	44	638	9	647	Y
BOA PM	20	2,041	44	2,085	N	BOA PM	66	867	25	892	Y
						Irvine Station E. Access at Barranca Pkwy					
							EB LT In	WBT	WBR	WB Tot	TG Rec LT?
STIY AM						STIY AM	7	1,870	112	1,982	N
STIY PM						STIY PM	5	930	44	974	Y

Left Turn Out Access

Parcel 12 S Access at Ada (TAZ 721 Access Roadway)								
Scenario	EB LT Out	SBR	SBR Half	SBT	NBT	NBL	Conflicti ng Vol	TG Rec LT?
STIY AM	27	53	27	1	1	1	30	Y
STIY PM	71	91	46	1	1	1	49	Y
BOA AM	3	9	5	638	964	44	1,651	N
BOA PM	7	25	13	867	772	66	1,718	N
Irvine Station E. Access at Barranca Pkwy								
Scenario	SB LT Out	WBR	WB RT Half	WBT	EBT	EBL	Conflicti ng Vol	TG Rec LT?
STIY AM	21	112	56	1,870	639	7	2,572	N
STIY PM	77	44	22	930	1,640	5	2,597	N

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of 10. The same methodology for previous NITM Program project traffic studies is used here. The estimated turn lane storage length requirements based on TG-1 for the analyzed intersections with the Project VTTMs and Master Plan Modification are summarized in Table 5-4 for STIY and Table 5-5 for BOA conditions.

At twenty of the evaluated turn lanes listed below, the recommended storage lengths are not consistent with the one foot per peak hour turn volume criteria and a separate deviation request letter is provided:

- Lynx / Harrier – NBL
- Treble / Marine Way – SBL, WBR
- Marine Way / Barranca Parkway – SBR, EBL, WBR
- Marine Way / Alton Parkway – NBL, NBR, WBL
- Bake Parkway / Marine Way - NBL, EBR
- Ada / Marine Way – NBL, NBR, EBR
- Lynx / Marine Way – NBR, SBL, WBL, WBR
- Launch – Parcel 11/City-1 Access & Barranca Parkway – SBR, EBR

#834 Lynx / Harrier

For the northbound left turn from Lynx to westbound Harrier, a northbound left turn lane is provided with 150' of storage length. The highest turn volume projection is 182 in the PM peak hour for STIY conditions and the recommended length is 190'.

#565 Treble / Marine Way

For the southbound left turn from Treble to eastbound Marine Way, two southbound left turn lanes are provided with 300' of storage length. The highest turn volume projection is 862 in the AM peak hour for STIY conditions and the recommended length is 440'. This is a slight decrease in volume from prior approvals.

For the westbound right turn from Marine Way to northbound Treble, a westbound right turn lane is provided with 300' of storage length. The highest turn volume projection is 723 in the PM peak hour for STIY conditions and the recommended length is 730'. This is a slight decrease in volume from prior approvals.

#566 Marine Way / Barranca Parkway

For the southbound right turn from Marine Way to westbound Barranca Parkway, a southbound right turn lane is provided with 420' of storage length. The highest turn volume projection is 938 in the AM peak hour for STIY conditions and the recommended length is 940'.

For the eastbound left turn from Barranca Parkway to northbound Marine Way, two eastbound left turn lanes are provided with 305' of storage length. The highest turn volume projection is 951 over 2 lanes (476 per lane) in the PM peak hour for STIY conditions and the recommended length is 480' per lane.

For the westbound right turn from Barranca Parkway to northbound Marine Way, a westbound right turn lane is provided with 345' of storage length. The highest turn volume projection is 622 in the PM peak hour for STIY conditions and the recommended length is 630'.

**TABLE 5-4: SHORT-TERM INTERIM YEAR (STIY) TURN LANE STORAGE
WITH PROJECT VTTMS AND MASTER PLAN MODIFICATION**

ID	Intersection	Movement	STIY With Project ¹				Lanes	Volume / Lane	Recommended Length ² (ft.)	Existing/ Provided Length ⁵ (ft.)
			AM	PM	Peak Hour	Volume				
Harrier										
834	Lynx & Harrier	NBL	92	182	PM	182	1	182	190	150 ^{3,6}
Marine Way										
478	Marine Wy. & Parcel 14 Access	SBL	10	16	PM	16	1	16	150	150
		WBR	82	34	AM	82	1	82	90	150
496	Parcel 13 W. Access & Marine Wy.	NBR	47	16	AM	47	1	47	90	125
499	Parcel 12 W. Access & Marine Wy.	NBR	16	27	PM	27	1	27	90	150
		NBR	16	27	PM	27	1	27	90	150
503	Parcel 2 E. Access - Parcel 3 S. Access & Marine Wy.	NBL	71	30	AM	71	1	71	90	150
		SBL	39	129	PM	129	1	129	130	180
		EBL	72	70	AM	72	1	72	150	200
		WBL	26	55	PM	55	1	55	150	150
504	Parcel 7 - City 2 W. Access & Marine Wy.	NBL	153	56	AM	153	1	153	160	160
		SBL	13	8	AM	13	1	13	90	150
		EBL	12	51	PM	51	1	51	150	150
		WBL	11	24	PM	24	1	24	150	150
512	City-2 E. Access & Marine Wy.	NBR	9	5	AM	9	1	9	90	150
		SBR	19	8	AM	19	1	19	90	150
513	Parcel 2 W. Access & Marine Wy.	NBR	17	9	AM	17	1	17	90	150
		NBR	17	9	AM	17	1	17	90	150
565	Treble & Marine Wy.	SBL	862	340	AM	862	2	431	440	300 ⁶
		EBL	10	77	PM	77	1	77	150	300
		WBR	200	723	PM	723	1	723	730	300 ^{3,6}
566	Marine Wy. & Barranca Pkwy.	NBL	37	132	PM	132	2	66	150	240
		NBR	25	97	PM	97	1	97	150	150
		SBL	589	447	AM	589	2	295	300	325
		SBR	938	527	AM	938	1	938	940	420 ^{3,6}
		EBL	206	951	PM	951	2	476	480	305 ^{3,6}
		EBR	84	61	AM	84	1	84	150	225
		WBL	91	48	AM	91	2	46	150	165
		WBR	357	622	PM	622	1	622	630	345 ^{3,6}
567	Marine Wy. & Alton Pkwy.	NBL	735	454	AM	735	2	368	370	330 ^{3,6}
		NBR	676	436	AM	676	1	676	680	492 ^{3,6}
		SBL	11	81	PM	81	2	41	150	150
		SBR	12	89	PM	89	1	89	150	280
		EBL	169	116	AM	169	2	85	150	300
		EBR	506	756	PM	756	Free (1)	756	760	230
		WBL	280	489	PM	489	2	245	250	150 ^{3,6}
		WBR	88	61	AM	88	1	88	150	260
568	Ada & Marine Wy.	NBL	8	30	PM	30	1	30	90	300
		NBR	18	41	PM	41	1	41	90	300
		EBR	8	10	PM	10	1	10	150	180
		WBL	45	81	PM	81	1	81	150	300
569	Bake Pkwy. & Marine Wy.-Parcel 1 Access	NBL	937	555	AM	937	2	469	470	400 ^{3,6}
		NBR	175	73	AM	175	1	175	180	300
		SBL	119	41	AM	119	1	119	150	300
		SBR	636	286	AM	636	Free (1)	636	640	50
		EBL	288	483	PM	483	2	242	250	300
		EBR	536	802	PM	802	2	401	410	400 ^{3,6}
		WBL	37	148	PM	148	1	148	150	150
		WBL	37	148	PM	148	1	148	150	150

TABLE 5-4: SHORT-TERM INTERIM YEAR (STIY) TURN LANE STORAGE
WITH PROJECT VTTMS AND MASTER PLAN MODIFICATION

ID	Intersection	Movement	STIY With Project ¹				Lanes	Volume / Lane	Recommended Length ² (ft.)	Existing/ Provided Length ⁵ (ft.)
			AM	PM	Peak Hour	Volume				
582	Lynx - Parcel 13 E Access & Marine Wy.	NBL	7	NOM	AM	7	1	7	90	<u>90</u>
		NBR	106	42	AM	106	1	106	110	<u>90</u> ^{4,6}
		SBL	994	663	AM	994	2	497	500	<u>350</u> ^{6,7}
		EBL	27	63	PM	63	1	63	150	<u>310</u>
		WBL	28	116	PM	116	1	116	150	<u>200</u>
		WBR	498	828	PM	828	1	828	830	<u>325</u> ^{3,6}
Barranca Parkway										
326	Ada & Barranca Pkwy.	NBL	26	57	PM	57	1	57	150	115
		SBL	61	120	PM	120	2	60	150	190
		SBR	13	53	PM	53	1	53	150	190
		EBL	12	37	PM	37	1	37	150	200
		WBL	199	74	AM	199	1	199	200	200
		WBR	48	41	AM	48	1	48	190	190
341	Alton Pkwy. & Barranca Pkwy./Muirlands Bl.	NBL	9	7	AM	9	1	9	150	210
		NBR	230	347	PM	347	1	347	350	490
		SBL	176	121	AM	176	2	88	150	240
		SBR	1,030	569	AM	1,030	Free (1)	1,030	1,030	410
		EBL	493	708	PM	708	2	354	360	440
		WBL	181	122	AM	181	2	91	150	225
479	Parcel 10 E. Access & Barranca Pkwy.	SBR	15	8	AM	15	1	15	90	<u>80</u>
500	Irvine Station E. Access & Barranca Pkwy.	SBL	21	77	PM	77	1	77	90	195
		SBR	NOM	5	PM	5	1	5	90	230
		EBL	7	5	AM	7	1	7	150	195
602	Vertical - Parcel 10 W. Access & Barranca Pkwy.	NBL	17	76	PM	76	1	76	90	300
		NBR	8	39	PM	39	1	39	90	300
		SBL	32	14	AM	32	1	32	90	<u>225</u>
		EBL	15	56	PM	56	1	56	150	<u>230</u>
		EBR	73	37	AM	73	1	73	150	300
		WBL	36	15	AM	36	1	36	150	335
		WBR	5	16	PM	16	1	16	150	<u>180</u>
603	Launch - Parcel 11/City-1 Access & Barranca Pkwy.	NBL	25	102	PM	102	2	51	90	300
		SBL	10	12	PM	12	1	12	90	<u>140</u>
		SBR	81	26	AM	81	1	81	90	<u>60</u> ^{3,6}
		EBL	16	55	PM	55	1	55	150	300
		EBR	153	46	AM	153	1	153	160	95 ^{3,4,6}
		WBL	37	13	AM	37	1	37	150	240
		WBR	NOM	15	PM	15	1	15	150	300
Ada										
519	Ada & Parcel 12 S. Access	NBL	NOM	NOM	AM	NOM	1	NOM	90	<u>90</u>

¹ NOM = Nominal (less than 5 vehicles per hour)

² Consistent with the methodology utilized in previous NITM program traffic studies, the recommended turn pocket length is based on one foot per peak hour turn volume (highest of AM and PM and rounded into increments of 10), where pocket lengths exceed the standard 150 feet for Major, Primary, and Secondary highways, and 90 feet for Commuter, Local streets, and driveways.

³ The peak hour volume exceeds the available storage length based on the one foot per peak hour turn volume criteria. However, review of the SimTraffic simulation results indicate that the turn lane queue is anticipated to clear in a timely manner and that the provided pocket length is adequate to accommodate the peak hour volume. (See separate deviation request letter)

⁴ Excess in queue can be accommodated within the transition lane.

⁵ 100 = Existing storage length; **100** = Provided storage length

⁶ Deviation requested

⁷ SB left turn bay; 1st (inside) left turn lane 350', 2nd (outside) left turn lane is over 350' (trap lane)

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**TABLE 5-5: BUILDOUT APPROVED (BOA) TURN LANE STORAGE
WITH PROJECT VTTMS AND MASTER PLAN MODIFICATION**

ID	Intersection	Movement	BOA With Project ¹				Lanes	Volume / Lane	Recommended Length ² (ft.)	Existing/ Provided Length ⁵ (ft.)
			AM	PM	Peak Hour	Volume				
Marine Way										
478	Marine Wy. & Parcel 14 Access	SBL	11	20	PM	20	1	20	150	150
		WBR	82	34	AM	82	1	82	90	150
496	Parcel 13 W. Access & Marine Wy.	NBR	47	16	AM	47	1	47	90	125
499	Parcel 12 W. Access & Marine Wy.	NBR	16	27	PM	27	1	27	90	150
503	Parcel 2 E. Access - Parcel 3 S. Access & Marine Wy.	NBL	69	25	AM	69	1	69	90	150
		SBL	41	139	PM	139	1	139	140	180
		EBL	94	47	AM	94	1	94	150	200
		WBL	23	77	PM	77	1	77	150	150
504	Parcel 7 - City 2 W. Access & Marine Wy.	NBL	146	50	AM	146	1	146	150	160
		SBL	17	10	AM	17	1	17	90	150
		EBL	13	44	PM	44	1	44	150	150
		WBL	10	40	PM	40	1	40	150	150
512	City-2 E. Access & Marine Wy.	NBR	9	5	AM	9	1	9	90	150
		SBR	19	8	AM	19	1	19	90	150
513	Parcel 2 W. Access & Marine Wy.	NBR	17	9	AM	17	1	17	90	150
568	Ada & Marine Wy.	NBL	665	554	AM	665	1	665	670	300 ^{3,6}
		NBR	302	224	AM	302	1	302	310	300 ^{3,6}
		EBR	382	657	PM	657	1	657	660	180 ^{3,6}
		WBL	266	236	AM	266	1	266	270	300
582	Lynx - Parcel 13 E Access & Marine Wy.	NBL	78	51	AM	78	1	78	90	90
		NBR ⁸	106	42	AM	106	1	106	110 ⁸	90 ^{4,6}
		SBL	831	388	AM	831	2	416	420	350 ^{6,7}
		EBL	75	129	PM	129	1	129	150	310
		WBL	118	476	PM	476	1	476	480	200 ^{3,6}
		WBR	333	678	PM	678	1	678	680	325 ^{3,6}
Barranca Parkway										
479	Parcel 10 E. Access & Barranca Pkwy.	SBR	15	8	AM	15	1	15	90	80
602	Vertical - Parcel 10 W. Access & Barranca Pkwy.	NBL	44	175	PM	175	1	175	180	300
		NBR	24	116	PM	116	1	116	120	300
		SBL	35	17	AM	35	1	35	90	225
		EBL	14	49	PM	49	1	49	150	230
		EBR	226	94	AM	226	1	226	230	300
		WBL	129	53	AM	129	1	129	150	335
		WBR	6	21	PM	21	1	21	150	180
603	Launch - Parcel 11/City-1 Access & Barranca Pkwy.	NBL	85	287	PM	287	2	144	150	300
		SBL	10	10	AM	10	1	10	90	140
		SBR	77	27	AM	77	1	77	90	60 ^{3,6}
		EBL	15	56	PM	56	1	56	150	300
		EBR	482	192	AM	482	1	482	490	95 ^{3,4,6}
		WBL	132	40	AM	132	1	132	150	240
		WBR	NOM	12	PM	12	1	12	150	300
Ada										
519	Ada & Parcel 12 S. Access	NBL	44	66	PM	66	1	66	90	90

¹ NOM = Nominal (less than 5 vehicles per hour)

² Consistent with the methodology utilized in previous NITM program traffic studies, the recommended turn pocket length is based on one foot per peak hour turn volume (highest of AM and PM and rounded into increments of 10), where pocket lengths exceed the standard 150 feet for Major, Primary, and Secondary highways, and 90 feet for Commuter, Local streets, and driveways.

³ The peak hour volume exceeds the available storage length based on the one foot per peak hour turn volume criteria. However, review of the SimTraffic simulation results indicate that the turn lane queue is anticipated to clear in a timely manner and that the provided pocket length is adequate to accommodate the peak hour volume. (See separate deviation request letter)

⁴ Excess in queue can be accommodated within the transition lane.

⁵ 100 = Existing storage length; **100** = Provided storage length

⁶ Deviation requested

⁷ SB left turn bay; 1st (inside) left turn lane 350'; 2nd (outside) left turn lane is over 350' (trap lane)

⁸ Not including future long range volumes associated with TAZ 722 development

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#567 Marine Way / Alton Parkway

For the northbound left turn from Marine Way to westbound Alton Parkway, two northbound left turn lanes are provided with 330' of storage length per lane. The highest turn volume projection is 735 in the AM peak hour for STIY conditions and the recommended length is 370' per lane.

For the northbound right turn from Marine Way to eastbound Alton Parkway, a northbound right turn lane is provided with 492' of storage length. The highest turn volume projection is 676 in the AM peak hour for STIY conditions and the recommended length is 680'.

For the westbound left turn from Alton Parkway to southbound Marine Way, two westbound left turn lanes are provided with 150' of storage length per lane. The highest turn volume projection is 489 over 2 lanes (245 per lane) in the PM peak hour for STIY conditions and the recommended length is 250' per lane.

#568 Ada / Marine Way

For the northbound left turn from Ada to westbound Marine Way, a northbound left turn lane is provided with 300' of storage length. The highest turn volume projection is 665 in the AM peak hour for BOA conditions and the recommended length is 670' per lane.

For the northbound right turn from Ada to eastbound Marine Way, a northbound right turn lane is provided with 300' of storage length. The highest turn volume projection is 302 in the AM peak hour for BOA conditions and the recommended length is 310'.

For the eastbound right turn from Marine Way to southbound Ada, an eastbound right turn lane is provided with 180' of storage length. The highest turn volume projection is 657 in the PM peak hour for BOA conditions and the recommended length is 660'.

#569 Bake Parkway / Marine Way

For the northbound left turn from Bake Parkway to westbound Marine Way, two northbound left turn lanes are provided with 400' of storage length. The highest turn volume projection is 937 over 2 lanes (469 per lane) in the AM peak hour for STIY conditions and the recommended length is 470' per lane. This is a slight decrease in volume from prior approvals.

For the eastbound right turn from Marine Way to southbound Bake Parkway, two eastbound right turn lanes are provided with 400' of storage length each. The highest STIY turn volume projection is 802 over 2 lanes (401 per lane) in the PM peak hour and the recommended length is 410' per lane. This is a slight decrease in volume from prior approvals.

#582 Lynx / Marine Way

For the northbound right turn from Lynx to eastbound Marine Way, a northbound right turn lane is provided with 90' of storage length. The highest turn volume projection is 106 (not including future long range volumes associated with TAZ 722 development) in the AM peak hour for BOA conditions and the recommended length is 110'.

For the southbound left turn from Lynx to eastbound Marine Way, two southbound left turn lanes are provided with 350' of storage length. The highest turn volume projection is 994 in the AM peak hour for STIY conditions and the recommended length is 500' per lane.

For the westbound left turn from Marine Way to northbound Lynx, a westbound right turn lane is provided with 200' of storage length. The highest BOA turn volume is 476 in the PM peak hour and the recommended length is 480'.

For the westbound right turn from Marine Way to northbound Lynx, a westbound right turn lane is provided with 325' of storage length. The highest STIY turn volume is 828 in the PM peak hour and the recommended length is 830'. This is a slight decrease in volume from prior approvals.

#603 Launch- Parcel 11/City-1 Access / Barranca Parkway

For the southbound right turn from Parcel 11/City-1 Access to westbound Barranca Parkway, a southbound right turn lane is provided with 60' of storage length. The highest STIY turn volume is 81 in the AM peak hour and the recommended length is 90'.

For the eastbound right turn from Barranca Parkway to southbound Launch, a westbound right turn lane is provided with 95' of storage length. The highest STIY turn volume is 153 in the AM peak hour and the recommended length is 160'.

5.1.8 Corner Clearance

Corner clearance is addressed in TG-9 of the Transportation Guidelines. For the distance between a signalized intersection and the nearest access before the intersection, minimum corner clearance should include sufficient distance to (1) not have the nearest access interfere with the maximum right turn queue and (2) allow right turns from the access to enter the left turn pocket at the signalized intersection.

TG-9 indicates that vehicles turning at driveways should not interfere with vehicles at adjacent intersection turn pockets. In addition, the corner clearance should be sufficient for drivers to enter the street without interfering with a vehicle approaching from a departing intersection. The distance between driveways and intersections is recommended. The distance between driveways and intersections has been evaluated above, and distance between driveways and intersections in the study area are longer than the TG minimum spacing.

The purpose of TG-9 is to minimize interference of drivers at one intersection with drivers exiting an adjacent intersection, to ensure the efficient operation of the street system. The proposed Project is not anticipated to diminish the existing operation of the overall circulation system in the Project area.

5.1.9 Driveway Length

Driveway lengths are evaluated for local street driveways based on the TG-15 guideline. The unsignalized driveway length is directly related to the volume entering or exiting the driveway (one foot per vehicle, with a minimum of 25 feet). Driveway lengths are illustrated on Exhibits 5-7 and 5-8.

Table 5-6 shows the driveway length evaluation per TG-15. As shown on Table 5-6, for the driveway of Parcel 12 South Access at Ada, the maximum inbound or outbound peak hour driveway volume is 92 vph in the PM peak hour (TG-15 recommends a driveway length of 100'). The provided driveway length accommodates 85' of storage. For Parcel 12 South Access at Ada, the proposed driveway length is less than recommended in TG-15 and a deviation request is provided.

TABLE 5-6: DRIVEWAY LENGTHS

Driveway	Access To	Estimated Maximum In / Out Volume	Minimum Recommended Driveway Length (feet)	Driveway Length Provided (feet)
MP Mod (BA 619) Access	Harrier	20	25	100
Parcel 12 W. Access	Marine Wy.	27	50	220
Parcel 12 S. Access	Ada	92	100	85
Parcel 13 W. Access	Marine Wy.	47	50	455
Parcel 13 E. Access	Marine Wy.	125 ²	175	410
Parcel 14 Access	Marine Wy.	82	100	65
Parcel 11/City-1 Access	Barranca Pkwy.	93	150	165
Parcel 10 W. Access	Barranca Pkwy.	91	150	245
Parcel 10 E. Access	Barranca Pkwy.	15	25	80
City-2 W. Access	Marine Wy.	63	125	500
Parcel 7 W. Access	Marine Wy.	174	225	250
City-2 E. Access	Marine Wy.	19	25	195
Parcel 7 E. Access	Marine Wy.	20	25	260
Parcel 2 W. Access	Marine Wy.	20	25	155
Parcel 2 E. Access	Marine Wy.	157	225	440
Parcel 13 Internal Driveways	Various local Roads	<10	25	10

¹ **100** = Driveway length is less than what is required by TG-15. Deviation is requested (see separate deviation request letter).

² Not including future long range volumes associated with TAZ 722 development

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For the driveway of Parcel 14 Access at Marine Way, the maximum inbound or outbound peak hour driveway volume is 82 vph in the AM peak hour (TG-15 recommends a driveway length of 100'). The provided driveway length accommodates 65' of storage. For Parcel 14 Access at Marine Way, the proposed driveway length is less than recommended in TG-15 and a deviation request is provided.

For Parcel 13 internal driveways, the maximum inbound or outbound peak hour driveway volume is less than 10 vph in the PM peak hour (TG-15 recommends a driveway length of 25'). The provided driveway length accommodates 10' of storage and a deviation request would be necessary.

5.2 PEDESTRIAN AND BICYCLE CIRCULATION

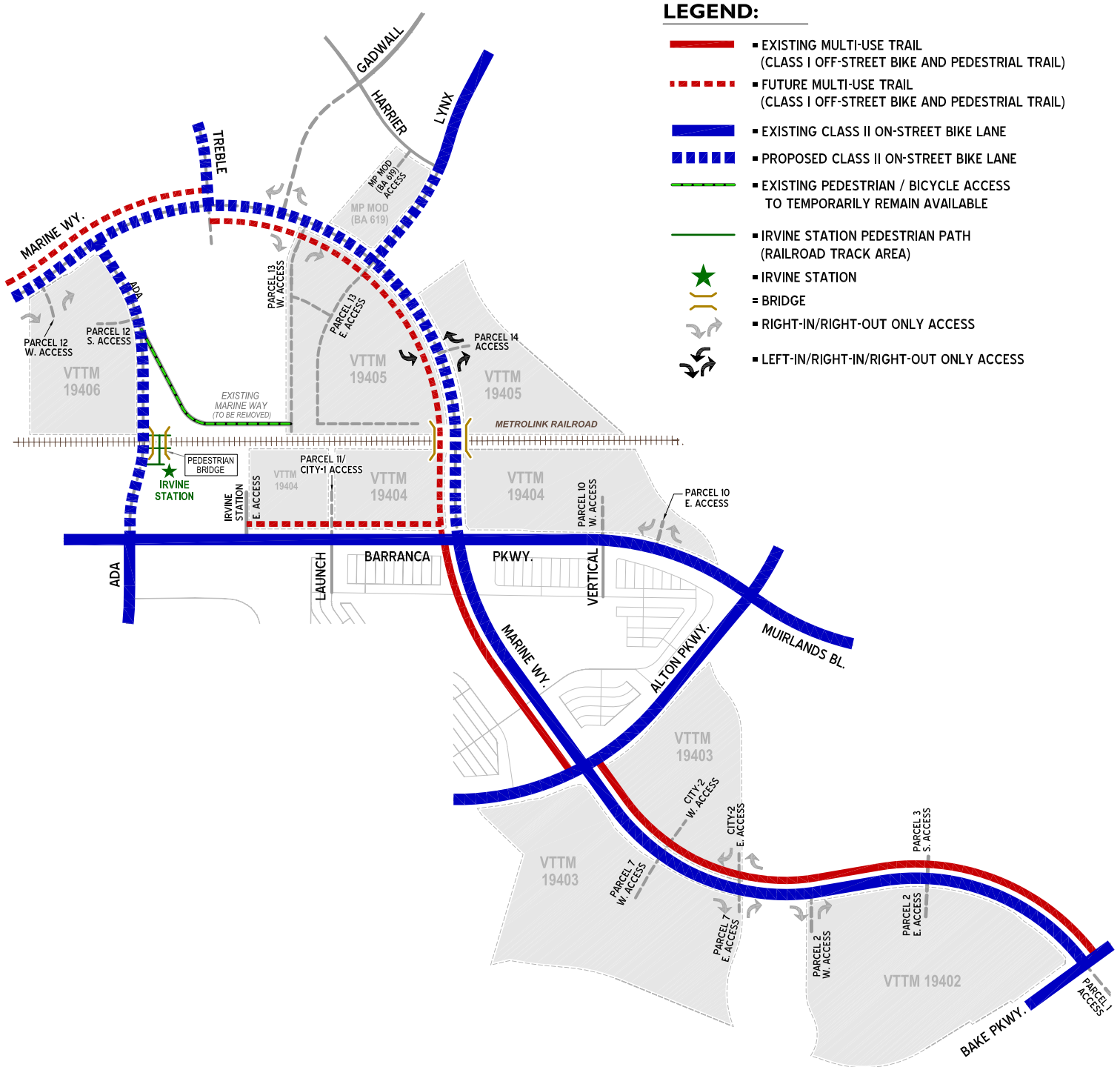
Within the Project VTTMs and Master Plan Modification, goals of the *2045 Irvine General Plan (2024)* for effective non-motorized transportation (Objectives C-3, C-4, C-5, and C-6)) are supported via the following planned bike and pedestrian trails:

- Class I Bike & Pedestrian Trail along the north side of Marine Way from west of VTTM 19406 to Treble, transitioning to the south side of Marine Way from Treble to Alton Parkway, and along the north side of Marine Way from Alton Parkway to Bake Parkway.
- Class I Bike & Pedestrian Trail along the north side of Barranca Parkway from Marine Way to Irvine Station.
- Class II On-Street Bike lanes along Marine Way throughout the study area.
- Class II On-Street Bike lanes along Barranca Parkway / Muirlands Boulevard throughout the study area.
- Class II On-Street Bike lanes along Alton Parkway throughout the study area.
- Class II On-Street Bike lanes along Bake Parkway, Lynx, and Treble in the study area.
- Class II On-Street Bike along Ada south of Barranca Parkway.
- Sidewalks along Marine Way, Bake Parkway, Barranca Parkway, Alton Parkway, Gadwall, Harrier, and portions of Lynx, Treble, and Ada in the study area.
- Crosswalks at intersections along Marine Way, Bake Parkway, Barranca Parkway, and Alton Parkway in the study area.

Exhibit 5-9 illustrates the existing and planned bikeways and trails for the project area. The project area trail system has been designed to utilize crosswalks at traffic signals and stop signs in order to provide safe crossings of roadways at intersections. Line of sight will be subject to applicable standards.

The Project VTTMs and Master Plan Modification are all connected to the Irvine Station via existing and proposed Class I off-street trails as well as existing and proposed Class II on-street bike lanes. To help promote the use of on-street bike lanes, the proposed sections of Marine Way adjacent to the VTTMs will be constructed as protected bike lanes, consistent with those recently constructed by the City along Cadence.

EXHIBIT 5-9: PROJECT AREA BIKEWAY AND TRAILS



5.3 TRANSIT FEATURES

Exhibit 5-10 illustrates existing bus transit services for the project area. Bus service is currently provided along Barranca Parkway - Muirlands Boulevard, and Alton Parkway in the study area.

The Project VTTMs and Master Plan Modification are located close to the Irvine Station, which is a passenger rail and bus terminal served by Metrolink commuter rail lines, multiple Orange County Transportation Authority (OCTA) bus routes, and Amtrak. OCTA Stationlink is included along Ada and Alton Parkway.

VTTM's 19404, 19405, and 19406 as well as Master Plan Modification are all within ½ mile of the Irvine Station. Those residents can access the station via the existing pedestrian bridge at the Irvine Station as well as Class I off-street trails along Barranca, the Marine Way undercrossing currently under construction, the future Ada undercrossing. VTTM 19403 is approximately ¾ of a mile from the Irvine Station and VTTM 19402 is approximately 1 mile from the Irvine Station. As stated above, there are existing Stationlink stops along Alton. Those stops are less than ½ mile from VTTM 19403 and VTTM 19402.

The Irvine Transit Vision Study provides a framework for bus and shuttle services that connect with OCTA local and regional bus operations and regional rail services via the Irvine Metrolink Station. Routing, funding and operation of future City or OCTA services are yet to be determined. Irvine and OCTA review transit availability as development and transportation patterns change. The 2022 Irvine Transit Vision includes potential Great Park Option 2 along Barranca Parkway - Muirlands Boulevard, Ada, and Alton Parkway. The Irvine CONNECT shuttle is also included along Ada.

5.4 CONGESTION MANAGEMENT PROJECT (CMP) CHECKLIST

The Congestion Management Program (CMP) legislation requires that the CMP Agency monitor the implementation of the Orange County CMP, including CMP land use coordination component requirements. The goal of the CMP is to ensure that certain key intersections within the CMP Highway System (CMPHS) are operating at acceptable levels. The CMP has been developed to monitor impacts on CMPHS intersections.

The CMP Monitoring Checklist for the Land Use Coordination Component can be found in Appendix 5.4. There are no study area intersections within the study area that are monitored as part of the CMP. As indicated in Appendix 5.4 contained within this traffic study, the CMP monitoring locations in the study area are not forecast to experience a project impact, based on an analysis of Short Term Interim Year conditions.

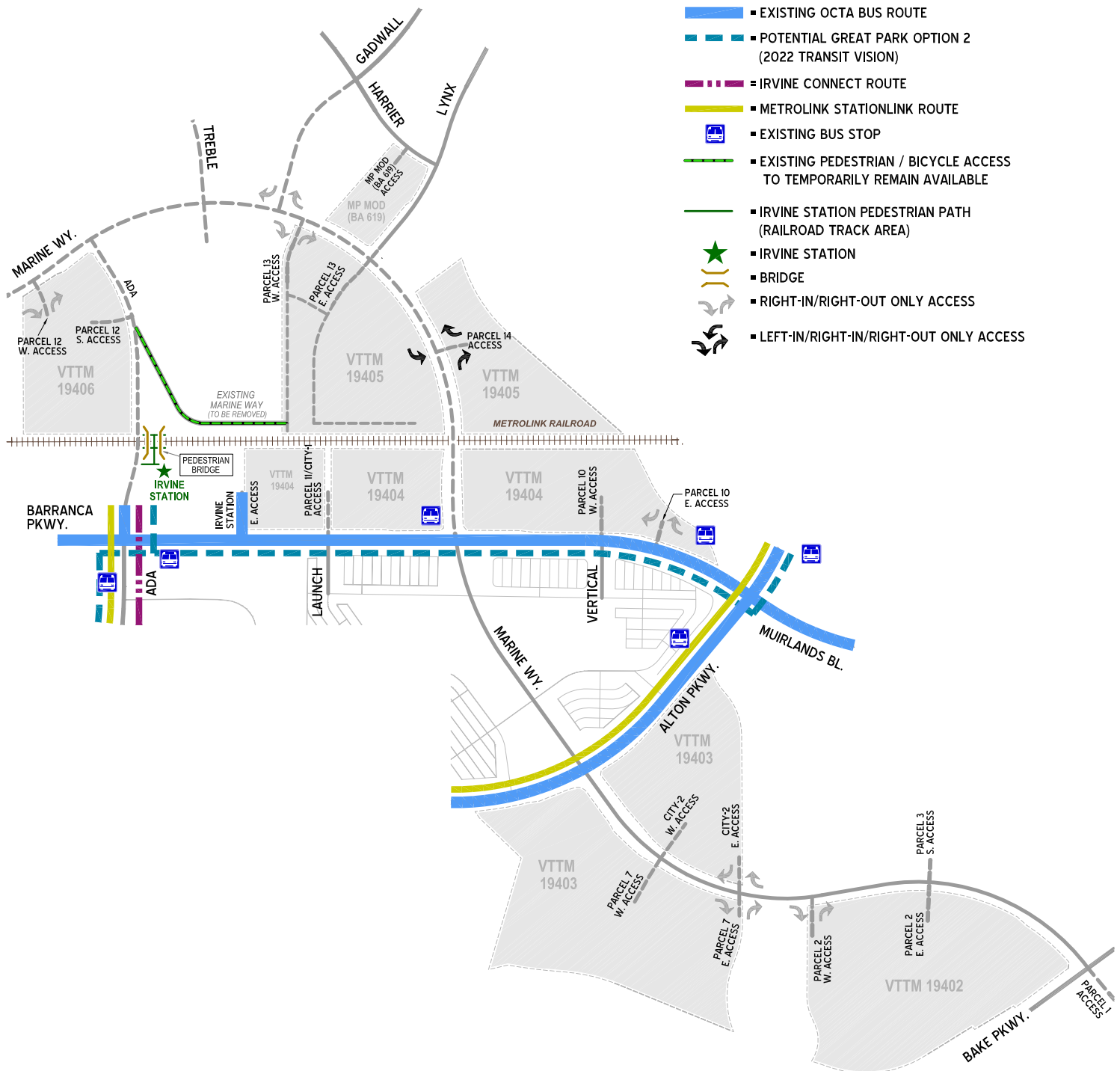
5.5 LAND USE CONVERSION

As required by Section 9-51-6Tii of the Zoning Ordinance, part of the 2025 Zone Change, and to the degree residential units are built in the 8.1C Trails and Transit Oriented Development area, a corresponding reduction in allowable non-residential intensity shall occur in terms of equivalent traffic generation based on a.m. peak, p.m. peak, and average daily trips. The residential units within VTTM 19402, VTTM 19403, and a portion of VTTM 19404 are converted from non-residential uses. A summary of that conversion is included in Appendix 5.5. The land uses shown in Appendix 5.5 reflect residential land uses on VTTM 19406, instead of the Congregate Care and Assisted Living uses that are analyzed in this Traffic Evaluation.

EXHIBIT 5-10: PROJECT AREA TRANSIT FEATURES

LEGEND:

- EXISTING OCTA BUS ROUTE
- POTENTIAL GREAT PARK OPTION 2 (2022 TRANSIT VISION)
- IRVINE CONNECT ROUTE
- METROLINK STATIONLINK ROUTE
- EXISTING BUS STOP
- EXISTING PEDESTRIAN / BICYCLE ACCESS TO TEMPORARILY REMAIN AVAILABLE
- IRVINE STATION PEDESTRIAN PATH (RAILROAD TRACK AREA)
- IRVINE STATION
- BRIDGE
- RIGHT-IN/RIGHT-OUT ONLY ACCESS
- LEFT-IN/RIGHT-IN/RIGHT-OUT ONLY ACCESS



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6 CONCLUSIONS

VTTM 19402 involves replacing 645,700 square feet of office use entitled per VTPM 2021-203 with 310 multi-family dwelling units southwest of Marine Way and northwest of Bake Parkway on Parcel 2.

VTTM 19403 involves replacing 400,000 square feet of office use and 267,000 square feet of warehouse use entitled per VTPM 2021-202 with 329 multi-family dwelling units south of Marine Way on Parcel 7 and on the City-2 parcel north of Marine Way, the assumed transportation center parking is replaced with 145 multi-family dwelling units.

VTTM 19404 (located between the railroad tracks and Barranca Parkway, on both sides of Marine Way) involves replacing 402,000 square feet of medical office use and 106,000 square feet of office use entitled per VTPM 2024-110 with 188 multi-family units on Parcel 10, 117 multi-family units on Parcel 11 and on the City-1 parcel, assumed transportation center parking is replaced by 49 multi-family dwelling units.

VTTM 19405 (located north of the railroad tracks) involves replacing 451 multi-family dwelling units and 25,000 square feet of retail entitled per VTTM 19284 with 274 multi-family dwelling units west of Marine Way on Parcel 13 and 147 multi-family dwelling units east of Marine Way on Parcel 14.

VTTM 19406 involves replacing 198,000 square feet of office use entitled per VTTM 19284 with 219 multi-family dwelling units on Parcel 12. It is anticipated that an application for an alternative land use in the same geographical area as VTTM 19406 will be submitted prior to approval of the VTTM. This alternative use is anticipated to be a continuing care retirement community ("CCRC") on the above referenced property with approximately 975 congregate care units plus 198 beds for assisted living.

Master Plan Mod BA 619 involves a modification to the District 6 Master Plan by replacing 69 senior affordable dwelling units with 36 multi-family dwelling units.

The total reduction in non-residential land uses is 1,349,700 square feet of office use, 25,000 square feet of retail use, 402,000 square feet of medical office use, and 267,000 square feet of warehouse use. For the purposes of the conservative analysis, the Project VTTMs and Master Plan Modification propose a total of 1,595 dwelling units, 975 congregate care units and 198 beds for assisted living facilities.

6.1 TRAFFIC ANALYSIS FINDINGS

This traffic study has analyzed potential traffic changes on the surrounding roadway network with the Project VTTMs and Master Plan Modification. Appropriate short term interim year improvements and circulation design features have also been evaluated.

As shown on Table 4-2, the AM and PM peak hour STIY LOS at the Fairbanks / Astor intersection is projected to be LOS F (using HCM Methodology) without or with the Project. The Project change at this intersection is nominal (less than 1%), and is below the Project impact threshold as discussed in Chapter 2.0. At all other traffic evaluation study area locations, the STIY peak hour intersection LOS is acceptable without or with the Project.

6.2 ACCESS ANALYSIS FINDINGS

The performance of intersections providing access to the Project VTTMs and Master Plan Modification have been examined in terms of (1) STIY conditions and, (2) General Plan Buildout (BOA) conditions.

Recommendations are provided in Exhibits 5-5 and 5-6 for lane geometry and traffic controls which include a combination of cross-street stop signs and traffic signals. The following project area intersections meet the peak hour warrants for a traffic signal with the Project VTTMs and Master Plan Modification:

- 500. Irvine Station E. Access at Barranca Parkway (if full access)
- 504. Parcel 7 W. Access – City-2 W Access at Marine Way
- 503. Parcel 2 E. Access – Parcel 3 S. Access at Marine Way
- 565. Treble at Marine Way
- 834. Lynx at Harrier (a signal is not recommended and a deviation request is included in Appendix 5.6)
- 582. Lynx – Parcel 13 E. Access at Marine Way

For BOA with Project VTTMs and Master Plan Modification conditions with surrounding unrelated development, intersection 568 – Ada at Marine Way is also anticipated to satisfy traffic signal warrants.

The Project access intersections are projected to operate at acceptable LOS during peak hours.

The intersection of Irvine Station East Access at Barranca Parkway has been evaluated for three conditions (cross-street stop control, traffic signal control, and restriction to right in/out only). For STIY conditions with cross-street stop control, the southbound left turn for the intersection of Irvine Station East Access at Barranca Parkway is projected to have unacceptable LOS. At this location, the City may ultimately decide to provide traffic signal control or restrict the left turn maneuvers at this intersection and reconfigure this intersection for right turns in/out only. If in the future traffic signal control is considered, evaluation of Transportation Guidelines would be appropriate at that time.

For BOA with Project VTTMs and Master Plan Modification conditions, increases in the northbound right and westbound left AM peak hour turning movement volumes result in LOS F intersection operations at the Lynx / Marine Way intersection. It should be noted that these morning peak hour volume increases are tied to a significant increase in residential development assumed to occur in ITAM TAZ 722. This LOS issue occurs for BOA conditions due to the ITAM TAZ 722 residential uses taking access to adjacent streets, which include a connection through Parcel 13 to the south leg of the Lynx / Marine Way intersection. Therefore, this LOS deficiency will need to be further evaluated at the time that the BOA residential development included in TAZ 722 is processed for development.

Recommended storage lengths for separate left turns and right turns at Project access intersections are provided in Table 5-3 for STIY conditions and Table 5-4 for BOA conditions.

6.3 PEDESTRIAN, BICYCLE AND TRANSIT FEATURES

Within the Project VTTMs and Master Plan Modification, goals of the City's General Plan for effective non-motorized transportation (Objectives B-3 and B-4) are supported via the following planned bike and pedestrian trails:

- Class I Bike & Pedestrian Trail along the north side of Marine Way from west of VTTM 19406 to Treble, transitioning to the south side of Marine Way from Treble to Alton Parkway, and along the north side of Marine Way from Alton Parkway to Bake Parkway.
- Class I Bike & Pedestrian Trail along the north side of Barranca Parkway from Marine Way to Irvine Station.
- Class II On-Street Bike lanes along Marine Way throughout the study area.
- Class II On-Street Bike lanes along Barranca Parkway / Muirlands Boulevard throughout the study area.
- Class II On-Street Bike lanes along Alton Parkway throughout the study area.
- Class II On-Street Bike lanes along Bake Parkway, Lynx, and Treble in the study area.
- Class II On-Street Bike along Ada south of Barranca Parkway.
- Sidewalks along Marine Way, Bake Parkway, Barranca Parkway, Alton Parkway, Gadwall, Harrier, and portions of Lynx, Treble, and Ada in the study area.
- Crosswalks at intersections along Marine Way, Bake Parkway, Barranca Parkway, and Alton Parkway in the study area.

The Project VTTMs and Master Plan Modification are all connected to the Irvine Station via existing and proposed Class I off-street trails as well as existing and proposed Class II on-street bike lanes. To help promote the use of on-street bike lanes, the proposed sections of Marine Way adjacent to the VTTMs will be construction as protected bike lanes, consistent with those recently constructed by the City along Cadence.

The Project VTTMs and Master Plan Modification are located close to the Irvine Station, which is a passenger rail and bus terminal served by Metrolink commuter rail lines, multiple Orange County Authority (OCTA) bus routes, and Amtrak. OCTA Stationlink is included along Ada and Alton Parkway.

VTTM's 19404, 19405, and 19406 as well as Master Plan Modification are all within ½ mile of the Irvine Station. Those residents can access the station via the existing pedestrian bridge at the Irvine Station as well as Class I off-street trails along Barranca, the Marine Way undercrossing currently under construction, the future Ada undercrossing. VTTM 19403 is approximately ¾ of a mile from the Irvine Station and VTTM 19402 is approximately 1 mile from the Irvine Station. As stated above, there are existing Stationlink stops along Alton. Those stops are less than ½ mile from VTTM 19403 and VTTM 19402.

6.4 CONGESTION MANAGEMENT PROJECT (CMP) CHECKLIST

The CMP legislation requires that the CMP Agency monitor the implementation of the Orange County CMP, including CMP land use coordination component requirements. The goal of the CMP is to ensure that certain key intersections within the CMP Highway System (CMPHS) are operating at acceptable levels. The CMP has been developed to monitor impacts on CMPHS intersections.

The CMP Monitoring Checklist for the Land Use Coordination Component can be found in Appendix 5.4. There are no study area intersections within the study area that are monitored as part of the CMP. As indicated in Appendix 5.4 contained within this traffic study, the CMP monitoring locations in the study area are not forecast to experience a project impact, based on an analysis of Short Term Interim Year conditions.

6.5 NON-RESIDENTIAL CONVERSION

As required by Section 9-51-6Tii of the Zoning Ordinance, part of the 2025 Zone Change, and to the degree residential units are built in the 8.1C Trails and Transit Oriented Development area, a corresponding reduction in allowable non-residential intensity shall occur in terms of equivalent traffic generation based on a.m. peak, p.m. peak, and average daily trips. The residential units within VTTM 19402, VTTM 19403, and a portion of VTTM 19404 are converted from non-residential uses. A summary of that conversion is included in Appendix 5.5. The land uses shown in Appendix 5.5 reflect residential land uses on VTTM 19406, instead of the Congregate Care and Assisted Living uses that are analyzed in this Traffic Evaluation.

APPENDIX 1.1:

APPROVED SCOPING AGREEMENT

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**Great Park Neighborhoods
VTTMs 19402, 19403, 19404, 19405, 19406 and
Master Plan Modification BA 619
Case Number 00954038-PPA
Traffic Evaluation Scope of Work**

(July 2, 2025)

This traffic evaluation will identify changes in trip generation and modifications to local traffic access associated with the proposed VTTMs 19402, 19403, 19404, 19405, 19406 and Master Plan Mod BA 619 in Great Park Neighborhoods (GPN) in Planning Area 51 (PA 51). According to the City of Irvine Traffic Study Guidelines (June 2020 and updated March 2023), a traffic evaluation report is utilized if a proposed project includes a change in land uses that is inconsistent with the previously approved project “A” map, “B” map, or CUP/Master Plan; or if proposed project is determined by City Engineer in coordination with the City Traffic Engineer to not be in “substantial conformance” with the roadway network from a previously approved project “A” map or “B” map; and if proposed project does not propose an increase in trips..

The Project (VTTMs 19402, 19403, 19404, 19405, 19406 and Master Plan Mod BA 619) is a combination of previously entitled residential units and conversion of previously entitled non-residential uses and does not increase site trip generation (as discussed below), so a traffic evaluation is appropriate. This evaluation will serve as the basis of design for intersections where the Project connects to surrounding roadways.

This traffic evaluation is to verify that overall findings are consistent with prior Great Park Neighborhoods traffic analyses. Land use and network features in the surrounding area were previously analyzed in the following studies:

- *Master Plan Modification VTTM 19284 Access Study* (February, 2025)
- *District 2 VTPM 2021-202 & VTPM 2021-203 and District 6 VTPM 2024-110 and VTTM 19284 Traffic Analysis* (August, 2024)
- *Parcel 3, Consolidated Access Assessment* (Urban Crossroads, January 18, 2024)
- *Great Park Neighborhoods District 2 VTPM 2021-204 & VTPM 2022-163 and District 3 VTPM 2021-201 Traffic Analysis* (Urban Crossroads, May 15, 2023)

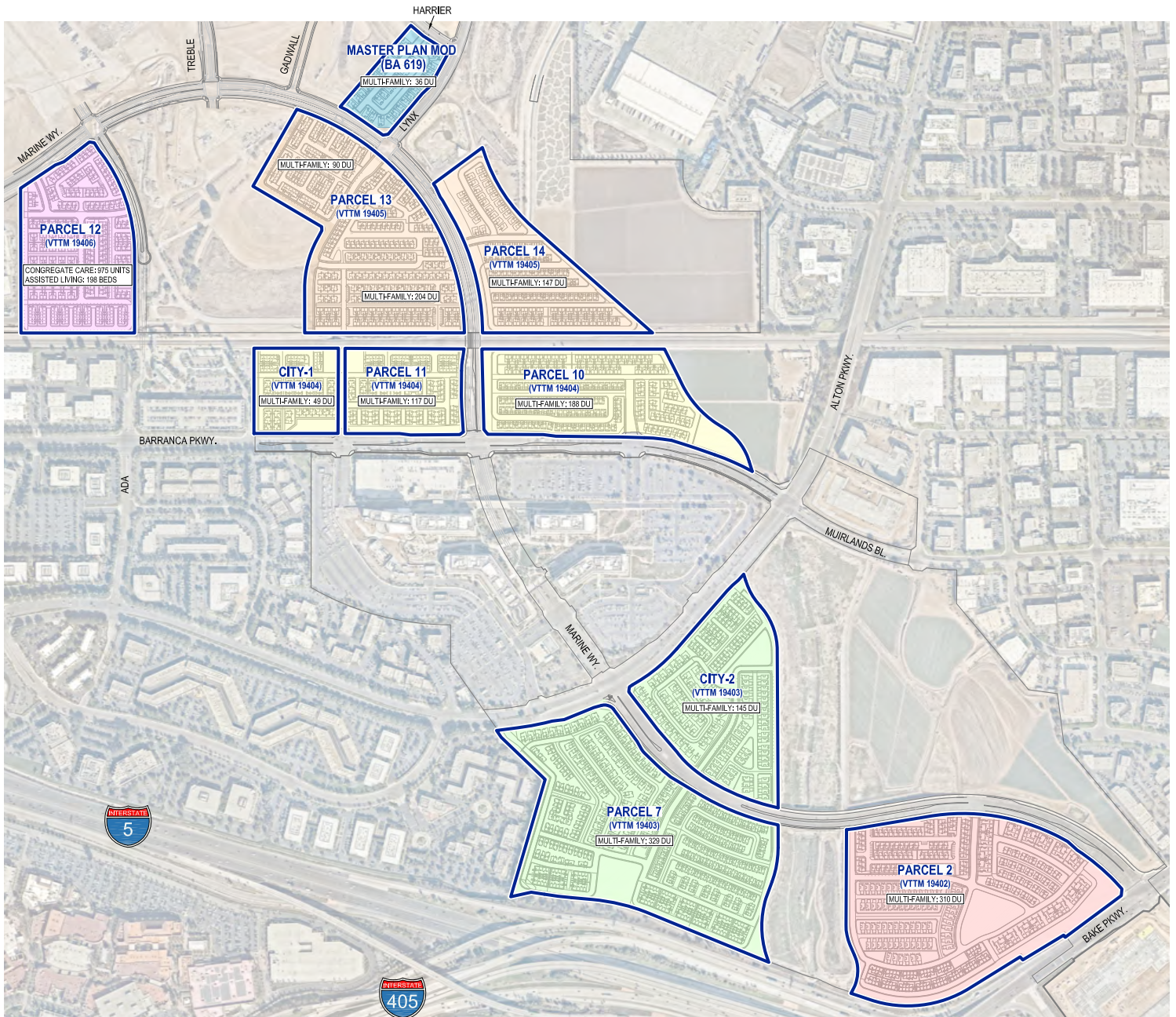
PROJECT DESCRIPTION

Exhibit 1 shows the Project entitlement site parcels, and Table 1 shows the land use quantities within each parcel for both “without project” (approved buildout) and “with project” conditions. VTTM 19402 involves replacing 645,700 square feet of office use entitled per VTPM 2021-203 with 310 multi-family dwelling units.

VTTM 19403 involves replacing 400,000 square feet of office use and 267,000 square feet of warehouse use entitled per VTPM 2021-202 with 329 multi-family dwelling units south of Marine Way and on the City-2 parcel, the assumed 180 transportation center parking spaces are replaced with 145 multi-family dwelling units.

Approved: *Sun-Sun Tvedten Murillo*
Date: 7/3/25

EXHIBIT 1: 2025 ENTITLEMENT SITE PARCELS



Sun-Sun Tvedten Murillo

TABLE 1: BUILDOUT PROJECT LAND USE DATA

VTTM	Parcel	ITAM TC TAZ	ITAM 15 TAZ	Code	Units	Description	BOA Without Project	With Project
VTTM 19403	City-2	698	990	272	DU	Multi-Family (GP)	0	145
VTTM 19403	7	674	920	269	TSF	Office (GP)	400	0
VTTM 19403	7	674	920	275	TSF	Warehouse/Industrial (GP)	267	0
VTTM 19403	7	674	920	272	DU	Multi-Family (GP)	0	329
VTTM 19404	10	720	613	269	TSF	Office (GP)	106	0
VTTM 19404	10	720	613	318	TSF	Medical Office-GP	212	0
VTTM 19404	10	720	613	272	DU	Multi-Family (GP)	0	188
VTTM 19404	11	716	612	318	TSF	Medical Office-GP	190	0
VTTM 19404	11	716	612	272	DU	Multi-Family (GP)	0	117
VTTM 19404	City-1	723	925	272	DU	Multi-Family (GP)	0	49
VTTM 19405	13	721	609	253	TSF	Retail (GP)	25	0
VTTM 19405	13	719	610	272	DU	Multi-Family (GP)	231	90
VTTM 19405	13	718	611	272	DU	Multi-Family (GP)	220	204
VTTM 19405	14	717	947	272	DU	Multi-Family (GP)	0	147
VTTM 19402	2	676	919	269	TSF	Office (GP)	645.7	0
VTTM 19402	2	676	919	272	DU	Multi-Family (GP)	0	310
MP Mod BA619		715	975	256	DU	Affordable	69	0
MP Mod BA619		715	975	272	DU	Multi-Family (GP)	0	36
VTTM 19406	12	721	609	269	TSF	Office (GP)	198	0
VTTM 19406	12	721	609	107	Units	Congregate Care	0	975
VTTM 19406	12	721	609	105	Beds	Assisted Living	0	198

Note: As proposed per City of Irvine Zoning Ordinance Section 9-51-6, non-residential uses can be converted to exceed 10,556 dwelling units. Remaining non-residential entitlement is assumed in TAZ's 701, 702, 703 and 704. Remaining HFET Entitlement is assumed in those TAZ for Buildout analysis purposes only. Ultimate allocation of this entitlement can only be made in writing by HFET, as Declarant, per a recorded Development Declaration and CC&Rs (or an amendment to a previously existing recorded Development Declaration and CC&Rs).

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VTTM 19404 involves replacing 402,000 square feet of medical office use and 106,000 square feet of office use entitled per VTPM 2024-110 with 188 multi-family units on Parcel 10, 117 multi-family units on Parcel 11 and on the City-1 parcel, assumed transportation center parking is replaced by 49 multi-family dwelling units.

VTTM 19405 involves replacing 451 multi-family dwelling units and 25,000 square feet of retail entitled per VTTM 19284 with 294 multi-family dwelling units west of Marine Way and 147 multi-family dwelling units east of Marine Way.

VTTM 19406 involves replacing 198,000 square feet of office use entitled per VTTM 19284 with 219 multi-family dwelling units. It is anticipated that an application for an alternative land use in the same geographical as VTTM 19406 will be submitted prior to approval of the VTTM. This alternative use is anticipated to be a continuing care retirement community ("CCRC") on the above referenced property with approximately 975 independent living units plus 198 beds for healthcare facilities.

Approved: Sun-Sun Treviño Murillo
Date: 7/3/25

Master Plan Mod BA 619 involves a modification to the District 6 Master Plan by replacing of 69 senior affordable dwelling units with 36 multi-family dwelling units.

The total reduction in non-residential land uses is 1,349,700 square feet of office use, 25,000 square feet of retail use, 402,000 square feet of medical office use, and 267,000 square feet of warehouse use.

TRAFFIC EVALUATION STUDY AREA

Exhibit 2 shows the traffic evaluation study area. Intersection analysis locations for STIY conditions are shown as follows:

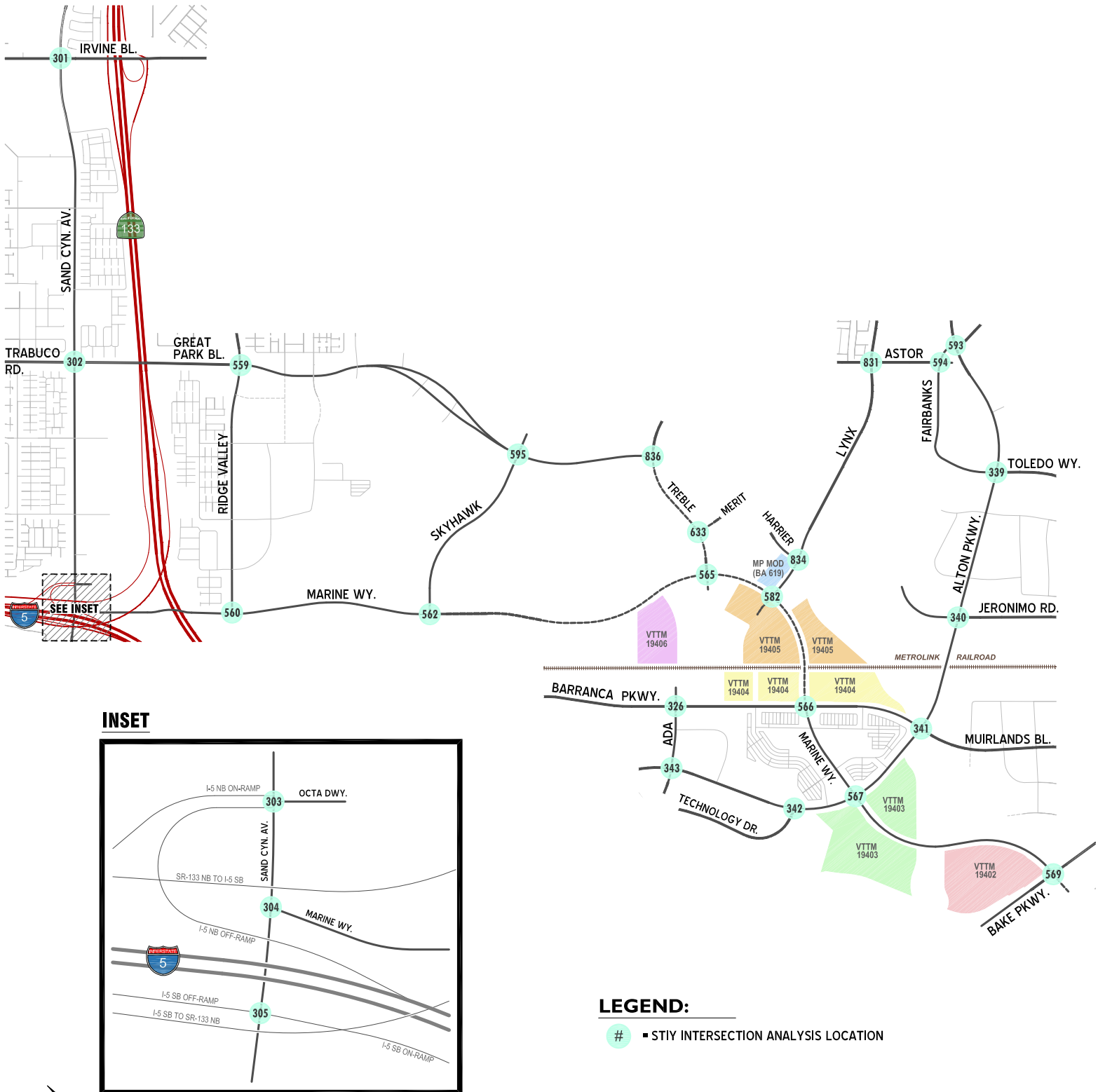
- Sand Canyon at Irvine Boulevard
- Sand Canyon at Great Park Boulevard
- Sand Canyon at I-5 NB Ramps
- Sand Canyon at Marine Way
- Sand Canyon at I-5 SB Ramps
- Ridge Valley at Great Park Boulevard
- Ridge Valley at Marine Way
- Skyhawk at Great Park Boulevard
- Skyhawk at Marine Way
- Treble at Great Park Boulevard
- Treble at Merit
- Treble at Marine Way
- Lynx at Harrier
- Lynx at Marine Way
- Marine Way at Barranca Parkway
- Marine Way at Alton Parkway
- Bake Parkway at Marine Way
- Ada at Barranca Parkway
- Alton Parkway at Barranca Parkway
- Lynx at Astor
- Fairbanks at Astor
- Ada at Alton Parkway
- Technology Drive (East) at Alton Parkway
- Alton Parkway at Jeronimo Road
- Alton Parkway at Toledo Way
- Alton Parkway at Fairbanks

PROJECT TRIP GENERATION

A summary of trip generation characteristics and trip generation rates for proposed land uses will be included in the analysis, consistent with ITAM trip generation rates and methodology. Table 2 presents the trip rates. For Without Project (STIY Ground) conditions, ITAM trip generation is shown on Table 3.

Approved: *Sun-Sun Tvedten Murillo*
Date: 7/3/25

EXHIBIT 2: TRAFFIC EVALUATION AREA



Sun-Sun Tvedten Murillo
7/3/25

TABLE 2: ITAM TC TRIP RATES

ITAM Code	Units	Description	Trip Rate				
			ADT	AM In	AM Out	PM In	PM Out
269	TSF	Office (GP)	0	0	0	0	0
262	ACRE	Agriculture	2.01	0.16	0.04	0.06	0.13
269	TSF	Office (GP)	12.55	0.88	0.25	0.44	0.77
275	TSF	Warehouse/Industrial (GP)	6.29	0.51	0.11	0.20	0.41
318	TSF	Medical Office-GP	25.77	1.37	0.51	0.99	1.49
253	TSF	Retail (GP)	54.72	2.20	1.19	2.41	2.82
272	DU	Multi-Family (GP)	7.15	0.12	0.56	0.43	0.23
107	Units	Congregate Care	2.02	0.04	0.03	0.10	0.08
105	Beds	Assisted Living	2.60	0.12	0.07	0.07	0.10
256	DU	Affordable	5.11	0.10	0.34	0.29	0.18

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TABLE 3: ITAM TC WITHOUT PROJECT (STIY GROUND) TRIP GENERATION

TAZ	VTM	Parcel	ITAM Code	Units	Description	Land Use Quantity	Trip Generation				
							ADT	AM In	AM Out	PM In	PM Out
698	VTM 19403	City-2	262	ACRE	Agriculture	19.5	39	3	1	1	3
674	VTM 19403	7	262	ACRE	Agriculture	37.3	75	6	1	2	5
720	VTM 19404	10	262	ACRE	Agriculture	18.3	37	3	1	1	2
716	VTM 19404	11	262	ACRE	Agriculture	10.3	21	2	0	1	1
718/719	VTM 19405	13	272	DU	Multi-Family (GP)	231	1,652	28	129	99	53
718/719	VTM 19405	13	272	DU	Multi-Family (GP)	220	1,573	26	123	95	51
717	VTM 19405	14	262	ACRE	Agriculture	12.5	25	2	1	1	2
717	VTM 19405	14	249	ACRE	Open Space	54.5	0	0	0	0	0
676	VTM 19402	2	262	ACRE	Agriculture	36.2	73	6	1	2	5
715	MP Mod BA619		256	DU	Affordable	69	353	7	23	20	12
721	VTM 19406				None	--	0	0	0	0	0
OVERALL TOTAL							3,848	83	280	222	134

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Approved: Sun-Sun Tvedten Murillo
Date: 7/3/25

Table 4 presents the trip generation for each Project VTTM. VTTM 19402 generates approximately 2,217 daily trips, 211 AM peak hour trips, and 204 PM peak hour trips. VTTM 19403 generates approximately 3,389 daily trips, 321 AM peak hour trips, and 312 PM peak hour trips. VTTM 19404 generates approximately 2,531 daily trips, 241 AM peak hour trips, and 233 PM peak hour trips. VTTM 19405 generates approximately 3,154 daily trips, 299 AM peak hour trips, and 292 PM peak hour trips. VTTM 19406 generates approximately 2,485 daily trips, 106 AM peak hour trips, and 210 PM peak hour trips. Master Plan Modification BA619 generates approximately 257 daily trips, 24 AM peak hour trips, and 23 PM peak hour trips.

TABLE 4: ITAM TC WITH PROJECT TRIP GENERATION

TAZ	VTTM	Parcel	ITAM Code	Units	Description	Land Use Quantity	Trip Generation				
							ADT	AM In	AM Out	PM In	PM Out
698	VTTM 19403	City-2	272	DU	Multi-Family (GP)	145	1,037	17	81	62	33
674	VTTM 19403	7	272	DU	Multi-Family (GP)	329	2,352	39	184	141	76
720	VTTM 19404	10	272	DU	Multi-Family (GP)	188	1,344	23	105	81	43
716	VTTM 19404	11	272	DU	Multi-Family (GP)	117	837	14	66	50	27
723	VTTM 19404	City-1	272	DU	Multi-Family (GP)	49	350	6	27	21	11
719	VTTM 19405	13	272	DU	Multi-Family (GP)	90	644	11	50	39	21
718	VTTM 19405	13	272	DU	Multi-Family (GP)	204	1,459	24	114	88	47
717	VTTM 19405	14	272	DU	Multi-Family (GP)	147	1,051	18	82	63	34
676	VTTM 19402	2	272	DU	Multi-Family (GP)	310	2,217	37	174	133	71
715	MP Mod BA619		272	DU	Multi-Family (GP)	36	257	4	20	15	8
721	VTTM 19406	12	107	Units	Congregate Care	975	1,970	39	29	98	78
721	VTTM 19406	12	105	Beds	Assisted Living	198	515	24	14	14	20
OVERALL TOTAL						1,615*	14,033	256	946	805	469

* Of the 1,615 dwelling units (1,834 with the residential version of VTTM 19406), 691 are from a previous entitlement. The remaining 924 dwelling units (1,143 with the residential version of VTTM 19406) are converted from non-residential uses. The conversion is summarized in Special Issues Section E and consistent with Zoning Ordinance 9-51-6-Tii.

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The residential land use version of VTTM 19406 generates approximately 1,566 daily trips, 149 AM peak hour trips, and 145 PM peak hour trips. It is anticipated that an application for an alternative land use in the same geographical as VTTM 19406 will be submitted prior to approval of the VTTM. This alternative use is anticipated to be a continuing care retirement community ("CCRC") on the above referenced property with approximately 975 independent living units plus healthcare facilities. These 975 congregate care units and approximately 198 beds are anticipated to generate 1 fewer ADT, 118 fewer AM Peak trips, and 30 fewer PM peak hour trips as compared to the previously entitled 198 TSF of Office (GP). The CCRC uses generate 920 more ADT, 43 fewer AM peak hour trips, and 65 more PM peak hour trips as compared to the residential land use version of VTTM 19406.

Approved: Sun-Sun Tvedten Murillo
Date: 7/3/25

TRAFFIC ANALYSIS

The most recent version of the City of Irvine Transportation Analysis Model TransCAD (ITAM TC) version 1.8 Short-Term Interim Year (STIY) scenario, with the most recently approved land uses and corresponding network assumptions will be used as the baseline for this evaluation.

Exhibit 3 shows the Project area Traffic Analysis Zones (TAZs). It is recommended that adjustments be made to the boundaries of TAZs 711, 715, 717, 718, 719, and 722.

Intersection Capacity Utilization (ICU) at signalized study intersections within the study area (bounded by Sand Canyon Avenue to the west, Irvine Boulevard to the north, Alton Parkway to the east, and Bake Parkway to the south) will be calculated for Short-Term Interim Year No Project (approved) and Short-Term Interim Year With Project (proposed) conditions. These ICU comparisons will be evaluated to confirm that traffic conditions are consistent with previous approvals.

The Highway Capacity Manual (HCM) methodology will be utilized to evaluate unsignalized or roundabout study area intersections within the Exhibit 2 study area.

Volume-to-capacity (v/c) ratios and Level of Service (LOS) at all study area intersections will be included in the LOS tables.

ACCESS ANALYSIS METHODOLOGY

Morning and evening peak hour design volumes will be developed for STIA and BOA with Project conditions in/out of project driveways based on ITAM trip generation. ITAM TC will be utilized in conjunction with prior approved access study intersection volumes for the adjacent intersections to evaluate STIA and BOA conditions. The evaluation will focus on the lane geometrics at proposed and existing intersections and driveways shown on Exhibit 4. As shown on Exhibit 4, Project access intersections will be evaluated for STIA and BOA conditions, whereas other intersections will be evaluated for STIA conditions only. The extension of Ada across the Metrolink Railroad tracks will be included in the BOA network.

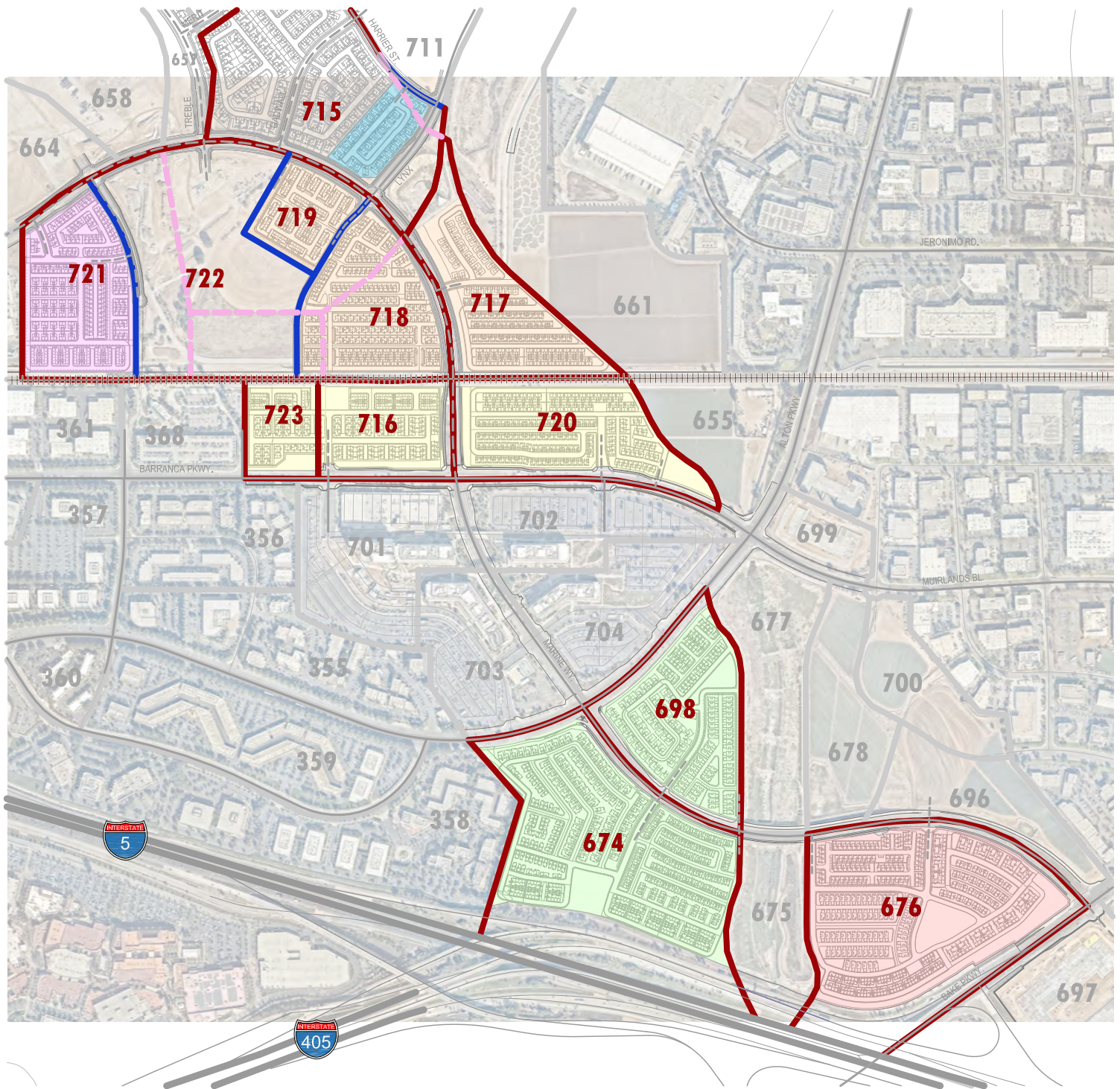
Exhibit 4 shows the access analysis locations. There are 13 driveways which provide access to the site along Marine Way, Barranca Parkway, and Harrier and are evaluated for both STIY and BOA conditions:

Marine Way Access Locations (8 Driveways):

- The Parcel 12 Westerly Access is a right-in/right-out driveway located on the westerly edge of the study serving VTTM 19406.
- The Parcel 13 Westerly Access is a right-in/right-out driveway located between Gadwall and Lynx serving VTTM 19405.
- The Parcel 13 Easterly Access is the south leg of Lynx / Marine Way intersection serving VTTM 19405.
- The Parcel 14 Access is a left-in/right-in/right-out (no left-out) driveway located between Lynx and Barranca Parkway serving VTTM 19405.
- The Parcel 7 / City-2 Westerly Access is located south of Alton Parkway serving VTTM 19403.

Approved: *Sun-Sun Tvedten Murillo*
Date: 7/3/25

EXHIBIT 3: ITAM TC TRAFFIC ANALYSIS ZONES (TAZs)

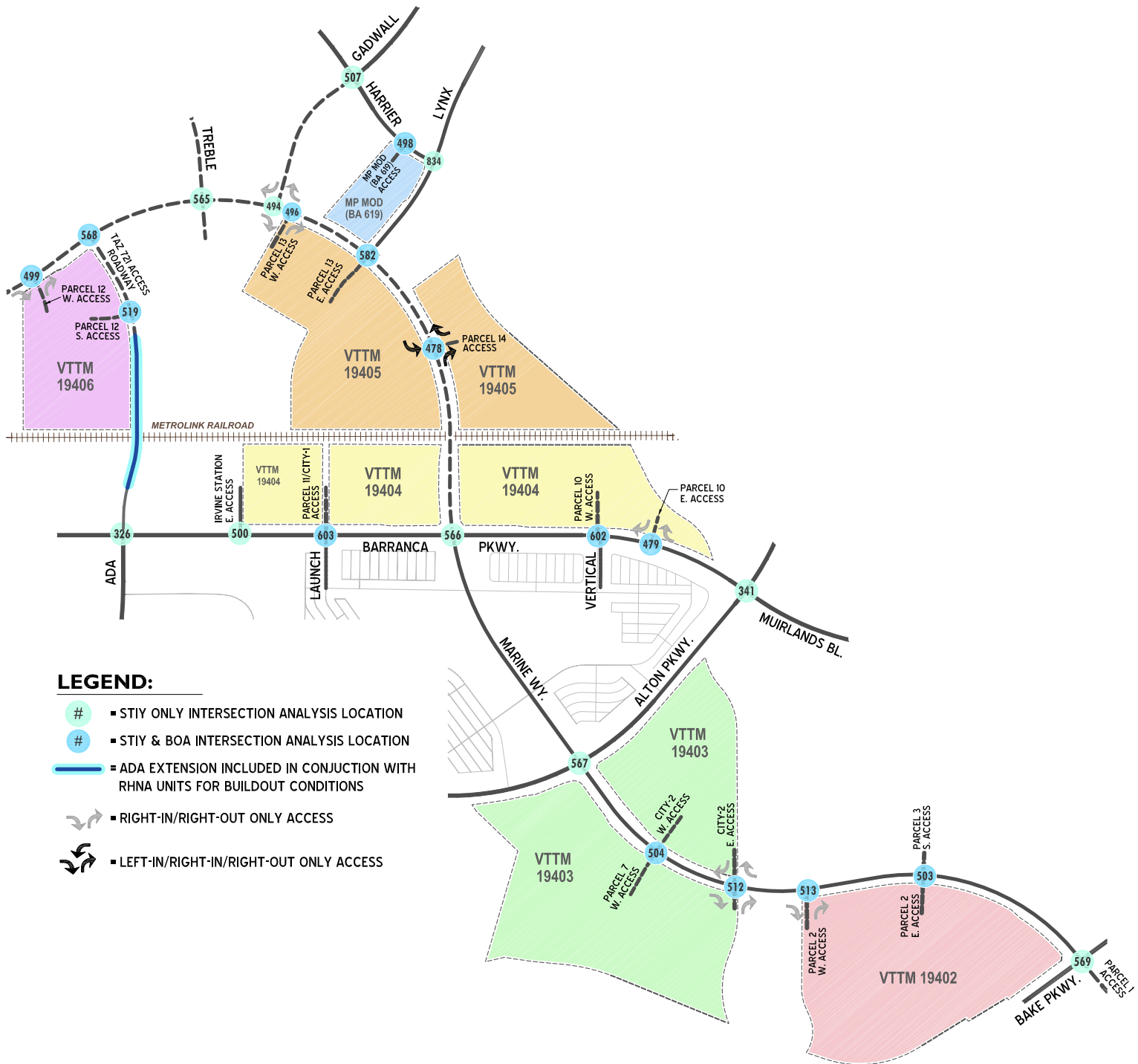


LEGEND:

- XX ■ ITAM TC TAZ BOUNDARY PROJECT AREA
- MODIFIED ZONE BOUNDARY
- EXISTING TAZ BOUNDARY TO BE ADJUSTED

Sun-Sun Tvedten Murillo

EXHIBIT 4: ACCESS ANALYSIS LOCATIONS



Sun Sun Tvedten Murillo

- The Parcel 7 / City-2 Easterly Access is a right-in/right-out driveway located on the easterly boundary of VTTM 19403.
- The Parcel 2 Westerly Access is a right-in/right-out driveway located on the westerly boundary of VTTM 19402.
- The Parcel 2 Easterly Access is opposite Parcel 3 south access and west of Bake Parkway serving VTTM 19402.

Barranca Parkway Access Locations (3 Driveways):

- The Parcel 11 / City-1 Access is opposite Launch and west of Marine Way serving VTTM 19404.
- The Parcel 10 Westerly Access is opposite Vertical and east of Marine Way serving VTTM 19404.
- The Parcel 10 Easterly Access is a right-in/right-out driveway located west of Alton Parkway serving VTTM 19404.

Harrier Access Location (1 Driveway):

- The Master Plan Mod (BA 619) Access is located west of Lynx.

Ada (1 Driveway):

- The Parcel 12 S. Access is located south of Marine Way serving VTTM 19406.

Additional intersection analysis locations for STIY conditions are shown on Treble at Marine Way, Gadwall at Harrier, and Lynx at Harrier. Intersection analysis locations along Marine Way also include the intersections with Treble, Lynx, Barranca Parkway, Alton Parkway, and Bake Parkway. Additional intersections along Barranca Parkway include Ada, Irvine Station E. Access, and Alton Parkway. Additional intersections along Astor include Lynx and Fairbanks.

The City will utilize the Transportation Guidelines (July 30, 1993) as a resource for reviewing the recommendations of the evaluation. Specifically, TG-1: Turn Lane Pocket Lengths, TG-7: Distances between Signalized Intersections, TG-8: Distance between Driveways and Intersections, TG-9: Corner Clearance, TG-10: Left Turn In/Out Access, TG-11: Right Turn Lanes at Driveways, TG-13: Traffic Signal Warrants, and TG-15: Driveway Lengths will be evaluated. In addition, intersection 478 will be reviewed with respect to City of Irvine Standard Plan 403 (Sight Distance Detail).

The evaluation will provide recommendations for intersection design features based upon STIA and BOA conditions with the proposed Project.

Exhibits 5 and 6 show the ITAM TC roadway networks for STIA and BOA conditions in the study area, respectively.

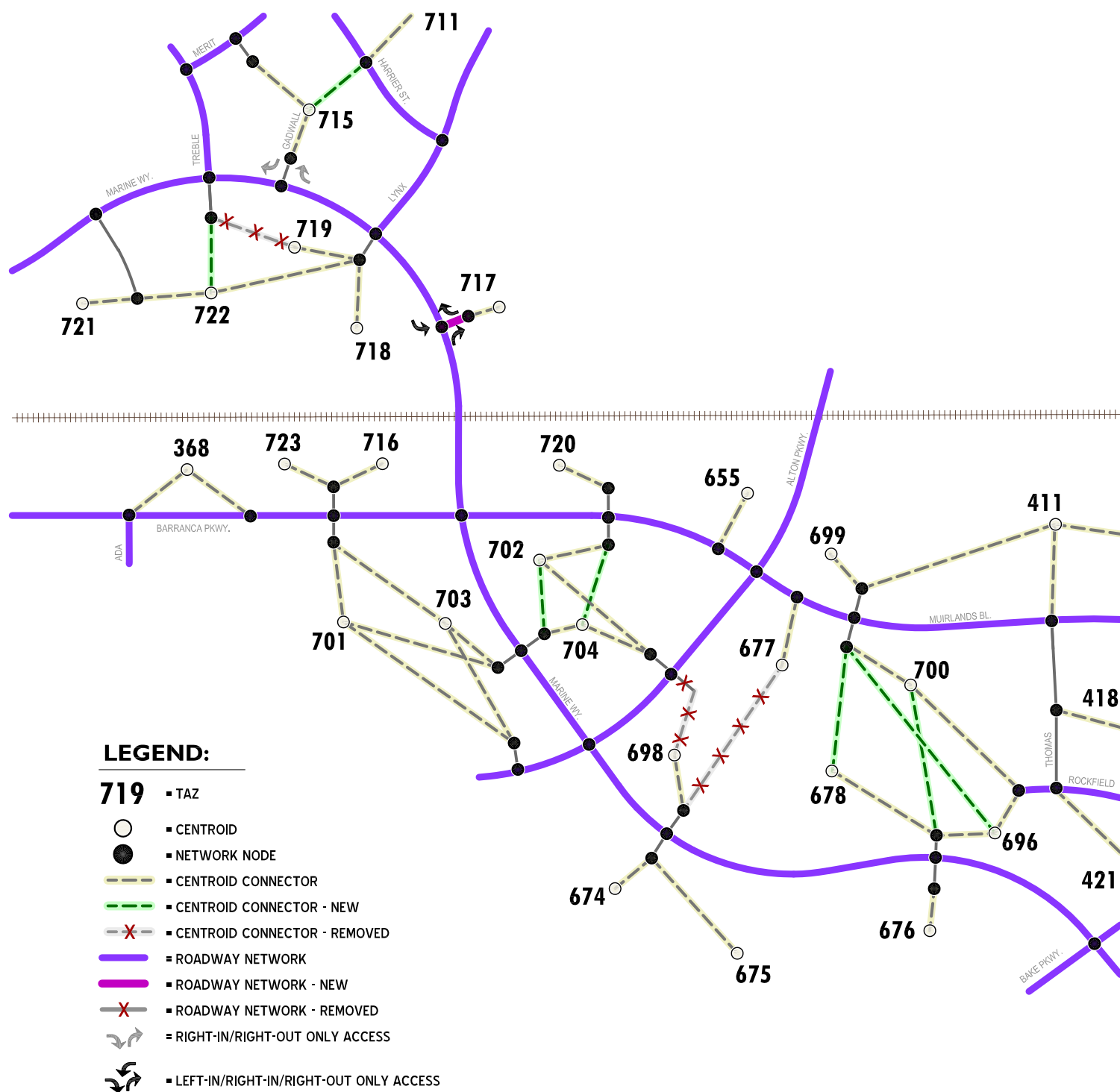
SPECIAL ISSUES

A. Congestion Management Program (CMP) Land Use Coordination Requirements

The City's "CMP Monitoring Checklist: Land Use Coordination Component" will be completed and included in the Access Study if the proposed project is forecast to generate 2,400 or more daily trips, or greater than 1,600 daily trips directly onto the CMP highway system.

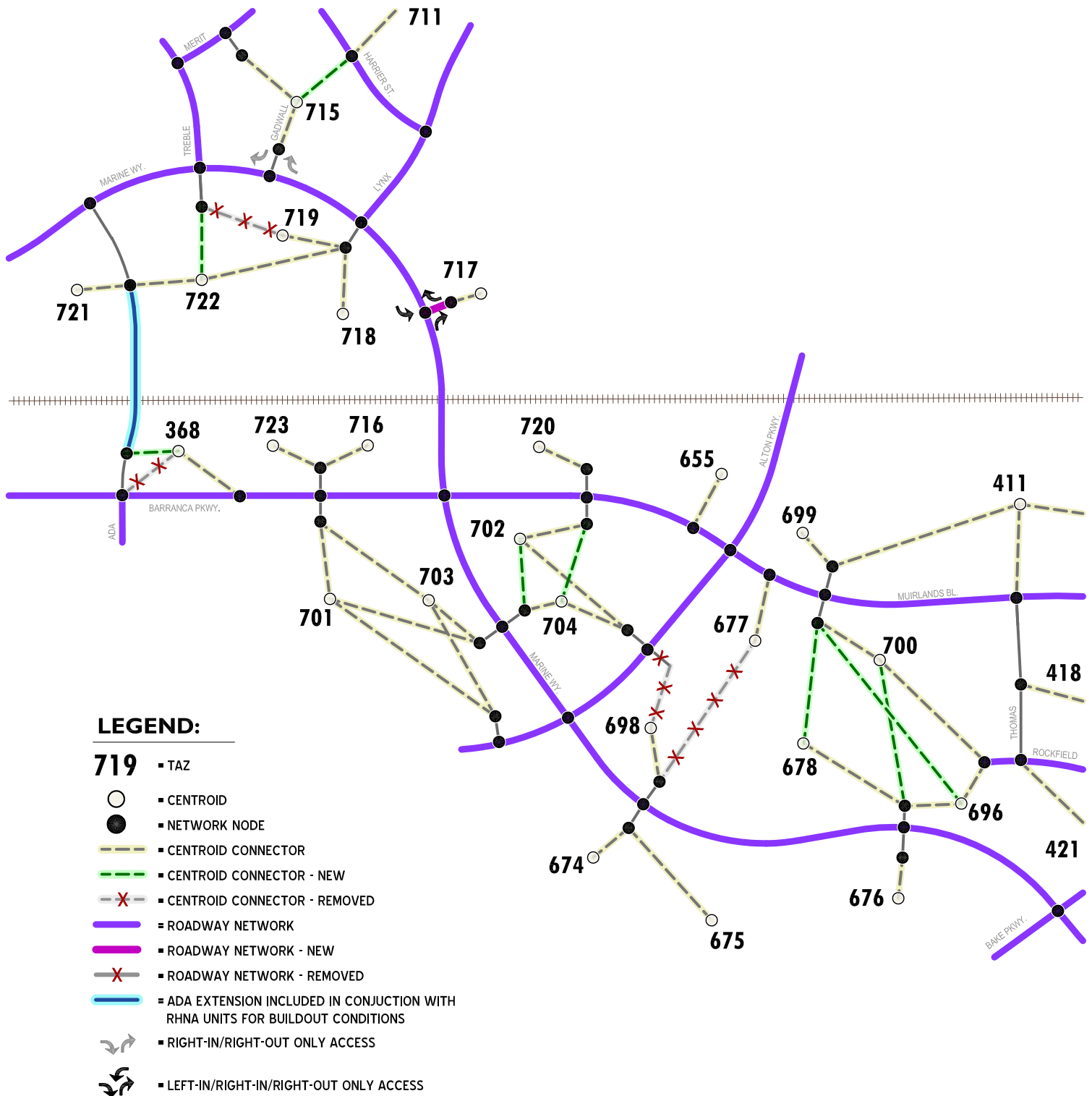
Approved: *Sun-Sun Tvedten Murillo*
Date: 7/3/25

EXHIBIT 5: STIY PROPOSED NETWORK



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7/3/25

EXHIBIT 6: BOA PROPOSED NETWORK



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7/3/25

B. Pedestrian Circulation

The pedestrian circulation on site and connection to the adjacent public facilities and corresponding traffic control measures within the project site will be discussed in this section. The Access Study will include a discussion of how policies a, b, and c of the City's 2045 Irvine General Plan Objective C-3 will be met with implementation of this project.

C. Bicycle Circulation

Bicycle circulation on-site and connection to adjacent bicycle facilities will be discussed in this section. Urban Crossroads will document how the project will conform to applicable policies of Objective C-4 of the City's 2045 Irvine General Plan.

D. Transit Facilities

The Access Study will identify the transit facilities (e.g., OCTA bus, i-Shuttle, etc.) within the project vicinity. Urban Crossroads will discuss pedestrian access to the transit facilities in the project vicinity.

E. Non-Residential Conversion

As required by Section 9-51-6Tii of the Zoning Ordinance, part of the 2025 Zone Change, and to the degree residential units are built in the 8.1C Trails and Transit Oriented Development area, a corresponding reduction in allowable non-residential intensity shall occur in terms of equivalent traffic generation based on a.m. peak, p.m. peak, and average daily trips. The residential units within VTTM 19402, VTTM 19403, VTTM 19404, and a portion of VTTM 19405 are converted from non-residential uses. A summary of that conversion will be included in this section.

CONCLUSIONS

The purpose of this evaluation is to verify consistency with the findings of the underlying approval. This evaluation will also serve as the basis of design for local roadway and key access driveway intersections where VTTMs 19402, 19403, 19404, 19405, 19406 and Master Plan Mod BA 619 connect to surrounding arterial roadways. A summary of the results of the evaluation and recommended improvements will be prepared.

Approved: *Sun-Sun Tvedten Murillo*
Date: 7/3/25

APPENDIX 4.1:

STIY WITHOUT PROJECT INTERSECTION CAPACITY UTILIZATION (ICU) WORKSHEETS

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301 - Sand Canyon Av. @ Irvine Bl. Short Term Approved-ITAM TC V1.8						
		IRVINE				
	Ln	Cap	AM Peak Hour		PM Peak Hour	
			Vol	V/C	Vol	V/C
NBL	2	3400	107	0.03	187	0.06
NBT	3	5100	262	0.05*	699	0.14*
NBR	2	3400	387	0.11	437	0.13
SBL	2	3400	364	0.11*	198	0.06*
SBT	3	5100	578	0.11	310	0.06
SBR	D	1700	150	0.09	87	0.05
EBL	2	3400	74	0.02	189	0.06*
EBT	4	6800	942	0.14*	978	0.14
EBR	1	1700	131	0.08	88	0.05
WBL	2	3400	547	0.16*	421	0.12
WBT	3	5100	1030	0.20	1281	0.25*
WBR	1	1700	221	0.13	363	0.21
Adjustment Overlaps					Clearance	0.05
Total ICU				0.51		0.56

302 - Sand Canyon Av. @ Trabuco Pkwy. Short Term Approved-ITAM TC V1.8						
		IRVINE				
	Ln	Cap	AM Peak Hour		PM Peak Hour	
			Vol	V/C	Vol	V/C
NBL	2	3400	40	0.01*	128	0.04
NBT	3	5100	490	0.10	1516	0.30*
NBR	F		450		628	
SBL	2	3400	134	0.04	152	0.04*
SBT	3	5100	1232	0.24*	595	0.12
SBR	1	1700	236	0.14	135	0.08
EBL	2	3400	174	0.05	143	0.04
EBT	3	5100	477	0.09*	386	0.08*
EBR	F		163		77	
WBL	2	3400	600	0.18*	328	0.10*
WBT	3	5100	501	0.10	518	0.10
WBR	D	1700	102	0.06	202	0.12
Adjustment Overlaps					Clearance	0.05
Total ICU				0.57		0.57

303 - Sand Canyon Av. @ I-5 NB Ramps-Marine Way Short Term Approved-ITAM TC V1.8						
		IRVINE				
	Ln	Cap	AM Peak Hour		PM Peak Hour	
			Vol	V/C	Vol	V/C
NBL	2	3400	358	0.11*	519	0.15*
NBT	3	5100	630	0.12	1577	0.31
NBR	D	1700	0		0	
SBL	1	1700	0		16	0.01
SBT	3	5100	1658	0.33*	922	0.18*
SBR	1	1700	484	0.28	161	0.09
EBL	1.5	3400	253	0.07*	941	0.28*
EBT	0.5	0	0		0	
EBR	2	3400	531	0.16	403	0.12
WBL	1	1700	20	0.01*	0	
WBT	1	1700	0		4	0.00*
WBR	0		0		0	
Adjustment Overlaps			EBR	0.02		
Note: Assumes E/W Split Phase					Clearance	0.05
Total ICU				0.59		0.66

304 - Sand Canyon Av. @ Old Marine Wy. Short Term Approved-ITAM TC V1.8						
		IRVINE				
	Ln	Cap	AM Peak Hour		PM Peak Hour	
			Vol	V/C	Vol	V/C
NBL	0		0	*	0	
NBT	3	5100	829	0.16	1976	0.39*
NBR	1	1700	418	0.25	760	0.45
SBL	2	3400	236	0.07	339	0.10*
SBT	3	5100	2004	0.39*	972	0.19
SBR	0		0		0	
EBL	0		0		0	
EBT	0		0	*	0	*
EBR	0		0		0	
WBL	2	3400	470	0.14*	379	0.11*
WBT	0		0		0	
WBR	1	1700	216	0.13	175	0.10
Adjustment Overlaps					Clearance	0.05
Total ICU				0.58		0.65

305 - Sand Canyon Av. @ I-5 SB Ramps Short Term Approved-ITAM TC V1.8						
		IRVINE				
	Ln	Cap	AM Peak Hour		PM Peak Hour	
			Vol	V/C	Vol	V/C
NBL	0		0		0	
NBT	4	6800	718	0.11*	1648	0.24*
NBR	1	1700	72	0.04	320	0.19
SBL	2	3400	694	0.20*	477	0.14*
SBT	4	6800	1867	0.27	868	0.13
SBR	0		0		0	
EBL	2.5	3400	466	0.14*	1061	0.21*
EBT	0		0		0	
EBR	1.5	3400	689	0.20	319	0.19
WBL	0		0		0	
WBT	0		0	*	0	*
WBR	0		0		0	
Adjustment Overlaps			EBR	0.03		
					Clearance	0.05
Total ICU				0.53		0.64

326 - Ada @ Barranca Pkwy. Short Term Approved-ITAM TC V1.8						
		IRVINE				
	Ln	Cap	AM Peak Hour		PM Peak Hour	
			Vol	V/C	Vol	V/C
NBL	1	1700	28	0.02*	54	0.03*
NBT	2	3400	72	0.02	75	0.02
NBR	D	1700	69	0.04	174	0.10
SBL	2	3400	62	0.02	118	0.03
SBT	1	1700	88	0.05*	111	0.07*
SBR	1	1700	14	0.01	53	0.03
EBL	1	1700	12	0.01*	38	0.02
EBT	2	3400	527	0.16	1142	0.34*
EBR	D	1700	151	0.09	43	0.03
WBL	1	1700	182	0.11	74	0.04*
WBT	2	3400	1123	0.33*	701	0.21
WBR	1	1700	46	0.03	42	0.02
Adjustment Overlaps					Clearance	0.05
Total ICU				0.46		0.53

339 - Alton Pkwy. @ Toledo Wy. Short Term Approved-ITAM TC V1.8							IRVINE	
	Ln	Cap	AM Peak Hour		PM Peak Hour			
			Vol	V/C	Vol	V/C		
NBL	1	1700	65	0.04*	85	0.05		
NBT	3	5100	641	0.13	1555	0.30*		
NBR	F		85		199			
SBL	1	1700	91	0.05	55	0.03*		
SBT	3	5100	1691	0.33*	709	0.14		
SBR	0		10		13			
EBL	1	1700	22	0.01	6	0.00		
EBT	1	1700	84	0.10*	51	0.06*		
EBR	0		86		57			
WBL	1	1700	146	0.09*	63	0.04*		
WBT	1	1700	61	0.04	54	0.03		
WBR	1	1700	119	0.07	84	0.05		
Adjustment Overlaps					Clearance		0.05	
Total ICU				0.61			0.48	

340 - Alton Pkwy. @ Jeronimo Rd. Short Term Approved-ITAM TC V1.8							IRVINE	
	Ln	Cap	AM Peak Hour		PM Peak Hour			
			Vol	V/C	Vol	V/C		
NBL	1	1700	52	0.03*	20	0.01		
NBT	3	5100	1003	0.20	1489	0.29*		
NBR	F		246		384			
SBL	2	3400	158	0.05	80	0.02*		
SBT	3	5100	1545	0.31*	1038	0.20		
SBR	0		26		6			
EBL	1	1700	3	0.00	24	0.01		
EBT	1	1700	7	0.00*	31	0.02*		
EBR	F		13		65			
WBL	2	3400	396	0.12*	247	0.07*		
WBT	1	1700	41	0.02	6	0.00		
WBR	1	1700	112	0.07	108	0.06		
Adjustment Overlaps					Clearance		0.05	
Total ICU				0.51			0.45	

341 - Alton Pkwy. @ Barranca Pkwy./Muirlands Short Term Approved-ITAM TC V1.8							IRVINE	
	Ln	Cap	AM Peak Hour		PM Peak Hour			
			Vol	V/C	Vol	V/C		
NBL	1	1700	9	0.01*	7	0.00		
NBT	3	5100	786	0.15	1007	0.20*		
NBR	1	1700	228	0.13	347	0.20		
SBL	2	3400	165	0.05	120	0.04*		
SBT	3	5100	1058	0.21*	730	0.14		
SBR	F		1032		570			
EBL	2	3400	485	0.14*	709	0.21*		
EBT	2	3400	205	0.06	456	0.14		
EBR	0		8		4			
WBL	2	3400	182	0.05	121	0.04		
WBT	2	3400	308	0.11*	241	0.11*		
WBR	0		67		144			
Adjustment Overlaps		N			Clearance		0.05	
Total ICU				0.52			0.61	

342 - Technology Dr. E. @ Alton Pkwy. Short Term Approved-ITAM TC V1.8							IRVINE	
	Ln	Cap	AM Peak Hour		PM Peak Hour			
			Vol	V/C	Vol	V/C		
NBL	1	1700	20	0.01*	31	0.02*		
NBT	1	1700	7	0.00	2	0.00		
NBR	1	1700	84	0.05	323	0.19		
SBL	1	1700	5	0.00	28	0.02		
SBT	1	1700	0	0.00*	3	0.02*		
SBR	0		5		31			
EBL	1	1700	40	0.02	4	0.00		
EBT	3	5100	1137	0.22*	1246	0.24*		
EBR	D	1700	20	0.01	14	0.01		
WBL	1	1700	260	0.15*	41	0.02*		
WBT	3	5100	1302	0.26	1208	0.24		
WBR	D	1700	28	0.02	2	0.00		
Adjustment Overlaps					NBR Clearance		0.15 0.05	
Total ICU				0.43			0.50	

343 - Alton Pkwy. @ Ada Short Term Approved-ITAM TC V1.8							IRVINE	
	Ln	Cap	AM Peak Hour		PM Peak Hour			
			Vol	V/C	Vol	V/C		
NBL	2	3400	276	0.08*	181	0.05*		
NBT	3	5100	1119	0.22	1135	0.22		
NBR	D	1700	5	0.00	9	0.01		
SBL	1	1700	7	0.00	15	0.01		
SBT	3	5100	1161	0.23*	1225	0.24*		
SBR	D	1700	124	0.07	91	0.05		
EBL	1	1700	57	0.03*	102	0.06*		
EBT	1	1700	47	0.03	19	0.01		
EBR	1	1700	252	0.15	260	0.15		
WBL	1	1700	6	0.00	16	0.01		
WBT	1	1700	14	0.02*	27	0.02*		
WBR	0		14		4			
Adjustment Overlaps			EBR	0.04	EBR	0.04	Clearance	0.05
Total ICU				0.45			0.46	

836 - Treble @ Great Park Blvd Short Term Approved-ITAM TC V1.8							IRVINE	
	Ln	Cap	AM Peak Hour		PM Peak Hour			
			Vol	V/C	Vol	V/C		
NBL	2	3400	458	0.13*	525	0.15*		
NBT	1	1700	3	0.00	3	0.00		
NBR	0		0		0			
SBL	0		0		0			
SBT	1	1700	4	0.00*	2	0.00*		
SBR	1	1700	828	0.49	732	0.43		
EBL	2	3400	706	0.21*	734	0.22*		
EBT	0		0		0			
EBR	1	1700	558	0.33	368	0.22		
WBL	0		0		0			
WBT	0		0	*	0	*		
WBR	0		0		0			
Adjustment Overlaps		E	SBR	0.33	SBR	0.26	Clearance	0.05
Total ICU				0.72			0.68	

559 - Ridge Valley @ Great Park Blvd. Short Term Approved-ITAM TC V1.8							IRVINE	
	Ln	Cap	AM Peak Hour		PM Peak Hour			
			Vol	V/C	Vol	V/C		
NBL	2	3400	153	0.05	227	0.07		
NBT	2	1700	10	0.01*	52	0.03*		
NBR	0	1700	53	0.03	95	0.06		
SBL	1	1700	145	0.09*	106	0.06*		
SBT	2	3400	36	0.01	30	0.01		
SBR	F		419		254			
EBL	2	3400	140	0.04	343	0.10*		
EBT	2	3400	744	0.22*	626	0.18		
EBR	F		183		175			
WBL	1	1700	58	0.03*	66	0.04		
WBT	2	3400	674	0.21	567	0.21*		
WBR	0		44		130			
Adjustment Overlaps					Clearance		0.05	
Total ICU				0.40			0.45	

560 - Ridge Valley @ Marine Wy. Short Term Approved-ITAM TC V1.8							IRVINE	
	Ln	Cap	AM Peak Hour		PM Peak Hour			
			Vol	V/C	Vol	V/C		
NBL	0		0		0			
NBT	0		0	*	0	*		
NBR	0		0		0			
SBL	2	3400	96	0.03*	109	0.03*		
SBT	0		0		0			
SBR	1	1700	298	0.18	204	0.12		
EBL	2	3400	84	0.02*	557	0.16*		
EBT	2	3400	434	0.13	540	0.16		
EBR	0		0		0			
WBL	0		0		0			
WBT	2	3400	443	0.13*	288	0.08*		
WBR	1	1700	147	0.09	148	0.09		
Adjustment Overlaps			SBR	0.13			Clearance	0.05
Total ICU				0.36			0.32	

562 - Skyhawk @ Marine Wy. Short Term Approved-ITAM TC V1.8							IRVINE	
	Ln	Cap	AM Peak Hour		PM Peak Hour			
			Vol	V/C	Vol	V/C		
NBL	0		0	*	0			
NBT	0		0		0	*		
NBR	0		0		0			
SBL	1	1700	0		21	0.01*		
SBT	0		0	*	0			
SBR	2	3400	351	0.10	185	0.05		
EBL	2	3400	141	0.04*	474	0.14*		
EBT	2	3400	358	0.11	258	0.08		
EBR	0		0		0			
WBL	0		0		0			
WBT	2	3400	291	0.09*	315	0.09*		
WBR	1	1700	0		67	0.04		
Adjustment Overlaps			SBR	0.07			Clearance	0.05
Total ICU				0.25			0.29	

565 - Treble @ Marine Wy. Short Term Approved-ITAM TC V1.8							IRVINE	
	Ln	Cap	AM Peak Hour		PM Peak Hour			
			Vol	V/C	Vol	V/C		
NBL	1	1700	0		0			
NBT	1	1700	0	*	0	*		
NBR	0		0		0			
SBL	2	3400	929	0.27*	367	0.11*		
SBT	1	1700	0		0	0.03		
SBR	0		0		56			
EBL	1	1700	0		55	0.03*		
EBT	2	3400	357	0.11*	180	0.05		
EBR	D	1700	0		0			
WBL	1	1700	0	*	0			
WBT	2	3400	227	0.07	371	0.11*		
WBR	1	1700	168	0.10	745	0.44		
Adjustment Overlaps		W			WBR	0.22	Clearance	0.05
Total ICU				0.43			0.52	

566 - Marine Wy. @ Barranca Pkwy. Short Term Approved-ITAM TC V1.8							IRVINE	
	Ln	Cap	AM Peak Hour		PM Peak Hour			
			Vol	V/C	Vol	V/C		
NBL	2	3400	37	0.01*	126	0.04		
NBT	2	3400	150	0.04	597	0.18*		
NBR	1	1700	25	0.01	95	0.06		
SBL	2	3400	509	0.15	462	0.14*		
SBT	2	3400	802	0.24*	223	0.07		
SBR	1	1700	752	0.44	613	0.36		
EBL	2	3400	317	0.09*	789	0.23*		
EBT	2	3400	53	0.02	126	0.04		
EBR	1	1700	83	0.05	60	0.04		
WBL	2	3400	92	0.03	47	0.01		
WBT	2	3400	86	0.03*	130	0.04*		
WBR	1	1700	349	0.21	617	0.36		
Adjustment Overlaps		W	SBR	0.13	WBR	0.18	Clearance	0.05
Total ICU				0.55			0.82	

567 - Marine Wy. @ Alton Pkwy. Short Term Approved-ITAM TC V1.8							IRVINE	
	Ln	Cap	AM Peak Hour		PM Peak Hour			
			Vol	V/C	Vol	V/C		
NBL	2	3400	648	0.19*	420	0.12*		
NBT	2	3400	60	0.02	11	0.00		
NBR	1	1700	603	0.35	387	0.23		
SBL	2	3400	11	0.00	86	0.03		
SBT	2	3400	7	0.00*	94	0.03*		
SBR	1	1700	12	0.01	93	0.05		
EBL	2	3400	71	0.02	17	0.01		
EBT	3	5100	709	0.14*	610	0.12*		
EBR	F		451		668			
WBL	2	3400	254	0.07*	444	0.13*		
WBT	3	5100	429	0.08	440	0.09		
WBR	1	1700	40	0.02	11	0.01		
Adjustment Overlaps		N	NBR	0.09			Clearance	0.05
Total ICU				0.54			0.45	

569 - Bake Pkwy @ Marine Wy. Short Term Approved-ITAM TC V1.8							IRVINE	
	Ln	Cap	AM Peak Hour		PM Peak Hour			
			Vol	V/C	Vol	V/C		
NBL	2	3400	974	0.29*	467	0.14		
NBT	3	5100	2576	0.51	2650	0.52*		
NBR	1	1700	176	0.10	73	0.04		
SBL	1	1700	122	0.07	41	0.02*		
SBT	4	6800	2662	0.39*	2462	0.36		
SBR	F		674		261			
EBL	2	3400	244	0.07*	494	0.15*		
EBT	1	1700	17	0.01	14	0.01		
EBR	2	3400	365	0.11	822	0.24		
WBL	1	1700	36	0.02	149	0.09		
WBT	2	3400	9	0.00*	16	0.00*		
WBR	D	1700	24	0.01	90	0.05		
Adjustment Overlaps		E			EBR	0.01 Clearance	0.05	
Total ICU				0.80			0.75	

582 - Lynx @ Marine Wy. Short Term Approved-ITAM TC V1.8							IRVINE	
	Ln	Cap	AM Peak Hour		PM Peak Hour			
			Vol	V/C	Vol	V/C		
NBL	1	1700	18	0.01	8	0.00		
NBT	1	1700	10	0.14*	11	0.05*		
NBR	0		222		82			
SBL	2	3400	1179	0.35*	488	0.14*		
SBT	1	1700	9	0.06	10	0.03		
SBR	0		98		48			
EBL	1	1700	44	0.03	81	0.05*		
EBT	2	3400	971	0.29*	608	0.18		
EBR	D	1700	7	0.00	12	0.01		
WBL	1	1700	37	0.02*	170	0.10		
WBT	2	3400	422	0.12	854	0.25*		
WBR	1	1700	230	0.14	1153	0.68		
Adjustment Overlaps		W			WBR	0.29 Clearance	0.05	
Total ICU				0.85			0.83	

593 - Alton Pkwy. @ Fairbanks Short Term Approved-ITAM TC V1.8							IRVINE	
	Ln	Cap	AM Peak Hour		PM Peak Hour			
			Vol	V/C	Vol	V/C		
NBL	1	1700	155	0.09*	256	0.15*		
NBT	3	3400	269	0.08	943	0.20		
NBR	0	1700	144	0.08	88			
SBL	1	1700	3	0.00	1	0.00		
SBT	3	5100	1162	0.30*	347	0.10*		
SBR	0		351		325	0.19		
EBL	1	1700	428	0.25*	307	0.18*		
EBT	1	1700	166	0.19	147	0.21		
EBR	0		160		203			
WBL	1	1700	92	0.05	30	0.02		
WBT	1	1700	226	0.13*	134	0.08*		
WBR	0		3		0			
Adjustment Overlaps							Clearance	0.05
Total ICU				0.82			0.56	

594 - Fairbanks @ Astor Short Term Approved-ITAM TC V1.8							IRVINE	
	Ln	Cap	AM Peak Hour		PM Peak Hour			
			Vol	V/C	Vol	V/C		
NBL	1	1700	86	0.05*	222	0.13*		
NBT	1	1700	2	0.00	1	0.00		
NBR	0		0		0			
SBL	1	1700	0		0			
SBT	1	1700	5	0.46*	0	0.38*		
SBR	0		782		643			
EBL	0		736		643			
EBT	1	1700	0	0.43*	0	0.38*		
EBR	D	1700	189	0.11	99	0.06		
WBL	0		0	*	0	*		
WBT	1	1700	0		0			
WBR	0		0		0			
Adjustment Overlaps							Clearance	0.05
Total ICU				0.99			0.94	

831 - Lynx @ Astor Short Term Approved-ITAM TC V1.8							IRVINE	
	Ln	Cap	AM Peak Hour		PM Peak Hour			
			Vol	V/C	Vol	V/C		
NBL	1	1700	169	0.10*	170	0.10*		
NBT	1	1700	2	0.00	7	0.00		
NBR	D	1700	119	0.07	109	0.06		
SBL	1	1700	28	0.02	13	0.01		
SBT	1	1700	8	0.00*	4	0.00*		
SBR	D	1700	40	0.02	20	0.01		
EBL	1	1700	10	0.01	36	0.02		
EBT	1	1700	757	0.57*	551	0.41*		
EBR	0		216		151			
WBL	1	1700	120	0.07*	127	0.07*		
WBT	1	1700	597	0.35	722	0.44		
WBR	0		5		30			
Adjustment Overlaps							Clearance	0.05
Total ICU				0.79			0.63	

Lanes, Volumes, Timings
594: Fairbanks & Astor

STIY Ground AM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	736	1	189	1	1	1	86	2	1	1	5	782
Future Volume (vph)	736	1	189	1	1	1	86	2	1	1	5	782
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		50	0		0	110		0	100		0
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	90			90			90			90		
Link Speed (mph)		45			45			45			45	
Link Distance (ft)		519			240			831			417	
Travel Time (s)		7.9			3.6			12.6			6.3	
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
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

HCM 7th TWSC
594: Fairbanks & Astor

STIY Ground AM Peak Hour

Intersection												
Int Delay, s/veh	253.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↕		↕		↕	↕		↕	↕	
Traffic Vol, veh/h	736	1	189	1	1	1	86	2	1	1	5	782
Future Vol, veh/h	736	1	189	1	1	1	86	2	1	1	5	782
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	-	-	50	-	-	-	110	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	800	1	205	1	1	1	93	2	1	1	5	850
Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	622	623	430	198	1047	3	855	0	0	3	0	0
Stage 1	433	433	-	190	190	-	-	-	-	-	-	-
Stage 2	190	190	-	8	858	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	~ 399	402	625	761	228	1081	785	-	-	1619	-	-
Stage 1	~ 601	582	-	812	743	-	-	-	-	-	-	-
Stage 2	812	743	-	1013	374	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 349	354	625	448	201	1081	785	-	-	1619	-	-
Mov Cap-2 Maneuver	~ 349	354	-	448	201	-	-	-	-	-	-	-
Stage 1	~ 601	582	-	715	655	-	-	-	-	-	-	-
Stage 2	~ 713	654	-	678	374	-	-	-	-	-	-	-
Approach	EB		WB			NB			SB			
HCM Ctrl Dly, s/v	\$ 492.71		14.85			9.86			0.01			
HCM LOS	F		B									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR			
Capacity (veh/h)	785	-	-	349	625	369	1619	-	-			
HCM Lane V/C Ratio	0.119	-	-	2.295	0.329	0.009	0.001	-	-			
HCM Ctrl Dly (s/v)	10.2	-	-	\$ 615.6	13.6	14.9	7.2	-	-			
HCM Lane LOS	B	-	-	F	B	B	A	-	-			
HCM 95th %tile Q(veh)	0.4	-	-	61.4	1.4	0	0	-	-			
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s										
+: Computation Not Defined		*: All major volume in platoon										

Lanes, Volumes, Timings

STIY Ground AM Peak Hour

595: Skyhawk & Great Park Blvd.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	915	1	157	738	63	1	1	236	19	1	1
Future Volume (vph)	1	915	1	157	738	63	1	1	236	19	1	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		563			328			999			360	
Travel Time (s)		12.8			7.5			22.7			8.2	
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
Shared Lane Traffic (%)												
Sign Control		Yield			Yield			Yield			Yield	
Intersection Summary												
Area Type:	Other											
Control Type:	Roundabout											

HCM 7th Roundabout
595: Skyhawk & Great Park Blvd.

STIY Ground AM Peak Hour

Intersection							
Intersection Delay, s/veh	7.4						
Intersection LOS	A						
Approach	EB		WB		NB		SB
Entry Lanes	2		2		2		1
Conflicting Circle Lanes	2		2		2		2
Adj Approach Flow, veh/h	965		1008		250		22
Demand Flow Rate, veh/h	984		1028		255		22
Vehicles Circulating, veh/h	189		3		1003		962
Vehicles Exiting, veh/h	795		1255		170		69
Ped Vol Crossing Leg, #/h	0		0		0		0
Ped Cap Adj	1.000		1.000		1.000		1.000
Approach Delay, s/veh	7.5		6.1		12.5		6.1
Approach LOS	A		A		B		A
Lane	Left	Right	Left	Right	Left	Right	Left
Designated Moves	LT	TR	LT	TR	L	TR	LTR
Assumed Moves	LT	TR	LT	TR	L	TR	LTR
RT Channelized							
Lane Util	0.470	0.530	0.470	0.530	0.004	0.996	1.000
Follow-Up Headway, s	2.667	2.535	2.667	2.535	2.667	2.535	2.535
Critical Headway, s	4.645	4.328	4.645	4.328	4.645	4.328	4.328
A (Intercept)	1350	1420	1350	1420	1350	1420	1420
B (Slope)	9.199e-48.501e-4		9.199e-48.501e-4		9.199e-48.501e-4		8.501e-4
Entry Flow, veh/h	462	522	483	545	1	254	22
Cap Entry Lane, veh/h	1134	1209	1346	1417	537	605	627
Entry HV Adj Factor	0.981	0.980	0.981	0.981	1.000	0.980	0.999
Flow Entry, veh/h	453	511	474	534	1	249	22
Cap Entry, veh/h	1113	1185	1321	1389	537	593	626
V/C Ratio	0.407	0.432	0.359	0.385	0.002	0.420	0.035
Control Delay, s/veh	7.5	7.5	6.0	6.1	6.7	12.5	6.1
LOS	A	A	A	A	A	B	A
95th %tile Queue, veh	2	2	2	2	0	2	0

Lanes, Volumes, Timings
633: Treble & Merit

STIY Ground AM Peak Hour

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	119	29	160	8	9	763
Future Volume (vph)	119	29	160	8	9	763
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		0	150	
Storage Lanes	1	0		0	1	
Taper Length (ft)	90				90	
Link Speed (mph)	30		40			40
Link Distance (ft)	242		797			359
Travel Time (s)	5.5		13.6			6.1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

HCM 7th TWSC
633: Treble & Merit

STIY Ground AM Peak Hour

Intersection						
Int Delay, s/veh	3.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	119	29	160	8	9	763
Future Vol, veh/h	119	29	160	8	9	763
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	150	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	119	29	160	8	9	763
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	945	164	0	0	168	0
Stage 1	164	-	-	-	-	-
Stage 2	781	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	291	881	-	-	1410	-
Stage 1	865	-	-	-	-	-
Stage 2	451	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	289	881	-	-	1410	-
Mov Cap-2 Maneuver	289	-	-	-	-	-
Stage 1	865	-	-	-	-	-
Stage 2	449	-	-	-	-	-
Approach	WB	NB		SB		
HCM Ctrl Dly, s/v	24.22	0		0.09		
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBR WBLn1	SBL	SBT		
Capacity (veh/h)	-	-	333	1410	-	
HCM Lane V/C Ratio	-	-	0.445	0.006	-	
HCM Ctrl Dly (s/v)	-	-	24.2	7.6	-	
HCM Lane LOS	-	-	C	A	-	
HCM 95th %tile Q(veh)	-	-	2.2	0	-	

Lanes, Volumes, Timings
594: Fairbanks & Astor

STIY Ground PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	643	1	99	1	1	1	222	1	1	1	1	643
Future Volume (vph)	643	1	99	1	1	1	222	1	1	1	1	643
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		50	0		0	110		0	100		0
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	90			90			90			90		
Link Speed (mph)		45			45			45			45	
Link Distance (ft)		519			240			831			417	
Travel Time (s)		7.9			3.6			12.6			6.3	
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
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

HCM 7th TWSC
594: Fairbanks & Astor

STIY Ground PM Peak Hour

Intersection												
Int Delay, s/veh	446.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	643	1	99	1	1	1	222	1	1	1	1	643
Future Vol, veh/h	643	1	99	1	1	1	222	1	1	1	1	643
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	-	-	50	-	-	-	110	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	699	1	108	1	1	1	241	1	1	1	1	699
Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	837	838	351	488	1186	2	700	0	0	2	0	0
Stage 1	353	353	-	484	484	-	-	-	-	-	-	-
Stage 2	484	485	-	4	702	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	~ 286	303	693	490	189	1083	897	-	-	1620	-	-
Stage 1	~ 664	631	-	564	552	-	-	-	-	-	-	-
Stage 2	~ 564	552	-	1019	440	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 208	221	693	301	138	1083	897	-	-	1620	-	-
Mov Cap-2 Maneuver	~ 208	221	-	301	138	-	-	-	-	-	-	-
Stage 1	~ 664	631	-	412	403	-	-	-	-	-	-	-
Stage 2	~ 411	403	-	858	440	-	-	-	-	-	-	-
Approach	EB		WB			NB			SB			
HCM Ctrl Dly, s/v	\$ 966.48		18.98			10.39			0.01			
HCM LOS	F		C									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR			
Capacity (veh/h)	897	-	-	208	693	261	1620	-	-			
HCM Lane V/C Ratio	0.269	-	-	3.371	0.155	0.013	0.001	-	-			
HCM Ctrl Dly (s/v)	10.5	-	-	\$ 1113.3	11.1	19	7.2	-	-			
HCM Lane LOS	B	-	-	F	B	C	A	-	-			
HCM 95th %tile Q(veh)	1.1	-	-	65.5	0.5	0	0	-	-			
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s										
+: Computation Not Defined		*: All major volume in platoon										

Lanes, Volumes, Timings

STIY Ground PM Peak Hour

595: Skyhawk & Great Park Blvd.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	3	688	63	216	1044	9	159	1	361	42	4	19
Future Volume (vph)	3	688	63	216	1044	9	159	1	361	42	4	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		563			328			999			360	
Travel Time (s)		12.8			7.5			22.7			8.2	
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
Shared Lane Traffic (%)												
Sign Control		Yield			Yield			Yield			Yield	
Intersection Summary												
Area Type:	Other											
Control Type:	Roundabout											

HCM 7th Roundabout
595: Skyhawk & Great Park Blvd.

STIY Ground PM Peak Hour

Intersection							
Intersection Delay, s/veh	9.7						
Intersection LOS	A						
Approach	EB		WB		NB		SB
Entry Lanes	2		2		2		1
Conflicting Circle Lanes	2		2		2		2
Adj Approach Flow, veh/h	793		1335		548		68
Demand Flow Rate, veh/h	808		1362		559		69
Vehicles Circulating, veh/h	281		174		786		1523
Vehicles Exiting, veh/h	1311		1171		303		13
Ped Vol Crossing Leg, #/h	0		0		0		0
Ped Cap Adj	1.000		1.000		1.000		1.000
Approach Delay, s/veh	7.3		10.0		12.0		12.3
Approach LOS	A		B		B		B
Lane	Left	Right	Left	Right	Left	Right	Left
Designated Moves	LT	TR	LT	TR	L	TR	LTR
Assumed Moves	LT	TR	LT	TR	L	TR	LTR
RT Channelized							
Lane Util	0.470	0.530	0.470	0.530	0.304	0.696	1.000
Follow-Up Headway, s	2.667	2.535	2.667	2.535	2.667	2.535	2.535
Critical Headway, s	4.645	4.328	4.645	4.328	4.645	4.328	4.328
A (Intercept)	1350	1420	1350	1420	1350	1420	1420
B (Slope)	9.199e-48.501e-4		9.199e-48.501e-4		9.199e-48.501e-4		8.501e-4
Entry Flow, veh/h	380	428	640	722	170	389	69
Cap Entry Lane, veh/h	1042	1118	1150	1225	655	728	389
Entry HV Adj Factor	0.980	0.981	0.980	0.980	0.982	0.979	0.984
Flow Entry, veh/h	372	420	627	708	167	381	68
Cap Entry, veh/h	1022	1098	1128	1200	643	713	383
V/C Ratio	0.365	0.383	0.556	0.589	0.260	0.534	0.177
Control Delay, s/veh	7.4	7.2	9.9	10.2	8.8	13.4	12.3
LOS	A	A	A	B	A	B	B
95th %tile Queue, veh	2	2	4	4	1	3	1

Lanes, Volumes, Timings
633: Treble & Merit

STIY Ground PM Peak Hour

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	22	8	701	99	20	401
Future Volume (vph)	22	8	701	99	20	401
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		0	150	
Storage Lanes	1	0		0	1	
Taper Length (ft)	90				90	
Link Speed (mph)	30		40			40
Link Distance (ft)	242		797			359
Travel Time (s)	5.5		13.6			6.1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

HCM 7th TWSC
633: Treble & Merit

STIY Ground PM Peak Hour

Intersection						
Int Delay, s/veh	0.7					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	22	8	701	99	20	401
Future Vol, veh/h	22	8	701	99	20	401
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	150	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	22	8	701	99	20	401
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	1192	751	0	0	800	0
Stage 1	751	-	-	-	-	-
Stage 2	441	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	207	411	-	-	823	-
Stage 1	467	-	-	-	-	-
Stage 2	648	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	202	411	-	-	823	-
Mov Cap-2 Maneuver	202	-	-	-	-	-
Stage 1	467	-	-	-	-	-
Stage 2	633	-	-	-	-	-
Approach	WB	NB		SB		
HCM Ctrl Dly, s/v	22.67	0		0.45		
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBR WBLn1	SBL	SBT		
Capacity (veh/h)	-	-	234	823	-	
HCM Lane V/C Ratio	-	-	0.128	0.024	-	
HCM Ctrl Dly (s/v)	-	-	22.7	9.5	-	
HCM Lane LOS	-	-	C	A	-	
HCM 95th %tile Q(veh)	-	-	0.4	0.1	-	

Lanes, Volumes, Timings
834: Lynx & Harrier

STIY Ground AM Peak Hour

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	8	616	303	234	406	7
Future Volume (vph)	8	616	303	234	406	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	90	200			0
Storage Lanes	1	0	1			0
Taper Length (ft)	60		90			
Link Speed (mph)	45			45	45	
Link Distance (ft)	208			749	1308	
Travel Time (s)	3.2			11.3	19.8	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

HCM 7th TWSC
834: Lynx & Harrier

STIY Ground AM Peak Hour

Intersection						
Int Delay, s/veh	15.6					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	8	616	303	234	406	7
Future Vol, veh/h	8	616	303	234	406	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	200	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	616	303	234	406	7
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1250	410	413	0	-	0
Stage 1	410	-	-	-	-	-
Stage 2	840	-	-	-	-	-
Critical Hdwy	6	5.7	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3	3	2.218	-	-	-
Pot Cap-1 Maneuver	241	741	1146	-	-	-
Stage 1	765	-	-	-	-	-
Stage 2	471	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	177	741	1146	-	-	-
Mov Cap-2 Maneuver	177	-	-	-	-	-
Stage 1	562	-	-	-	-	-
Stage 2	471	-	-	-	-	-
Approach	EB	NB		SB		
HCM Ctrl Dly, s/v	34.94	5.23		0		
HCM LOS	D					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1146	-	712	-	-	
HCM Lane V/C Ratio	0.264	-	0.877	-	-	
HCM Ctrl Dly (s/v)	9.3	-	34.9	-	-	
HCM Lane LOS	A	-	D	-	-	
HCM 95th %tile Q(veh)	1.1	-	10.8	-	-	

Lanes, Volumes, Timings
834: Lynx & Harrier

STIY Ground PM Peak Hour

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	6	453	568	341	248	6
Future Volume (vph)	6	453	568	341	248	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	90	200			0
Storage Lanes	1	0	1			0
Taper Length (ft)	60		90			
Link Speed (mph)	45			45	45	
Link Distance (ft)	208			749	1308	
Travel Time (s)	3.2			11.3	19.8	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

HCM 7th TWSC
834: Lynx & Harrier

STIY Ground PM Peak Hour

Intersection						
Int Delay, s/veh	9.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	6	453	568	341	248	6
Future Vol, veh/h	6	453	568	341	248	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	200	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	6	453	568	341	248	6
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1728	251	254	0	-	0
Stage 1	251	-	-	-	-	-
Stage 2	1477	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	97	788	1311	-	-	-
Stage 1	791	-	-	-	-	-
Stage 2	209	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	55	788	1311	-	-	-
Mov Cap-2 Maneuver	55	-	-	-	-	-
Stage 1	448	-	-	-	-	-
Stage 2	209	-	-	-	-	-
Approach	EB	NB		SB		
HCM Ctrl Dly, s/v	21.15	6.14		0		
HCM LOS	C					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1311	-	671	-	-	
HCM Lane V/C Ratio	0.433	-	0.684	-	-	
HCM Ctrl Dly (s/v)	9.8	-	21.2	-	-	
HCM Lane LOS	A	-	C	-	-	
HCM 95th %tile Q(veh)	2.2	-	5.4	-	-	

APPENDIX 4.2:

STIY WITH PROJECT INTERSECTION CAPACITY UTILIZATION (ICU) WORKSHEETS

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301 - Sand Canyon Av. @ Irvine Bl. Short Term Approved-ITAM TC V1.8							IRVINE	
	Ln	Cap	AM Peak Hour		PM Peak Hour			
			Vol	V/C	Vol	V/C		
NBL	2	3400	114	0.03	189	0.06		
NBT	3	5100	269	0.05*	690	0.14*		
NBR	2	3400	381	0.11	442	0.13		
SBL	2	3400	350	0.10*	197	0.06*		
SBT	3	5100	585	0.11	310	0.06		
SBR	D	1700	155	0.09	86	0.05		
EBL	2	3400	77	0.02	185	0.05*		
EBT	4	6800	944	0.14*	978	0.14		
EBR	1	1700	138	0.08	88	0.05		
WBL	2	3400	521	0.15*	423	0.12		
WBT	3	5100	1004	0.20	1280	0.25*		
WBR	1	1700	208	0.12	355	0.21		
Adjustment Overlaps					Clearance		0.05	
Total ICU				0.49			0.55	

302 - Sand Canyon Av. @ Trabuco Pkwy. Short Term Approved-ITAM TC V1.8							IRVINE	
	Ln	Cap	AM Peak Hour		PM Peak Hour			
			Vol	V/C	Vol	V/C		
NBL	2	3400	40	0.01*	127	0.04		
NBT	3	5100	491	0.10	1511	0.30*		
NBR	F		449		636			
SBL	2	3400	133	0.04	153	0.05*		
SBT	3	5100	1230	0.24*	595	0.12		
SBR	1	1700	238	0.14	133	0.08		
EBL	2	3400	173	0.05	146	0.04		
EBT	3	5100	476	0.09*	399	0.08*		
EBR	F		163		79			
WBL	2	3400	605	0.18*	333	0.10*		
WBT	3	5100	508	0.10	518	0.10		
WBR	D	1700	102	0.06	203	0.12		
Adjustment Overlaps					Clearance		0.05	
Total ICU				0.57			0.58	

303 - Sand Canyon Av. @ I-5 NB Ramps-Marine Way Short Term Approved-ITAM TC V1.8							IRVINE	
	Ln	Cap	AM Peak Hour		PM Peak Hour			
			Vol	V/C	Vol	V/C		
NBL	2	3400	349	0.10*	517	0.15*		
NBT	3	5100	628	0.12	1573	0.31		
NBR	D	1700	0		0			
SBL	1	1700	0		16	0.01		
SBT	3	5100	1651	0.32*	922	0.18*		
SBR	1	1700	482	0.28	161	0.09		
EBL	1.5	3400	257	0.08*	943	0.28*		
EBT	0.5	0	0		0			
EBR	2	3400	528	0.16	402	0.12		
WBL	1	1700	20	0.01*	0			
WBT	1	1700	0		4	0.00*		
WBR	0		0		0			
Adjustment Overlaps			EBR	0.01			Clearance	0.05
Note: Assumes E/W Split Phase								
Total ICU				0.57			0.66	

304 - Sand Canyon Av. @ Old Marine Wy. Short Term Approved-ITAM TC V1.8							IRVINE	
	Ln	Cap	AM Peak Hour		PM Peak Hour			
			Vol	V/C	Vol	V/C		
NBL	0		0	*	0			
NBT	3	5100	825	0.16	1969	0.39*		
NBR	1	1700	425	0.25	759	0.45		
SBL	2	3400	230	0.07	343	0.10*		
SBT	3	5100	1999	0.39*	968	0.19		
SBR	0		0		0			
EBL	0		0		0			
EBT	0		0	*	0	*		
EBR	0		0		0			
WBL	2	3400	478	0.14*	378	0.11*		
WBT	0		0		0			
WBR	1	1700	209	0.12	177	0.10		
Adjustment Overlaps					Clearance		0.05	
Total ICU				0.58			0.65	

305 - Sand Canyon Av. @ I-5 SB Ramps Short Term Approved-ITAM TC V1.8							IRVINE	
	Ln	Cap	AM Peak Hour		PM Peak Hour			
			Vol	V/C	Vol	V/C		
NBL	0		0		0			
NBT	4	6800	710	0.10*	1645	0.24*		
NBR	1	1700	73	0.04	322	0.19		
SBL	2	3400	698	0.21*	474	0.14*		
SBT	4	6800	1851	0.27	866	0.13		
SBR	0		0		0			
EBL	2.5	3400	484	0.14*	1055	0.21*		
EBT	0		0		0			
EBR	1.5	3400	718	0.21	320	0.19		
WBL	0		0		0			
WBT	0		0	*	0	*		
WBR	0		0		0			
Adjustment Overlaps			EBR	0.04			Clearance	0.05
Total ICU				0.54			0.64	

326 - Ada @ Barranca Pkwy. Short Term Approved-ITAM TC V1.8							IRVINE	
	Ln	Cap	AM Peak Hour		PM Peak Hour			
			Vol	V/C	Vol	V/C		
NBL	1	1700	26	0.02*	57	0.03*		
NBT	2	3400	70	0.02	77	0.02		
NBR	D	1700	65	0.04	187	0.11		
SBL	2	3400	61	0.02	120	0.04		
SBT	1	1700	90	0.05*	110	0.06*		
SBR	1	1700	13	0.01	53	0.03		
EBL	1	1700	12	0.01*	37	0.02		
EBT	2	3400	520	0.15	1160	0.34*		
EBR	D	1700	157	0.09	42	0.02		
WBL	1	1700	199	0.12	74	0.04*		
WBT	2	3400	1133	0.33*	707	0.21		
WBR	1	1700	48	0.03	41	0.02		
Adjustment Overlaps					NBR	0.03	Clearance	0.05
Total ICU				0.46			0.55	

339 - Alton Pkwy. @ Toledo Wy. Short Term Approved-ITAM TC V1.8							IRVINE	
	Ln	Cap	AM Peak Hour		PM Peak Hour			
			Vol	V/C	Vol	V/C		
NBL	1	1700	65	0.04*	84	0.05		
NBT	3	5100	641	0.13	1556	0.31*		
NBR	F		87		198			
SBL	1	1700	93	0.05	55	0.03*		
SBT	3	5100	1691	0.33*	709	0.14		
SBR	0		10		13			
EBL	1	1700	22	0.01	6	0.00		
EBT	1	1700	83	0.10*	50	0.06*		
EBR	0		84		57			
WBL	1	1700	146	0.09*	63	0.04*		
WBT	1	1700	62	0.04	53	0.03		
WBR	1	1700	119	0.07	84	0.05		
Adjustment Overlaps					Clearance		0.05	
Total ICU				0.61			0.49	

340 - Alton Pkwy. @ Jeronimo Rd. Short Term Approved-ITAM TC V1.8							IRVINE	
	Ln	Cap	AM Peak Hour		PM Peak Hour			
			Vol	V/C	Vol	V/C		
NBL	1	1700	53	0.03*	19	0.01		
NBT	3	5100	1011	0.20	1486	0.29*		
NBR	F		250		385			
SBL	2	3400	152	0.04	82	0.02*		
SBT	3	5100	1547	0.31*	1034	0.20		
SBR	0		26		6			
EBL	1	1700	3	0.00	23	0.01		
EBT	1	1700	7	0.00*	30	0.02*		
EBR	F		13		61			
WBL	2	3400	399	0.12*	256	0.08*		
WBT	1	1700	40	0.02	6	0.00		
WBR	1	1700	107	0.06	114	0.07		
Adjustment Overlaps					Clearance		0.05	
Total ICU				0.51			0.46	

341 - Alton Pkwy. @ Barranca Pkwy./Muirlands Short Term Approved-ITAM TC V1.8							IRVINE	
	Ln	Cap	AM Peak Hour		PM Peak Hour			
			Vol	V/C	Vol	V/C		
NBL	1	1700	9	0.01*	7	0.00		
NBT	3	5100	788	0.15	1006	0.20*		
NBR	1	1700	230	0.14	347	0.20		
SBL	2	3400	176	0.05	121	0.04*		
SBT	3	5100	1055	0.21*	729	0.14		
SBR	F		1030		569			
EBL	2	3400	493	0.14*	708	0.21*		
EBT	2	3400	210	0.06	455	0.14		
EBR	0		8		4			
WBL	2	3400	181	0.05	122	0.04		
WBT	2	3400	307	0.11*	243	0.11*		
WBR	0		71		147			
Adjustment Overlaps		N			Clearance		0.05	
Total ICU				0.52			0.61	

342 - Technology Dr. E. @ Alton Pkwy. Short Term Approved-ITAM TC V1.8							IRVINE	
	Ln	Cap	AM Peak Hour		PM Peak Hour			
			Vol	V/C	Vol	V/C		
NBL	1	1700	18	0.01*	33	0.02*		
NBT	1	1700	6	0.00	2	0.00		
NBR	1	1700	86	0.05	359	0.21		
SBL	1	1700	5	0.00	28	0.02		
SBT	1	1700	0	0.00*	3	0.02*		
SBR	0		5		30			
EBL	1	1700	38	0.02	4	0.00		
EBT	3	5100	1154	0.23*	1248	0.24*		
EBR	D	1700	20	0.01	13	0.01		
WBL	1	1700	289	0.17*	42	0.02*		
WBT	3	5100	1320	0.26	1232	0.24		
WBR	D	1700	29	0.02	2	0.00		
Adjustment Overlaps					NBR Clearance		0.17 0.05	
Total ICU				0.46			0.52	

343 - Alton Pkwy. @ Ada Short Term Approved-ITAM TC V1.8							IRVINE	
	Ln	Cap	AM Peak Hour		PM Peak Hour			
			Vol	V/C	Vol	V/C		
NBL	2	3400	267	0.08*	191	0.06*		
NBT	3	5100	1128	0.22	1136	0.22		
NBR	D	1700	5	0.00	9	0.01		
SBL	1	1700	7	0.00	15	0.01		
SBT	3	5100	1174	0.23*	1237	0.24*		
SBR	D	1700	126	0.07	100	0.06		
EBL	1	1700	64	0.04*	104	0.06*		
EBT	1	1700	48	0.03	19	0.01		
EBR	1	1700	273	0.16	256	0.15		
WBL	1	1700	6	0.00	15	0.01		
WBT	1	1700	14	0.02*	28	0.02*		
WBR	0		14		4			
Adjustment Overlaps			EBR	0.04	EBR	0.03	Clearance	0.05
Total ICU				0.46			0.46	

836 - Treble @ Great Park Blvd Short Term Approved-ITAM TC V1.8							IRVINE	
	Ln	Cap	AM Peak Hour		PM Peak Hour			
			Vol	V/C	Vol	V/C		
NBL	2	3400	466	0.14*	530	0.16*		
NBT	1	1700	3	0.00	3	0.00		
NBR	0		0		0			
SBL	0		0		0			
SBT	1	1700	4	0.00*	3	0.00*		
SBR	1	1700	829	0.49	722	0.42		
EBL	2	3400	700	0.21*	723	0.21*		
EBT	0		0		0			
EBR	1	1700	549	0.32	393	0.23		
WBL	0		0		0			
WBT	0		0	*	0	*		
WBR	0		0		0			
Adjustment Overlaps		E	SBR	0.33	SBR	0.26	Clearance	0.05
Total ICU				0.73			0.68	

559 - Ridge Valley @ Great Park Blvd. Short Term Approved-ITAM TC V1.8							IRVINE	
	Ln	Cap	AM Peak Hour		PM Peak Hour			
			Vol	V/C	Vol	V/C		
NBL	2	3400	154	0.05	229	0.07		
NBT	2	1700	10	0.01*	51	0.03*		
NBR	0	1700	52	0.03	96	0.06		
SBL	1	1700	143	0.08*	107	0.06*		
SBT	2	3400	36	0.01	29	0.01		
SBR	F		421		255			
EBL	2	3400	140	0.04*	345	0.10*		
EBT	2	3400	740	0.22	646	0.19		
EBR	F		184		176			
WBL	1	1700	58	0.03	65	0.04		
WBT	2	3400	685	0.21*	568	0.20*		
WBR	0		44		127			
Adjustment Overlaps					Clearance		0.05	
Total ICU				0.39			0.44	

560 - Ridge Valley @ Marine Wy. Short Term Approved-ITAM TC V1.8							IRVINE	
	Ln	Cap	AM Peak Hour		PM Peak Hour			
			Vol	V/C	Vol	V/C		
NBL	0		0		0			
NBT	0		0	*	0	*		
NBR	0		0		0			
SBL	2	3400	98	0.03*	109	0.03*		
SBT	0		0		0			
SBR	1	1700	296	0.17	204	0.12		
EBL	2	3400	82	0.02*	559	0.16*		
EBT	2	3400	437	0.13	542	0.16		
EBR	0		0		0			
WBL	0		0		0			
WBT	2	3400	447	0.13*	289	0.09*		
WBR	1	1700	147	0.09	149	0.09		
Adjustment Overlaps			SBR	0.12			Clearance	0.05
Total ICU				0.35			0.33	

562 - Skyhawk @ Marine Wy. Short Term Approved-ITAM TC V1.8							IRVINE	
	Ln	Cap	AM Peak Hour		PM Peak Hour			
			Vol	V/C	Vol	V/C		
NBL	0		0	*	0			
NBT	0		0		0	*		
NBR	0		0		0			
SBL	1	1700	0		23	0.01*		
SBT	0		0	*	0			
SBR	2	3400	343	0.10	183	0.05		
EBL	2	3400	141	0.04*	463	0.14*		
EBT	2	3400	365	0.11	274	0.08		
EBR	0		0		0			
WBL	0		0		0			
WBT	2	3400	305	0.09*	321	0.09*		
WBR	1	1700	0		68	0.04		
Adjustment Overlaps			SBR	0.07			Clearance	0.05
Total ICU				0.25			0.29	

565 - Treble @ Marine Wy. Short Term Approved-ITAM TC V1.8							IRVINE	
	Ln	Cap	AM Peak Hour		PM Peak Hour			
			Vol	V/C	Vol	V/C		
NBL	1	1700	0		0			
NBT	1	1700	0	*	0	*		
NBR	0		0		0			
SBL	2	3400	910	0.27*	351	0.10*		
SBT	1	1700	0		0	0.04		
SBR	0		0		71			
EBL	1	1700	0		77	0.05*		
EBT	2	3400	369	0.11*	224	0.07		
EBR	D	1700	0		0			
WBL	1	1700	0	*	0			
WBT	2	3400	279	0.08	418	0.12*		
WBR	1	1700	175	0.10	708	0.42		
Adjustment Overlaps		W			WBR	0.20	Clearance	0.05
Total ICU				0.43			0.52	

566 - Marine Wy. @ Barranca Pkwy. Short Term Approved-ITAM TC V1.8							IRVINE	
	Ln	Cap	AM Peak Hour		PM Peak Hour			
			Vol	V/C	Vol	V/C		
NBL	2	3400	37	0.01*	132	0.04		
NBT	2	3400	159	0.05	607	0.18*		
NBR	1	1700	25	0.01	97	0.06		
SBL	2	3400	504	0.15	462	0.14*		
SBT	2	3400	812	0.24*	225	0.07		
SBR	1	1700	738	0.43	627	0.37		
EBL	2	3400	331	0.10*	788	0.23*		
EBT	2	3400	52	0.02	126	0.04		
EBR	1	1700	84	0.05	61	0.04		
WBL	2	3400	91	0.03	48	0.01		
WBT	2	3400	83	0.02*	135	0.04*		
WBR	1	1700	357	0.21	622	0.37		
Adjustment Overlaps		W	SBR	0.11	WBR	0.19	Clearance	0.05
Total ICU				0.53			0.83	

567 - Marine Wy. @ Alton Pkwy. Short Term Approved-ITAM TC V1.8							IRVINE	
	Ln	Cap	AM Peak Hour		PM Peak Hour			
			Vol	V/C	Vol	V/C		
NBL	2	3400	735	0.22*	479	0.14*		
NBT	2	3400	71	0.02	13	0.00		
NBR	1	1700	676	0.40	436	0.26		
SBL	2	3400	11	0.00	81	0.02		
SBT	2	3400	8	0.00*	109	0.03*		
SBR	1	1700	12	0.01	89	0.05		
EBL	2	3400	69	0.02	16	0.00		
EBT	3	5100	658	0.13*	562	0.11*		
EBR	F		506		756			
WBL	2	3400	280	0.08*	489	0.14*		
WBT	3	5100	396	0.08	400	0.08		
WBR	1	1700	38	0.02	11	0.01		
Adjustment Overlaps		N	NBR	0.10			Clearance	0.05
Total ICU				0.58			0.47	

569 - Bake Pkwy @ Marine Wy. Short Term Approved-ITAM TC V1.8							IRVINE	
	Ln	Cap	AM Peak Hour		PM Peak Hour			
			Vol	V/C	Vol	V/C		
NBL	2	3400	937	0.28*	514	0.15		
NBT	3	5100	2561	0.50	2654	0.52*		
NBR	1	1700	175	0.10	73	0.04		
SBL	1	1700	119	0.07	41	0.02*		
SBT	4	6800	2667	0.39*	2451	0.36		
SBR	F		636		286			
EBL	2	3400	288	0.08*	483	0.14*		
EBT	1	1700	20	0.01	13	0.01		
EBR	2	3400	442	0.13	802	0.24		
WBL	1	1700	37	0.02	148	0.09		
WBT	2	3400	9	0.00*	17	0.01*		
WBR	D	1700	24	0.01	89	0.05		
Adjustment Overlaps		E			EBR	0.01 Clearance	0.05	
Total ICU				0.80			0.75	

582 - Lynx @ Marine Wy. Short Term Approved-ITAM TC V1.8							IRVINE	
	Ln	Cap	AM Peak Hour		PM Peak Hour			
			Vol	V/C	Vol	V/C		
NBL	1	1700	7	0.00	4	0.00		
NBT	1	1700	4	0.09*	6	0.04*		
NBR	0		151		57			
SBL	2	3400	1217	0.36*	530	0.16*		
SBT	1	1700	3	0.04	5	0.03		
SBR	0		59		39			
EBL	1	1700	27	0.02	63	0.04*		
EBT	2	3400	978	0.29*	627	0.18		
EBR	D	1700	3	0.00	6	0.00		
WBL	1	1700	28	0.02*	116	0.07		
WBT	2	3400	487	0.14	870	0.26*		
WBR	1	1700	281	0.17	1181	0.69		
Adjustment Overlaps		W			WBR	0.27 Clearance	0.05	
Total ICU				0.81			0.82	

593 - Alton Pkwy. @ Fairbanks Short Term Approved-ITAM TC V1.8							IRVINE	
	Ln	Cap	AM Peak Hour		PM Peak Hour			
			Vol	V/C	Vol	V/C		
NBL	1	1700	152	0.09*	263	0.15*		
NBT	3	3400	270	0.08	927	0.20		
NBR	0	1700	147	0.09	90			
SBL	1	1700	3	0.00	1	0.00		
SBT	3	5100	1163	0.30*	344	0.10*		
SBR	0		352		323	0.19		
EBL	1	1700	430	0.25*	302	0.18*		
EBT	1	1700	169	0.19	151	0.21		
EBR	0		157		209			
WBL	1	1700	94	0.06	31	0.02		
WBT	1	1700	230	0.14*	136	0.08*		
WBR	0		3		0			
Adjustment Overlaps					Clearance		0.05	
Total ICU				0.83			0.56	

594 - Fairbanks @ Astor Short Term Approved-ITAM TC V1.8							IRVINE	
	Ln	Cap	AM Peak Hour		PM Peak Hour			
			Vol	V/C	Vol	V/C		
NBL	1	1700	86	0.05*	219	0.13*		
NBT	1	1700	2	0.00	1	0.00		
NBR	0		0		0			
SBL	1	1700	0		0			
SBT	1	1700	5	0.46*	0	0.38*		
SBR	0		784		645			
EBL	0		738		653			
EBT	1	1700	0	0.43*	0	0.38*		
EBR	D	1700	186	0.11	98	0.06		
WBL	0		0	*	0	*		
WBT	1	1700	0		0			
WBR	0		0		0			
Adjustment Overlaps					Clearance		0.05	
Total ICU				0.99			0.94	

831 - Lynx @ Astor Short Term Approved-ITAM TC V1.8							IRVINE	
	Ln	Cap	AM Peak Hour		PM Peak Hour			
			Vol	V/C	Vol	V/C		
NBL	1	1700	170	0.10*	167	0.10*		
NBT	1	1700	2	0.00	7	0.00		
NBR	D	1700	120	0.07	108	0.06		
SBL	1	1700	28	0.02	13	0.01		
SBT	1	1700	8	0.00*	3	0.00*		
SBR	D	1700	40	0.02	20	0.01		
EBL	1	1700	10	0.01	35	0.02		
EBT	1	1700	755	0.57*	561	0.42*		
EBR	0		212		150			
WBL	1	1700	119	0.07*	126	0.07*		
WBT	1	1700	600	0.36	723	0.44		
WBR	0		5		30			
Adjustment Overlaps					Clearance		0.05	
Total ICU				0.79			0.64	

Lanes, Volumes, Timings
594: Fairbanks & Astor

STIY w/ Project AM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	738	0	186	0	0	0	86	2	0	0	5	784
Future Volume (vph)	738	0	186	0	0	0	86	2	0	0	5	784
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		50	0		0	110		0	100		0
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	90			90			90			90		
Link Speed (mph)		45			45			45			45	
Link Distance (ft)		519			240			831			417	
Travel Time (s)		7.9			3.6			12.6			6.3	
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
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

HCM 7th TWSC
594: Fairbanks & Astor

STIY w/ Project AM Peak Hour

Intersection												
Int Delay, s/veh	222.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↕		↕		↕	↕		↕	↕	
Traffic Vol, veh/h	738	0	186	0	0	0	86	2	0	0	5	784
Future Vol, veh/h	738	0	186	0	0	0	86	2	0	0	5	784
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	-	-	50	-	-	-	110	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	777	0	196	0	0	0	91	2	0	0	5	825
Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	601	601	418	188	1014	2	831	0	0	2	0	0
Stage 1	418	418	-	183	183	-	-	-	-	-	-	-
Stage 2	183	183	-	5	831	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	~ 412	414	635	772	239	1082	802	-	-	1620	-	-
Stage 1	~ 613	591	-	819	748	-	-	-	-	-	-	-
Stage 2	819	748	-	1017	385	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 366	367	635	474	212	1082	802	-	-	1620	-	-
Mov Cap-2 Maneuver	~ 366	367	-	474	212	-	-	-	-	-	-	-
Stage 1	~ 613	591	-	726	664	-	-	-	-	-	-	-
Stage 2	~ 726	664	-	703	385	-	-	-	-	-	-	-
Approach	EB		WB			NB			SB			
HCM Ctrl Dly, s/v	\$ 433.13		0			9.83			0			
HCM LOS	F		A									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR			
Capacity (veh/h)	802	-	-	366	635	-	1620	-	-			
HCM Lane V/C Ratio	0.113	-	-	2.125	0.308	-	-	-	-			
HCM Ctrl Dly (s/v)	10.1	-	-	\$ 539	13.2	0	0	-	-			
HCM Lane LOS	B	-	-	F	B	A	A	-	-			
HCM 95th %tile Q(veh)	0.4	-	-	56.6	1.3	-	0	-	-			
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s										
+: Computation Not Defined		*: All major volume in platoon										

Lanes, Volumes, Timings

STIY w/ Project AM Peak Hour

595: Skyhawk & Great Park Blvd.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	903	0	154	753	63	0	0	236	19	0	0
Future Volume (vph)	0	903	0	154	753	63	0	0	236	19	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		563			727			999			360	
Travel Time (s)		12.8			16.5			22.7			8.2	
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
Shared Lane Traffic (%)												
Sign Control		Yield			Yield			Yield			Yield	
Intersection Summary												
Area Type:	Other											
Control Type:	Roundabout											

HCM 7th Roundabout
595: Skyhawk & Great Park Blvd.

STIY w/ Project AM Peak Hour

Intersection							
Intersection Delay, s/veh	7.3						
Intersection LOS	A						
Approach	EB		WB		NB		SB
Entry Lanes	2		2		2		1
Conflicting Circle Lanes	2		2		2		2
Adj Approach Flow, veh/h	951		1021		248		20
Demand Flow Rate, veh/h	970		1041		253		20
Vehicles Circulating, veh/h	185		0		990		974
Vehicles Exiting, veh/h	809		1243		165		67
Ped Vol Crossing Leg, #/h	0		0		0		0
Ped Cap Adj	1.000		1.000		1.000		1.000
Approach Delay, s/veh	7.4		6.1		12.2		6.2
Approach LOS	A		A		B		A
Lane	Left	Right	Left	Right	Left	Right	Left
Designated Moves	LT	TR	LT	TR	L	TR	LTR
Assumed Moves	LT	TR	LT	TR	L	TR	LTR
RT Channelized							
Lane Util	0.470	0.530	0.470	0.530	0.000	1.000	1.000
Follow-Up Headway, s	2.667	2.535	2.667	2.535	2.667	2.535	2.535
Critical Headway, s	4.645	4.328	4.645	4.328	4.645	4.328	4.328
A (Intercept)	1350	1420	1350	1420	1350	1420	1420
B (Slope)	9.199e-48.501e-4		9.199e-48.501e-4		9.199e-48.501e-4		8.501e-4
Entry Flow, veh/h	456	514	489	552	0	253	20
Cap Entry Lane, veh/h	1139	1213	1350	1420	543	612	620
Entry HV Adj Factor	0.980	0.981	0.981	0.980	1.000	0.980	1.000
Flow Entry, veh/h	447	504	480	541	0	248	20
Cap Entry, veh/h	1116	1190	1325	1392	543	600	620
V/C Ratio	0.400	0.424	0.362	0.389	0.000	0.413	0.032
Control Delay, s/veh	7.4	7.3	6.1	6.2	6.6	12.2	6.2
LOS	A	A	A	A	A	B	A
95th %tile Queue, veh	2	2	2	2	0	2	0

Lanes, Volumes, Timings
633: Treble & Merit

STIY w/ Project AM Peak Hour

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	114	28	167	8	9	772
Future Volume (vph)	114	28	167	8	9	772
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		0	150	
Storage Lanes	1	0		0	1	
Taper Length (ft)	90				90	
Link Speed (mph)	30		40			40
Link Distance (ft)	242		797			359
Travel Time (s)	5.5		13.6			6.1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

HCM 7th TWSC
633: Treble & Merit

STIY w/ Project AM Peak Hour

Intersection						
Int Delay, s/veh	3.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	114	28	167	8	9	772
Future Vol, veh/h	114	28	167	8	9	772
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	150	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	114	28	167	8	9	772
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	961	171	0	0	175	0
Stage 1	171	-	-	-	-	-
Stage 2	790	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	284	873	-	-	1401	-
Stage 1	859	-	-	-	-	-
Stage 2	447	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	282	873	-	-	1401	-
Mov Cap-2 Maneuver	282	-	-	-	-	-
Stage 1	859	-	-	-	-	-
Stage 2	444	-	-	-	-	-
Approach	WB	NB		SB		
HCM Ctrl Dly, s/v	24.3	0		0.09		
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBR WBLn1	SBL	SBT		
Capacity (veh/h)	-	-	326	1401	-	
HCM Lane V/C Ratio	-	-	0.436	0.006	-	
HCM Ctrl Dly (s/v)	-	-	24.3	7.6	-	
HCM Lane LOS	-	-	C	A	-	
HCM 95th %tile Q(veh)	-	-	2.1	0	-	

Lanes, Volumes, Timings
594: Fairbanks & Astor

STIY w/ Project PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	653	0	98	0	0	0	219	1	0	0	0	645
Future Volume (vph)	653	0	98	0	0	0	219	1	0	0	0	645
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		50	0		0	110		0	100		0
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	90			90			90			90		
Link Speed (mph)		45			45			45			45	
Link Distance (ft)		519			240			831			417	
Travel Time (s)		7.9			3.6			12.6			6.3	
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
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

HCM 7th TWSC
594: Fairbanks & Astor

STIY w/ Project PM Peak Hour

Intersection												
Int Delay, s/veh	391											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↕		↕		↕	↕		↕	↕	
Traffic Vol, veh/h	653	0	98	0	0	0	219	1	0	0	0	645
Future Vol, veh/h	653	0	98	0	0	0	219	1	0	0	0	645
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	-	-	50	-	-	-	110	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	687	0	103	0	0	0	231	1	0	0	0	679
Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	802	802	339	462	1141	1	679	0	0	1	0	0
Stage 1	339	339	-	462	462	-	-	-	-	-	-	-
Stage 2	462	462	-	0	679	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	~ 302	317	703	510	201	1084	913	-	-	1622	-	-
Stage 1	~ 675	640	-	580	565	-	-	-	-	-	-	-
Stage 2	~ 580	565	-	-	451	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 226	237	703	325	150	1084	913	-	-	1622	-	-
Mov Cap-2 Maneuver	~ 226	237	-	325	150	-	-	-	-	-	-	-
Stage 1	~ 675	640	-	433	422	-	-	-	-	-	-	-
Stage 2	~ 433	422	-	-	451	-	-	-	-	-	-	-
Approach	EB		WB			NB			SB			
HCM Ctrl Dly, s/v	\$ 838.3		0			10.22			0			
HCM LOS	F		A									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR			
Capacity (veh/h)	913	-	-	226	703	-	1622	-	-			
HCM Lane V/C Ratio	0.252	-	-	3.041	0.147	-	-	-	-			
HCM Ctrl Dly (s/v)	10.3	-	-	\$ 962.5	11	0	0	-	-			
HCM Lane LOS	B	-	-	F	B	A	A	-	-			
HCM 95th %tile Q(veh)	1	-	-	61.8	0.5	-	0	-	-			
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s										
+: Computation Not Defined		*: All major volume in platoon										

Lanes, Volumes, Timings

STIY w/ Project PM Peak Hour

595: Skyhawk & Great Park Blvd.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	3	709	63	213	1042	9	153	1	353	42	4	18
Future Volume (vph)	3	709	63	213	1042	9	153	1	353	42	4	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		563			727			999			360	
Travel Time (s)		12.8			16.5			22.7			8.2	
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
Shared Lane Traffic (%)												
Sign Control		Yield			Yield			Yield			Yield	
Intersection Summary												
Area Type:	Other											
Control Type:	Roundabout											

HCM 7th Roundabout
595: Skyhawk & Great Park Blvd.

STIY w/ Project PM Peak Hour

Intersection							
Intersection Delay, s/veh	9.6						
Intersection LOS	A						
Approach	EB		WB		NB		SB
Entry Lanes	2		2		2		1
Conflicting Circle Lanes	2		2		2		2
Adj Approach Flow, veh/h	815		1330		534		67
Demand Flow Rate, veh/h	831		1356		544		68
Vehicles Circulating, veh/h	277		168		809		1511
Vehicles Exiting, veh/h	1302		1185		299		13
Ped Vol Crossing Leg, #/h	0		0		0		0
Ped Cap Adj	1.000		1.000		1.000		1.000
Approach Delay, s/veh	7.4		9.9		12.1		12.1
Approach LOS	A		A		B		B
Lane	Left	Right	Left	Right	Left	Right	Left
Designated Moves	LT	TR	LT	TR	L	TR	LTR
Assumed Moves	LT	TR	LT	TR	L	TR	LTR
RT Channelized							
Lane Util	0.471	0.529	0.470	0.530	0.301	0.699	1.000
Follow-Up Headway, s	2.667	2.535	2.667	2.535	2.667	2.535	2.535
Critical Headway, s	4.645	4.328	4.645	4.328	4.645	4.328	4.328
A (Intercept)	1350	1420	1350	1420	1350	1420	1420
B (Slope)	9.199e-48.501e-4		9.199e-48.501e-4		9.199e-48.501e-4		8.501e-4
Entry Flow, veh/h	391	440	637	719	164	380	68
Cap Entry Lane, veh/h	1046	1122	1157	1231	641	714	393
Entry HV Adj Factor	0.980	0.982	0.981	0.980	0.982	0.982	0.984
Flow Entry, veh/h	383	432	625	705	161	373	67
Cap Entry, veh/h	1025	1102	1135	1207	630	701	387
V/C Ratio	0.374	0.392	0.551	0.584	0.256	0.532	0.173
Control Delay, s/veh	7.5	7.3	9.7	10.0	8.9	13.5	12.1
LOS	A	A	A	B	A	B	B
95th %tile Queue, veh	2	2	3	4	1	3	1

Lanes, Volumes, Timings
633: Treble & Merit

STIY w/ Project PM Peak Hour

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	25	7	670	115	20	397
Future Volume (vph)	25	7	670	115	20	397
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		0	150	
Storage Lanes	1	0		0	1	
Taper Length (ft)	90				90	
Link Speed (mph)	30		40			40
Link Distance (ft)	242		797			359
Travel Time (s)	5.5		13.6			6.1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

HCM 7th TWSC
633: Treble & Merit

STIY w/ Project PM Peak Hour

Intersection						
Int Delay, s/veh	0.7					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	25	7	670	115	20	397
Future Vol, veh/h	25	7	670	115	20	397
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	150	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	25	7	670	115	20	397
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	1165	728	0	0	785	0
Stage 1	728	-	-	-	-	-
Stage 2	437	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	215	424	-	-	834	-
Stage 1	478	-	-	-	-	-
Stage 2	651	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	210	424	-	-	834	-
Mov Cap-2 Maneuver	210	-	-	-	-	-
Stage 1	478	-	-	-	-	-
Stage 2	636	-	-	-	-	-
Approach	WB	NB		SB		
HCM Ctrl Dly, s/v	22.66	0		0.45		
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBR WBLn1	SBL	SBT		
Capacity (veh/h)	-	-	236	834	-	
HCM Lane V/C Ratio	-	-	0.136	0.024	-	
HCM Ctrl Dly (s/v)	-	-	22.7	9.4	-	
HCM Lane LOS	-	-	C	A	-	
HCM 95th %tile Q(veh)	-	-	0.5	0.1	-	

Lanes, Volumes, Timings
834: Lynx & Harrier

STIY w/ Project AM Peak Hour

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	7	604	311	243	404	6
Future Volume (vph)	7	604	311	243	404	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	90	200			0
Storage Lanes	1	0	1			0
Taper Length (ft)	60		90			
Link Speed (mph)	45			45	45	
Link Distance (ft)	208			749	1308	
Travel Time (s)	3.2			11.3	19.8	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

HCM 7th TWSC
834: Lynx & Harrier

STIY w/ Project AM Peak Hour

Intersection						
Int Delay, s/veh	15.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	7	604	311	243	404	6
Future Vol, veh/h	7	604	311	243	404	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	200	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	7	604	311	243	404	6
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1272	407	410	0	-	0
Stage 1	407	-	-	-	-	-
Stage 2	865	-	-	-	-	-
Critical Hdwy	5.9	5.9	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.2	3	2.218	-	-	-
Pot Cap-1 Maneuver	234	726	1149	-	-	-
Stage 1	726	-	-	-	-	-
Stage 2	438	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	170	726	1149	-	-	-
Mov Cap-2 Maneuver	170	-	-	-	-	-
Stage 1	530	-	-	-	-	-
Stage 2	438	-	-	-	-	-
Approach	EB	NB		SB		
HCM Ctrl Dly, s/v	34.8	5.22		0		
HCM LOS	D					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1149	-	700	-	-	
HCM Lane V/C Ratio	0.271	-	0.873	-	-	
HCM Ctrl Dly (s/v)	9.3	-	34.8	-	-	
HCM Lane LOS	A	-	D	-	-	
HCM 95th %tile Q(veh)	1.1	-	10.6	-	-	

Lanes, Volumes, Timings
834: Lynx & Harrier

STIY w/ Project PM Peak Hour

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	5	450	584	328	246	5
Future Volume (vph)	5	450	584	328	246	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	90	200			0
Storage Lanes	1	0	1			0
Taper Length (ft)	60		90			
Link Speed (mph)	45			45	45	
Link Distance (ft)	208			749	1308	
Travel Time (s)	3.2			11.3	19.8	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

HCM 7th TWSC
834: Lynx & Harrier

STIY w/ Project PM Peak Hour

Intersection						
Int Delay, s/veh	9.2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	450	584	328	246	5
Future Vol, veh/h	5	450	584	328	246	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	200	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	450	584	328	246	5
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1745	249	251	0	-	0
Stage 1	249	-	-	-	-	-
Stage 2	1496	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	95	790	1314	-	-	-
Stage 1	793	-	-	-	-	-
Stage 2	205	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	53	790	1314	-	-	-
Mov Cap-2 Maneuver	53	-	-	-	-	-
Stage 1	441	-	-	-	-	-
Stage 2	205	-	-	-	-	-
Approach	EB	NB		SB		
HCM Ctrl Dly, s/v	20.02	6.35		0		
HCM LOS	C					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1314	-	685	-	-	
HCM Lane V/C Ratio	0.444	-	0.664	-	-	
HCM Ctrl Dly (s/v)	9.9	-	20	-	-	
HCM Lane LOS	A	-	C	-	-	
HCM 95th %tile Q(veh)	2.3	-	5	-	-	

APPENDIX 5.1:

STIY ON-SITE ROADWAYS, INTERSECTION LOS SUMMARY (HCM) AND ICU WORKSHEETS WITH PROJECT

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	12	520	157	199	1625	48	26	70	65	61	90	13
Future Volume (vph)	12	520	157	199	1625	48	26	70	65	61	90	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		50	200		200	115		0	170		100
Storage Lanes	1		1	1		1	1		0	2		1
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			35			35	
Link Distance (ft)		417			737			356			367	
Travel Time (s)		5.2			9.1			6.9			7.1	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6						4
Detector Phase	5	2	2	1	6	6	3	8		7	4	4
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	9.5	20.5	20.5	9.5	20.5	20.5	9.5	20.5		9.5	20.5	20.5
Total Split (s)	9.5	20.5	20.5	9.5	20.5	20.5	9.5	20.5		9.5	20.5	20.5
Total Split (%)	15.8%	34.2%	34.2%	15.8%	34.2%	34.2%	15.8%	34.2%		15.8%	34.2%	34.2%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None		None	None	None

Intersection Summary

Area Type: Other

Cycle Length: 60

Actuated Cycle Length: 60

Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Splits and Phases: 326: Ada & Barranca Pkwy.



												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	12	520	157	199	1625	48	26	70	65	61	90	13
Future Volume (veh/h)	12	520	157	199	1625	48	26	70	65	61	90	13
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	12	520	157	199	1625	48	26	70	65	61	90	13
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	27	1710	763	148	1952	871	52	152	126	184	199	168
Arrive On Green	0.02	0.48	0.48	0.17	1.00	1.00	0.03	0.08	0.08	0.05	0.11	0.11
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1781	1842	1530	3456	1870	1585
Grp Volume(v), veh/h	12	520	157	199	1625	48	26	67	68	61	90	13
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1781	1777	1595	1728	1870	1585
Q Serve(g_s), s	0.4	5.3	3.4	5.0	0.0	0.0	0.9	2.2	2.4	1.0	2.7	0.4
Cycle Q Clear(g_c), s	0.4	5.3	3.4	5.0	0.0	0.0	0.9	2.2	2.4	1.0	2.7	0.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.96	1.00		1.00
Lane Grp Cap(c), veh/h	27	1710	763	148	1952	871	52	146	131	184	199	168
V/C Ratio(X)	0.45	0.30	0.21	1.34	0.83	0.06	0.50	0.46	0.52	0.33	0.45	0.08
Avail Cap(c_a), veh/h	148	1710	763	148	1952	871	148	474	425	288	499	423
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.3	9.5	9.0	25.0	0.0	0.0	28.7	26.3	26.4	27.4	25.2	24.2
Incr Delay (d2), s/veh	11.1	0.5	0.6	191.5	4.3	0.1	7.2	2.2	3.1	1.0	1.6	0.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	1.5	1.1	9.5	1.2	0.0	0.4	0.9	1.0	0.4	1.2	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	40.4	9.9	9.6	216.5	4.3	0.1	35.9	28.5	29.5	28.4	26.8	24.4
LnGrp LOS	D	A	A	F	A	A	D	C	C	C	C	C
Approach Vol, veh/h	689			1872			161			164		
Approach Delay, s/veh	10.4			26.8			30.1			27.2		
Approach LOS	B			C			C			C		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.5	33.4	6.3	10.9	5.4	37.5	7.7	9.4				
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	5.0	16.0	5.0	16.0	5.0	16.0	5.0	16.0				
Max Q Clear Time (g_c+I1), s	7.0	7.3	2.9	4.7	2.4	2.0	3.0	4.4				
Green Ext Time (p_c), s	0.0	2.3	0.0	0.3	0.0	8.9	0.0	0.5				
Intersection Summary												
HCM 7th Control Delay, s/veh	23.1											
HCM 7th LOS	C											

341: Alton Pkwy & Barranca Pkwy./Muirlands Bl.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↔↔		↔↔	↔↔		↔	↔↔↔	↔	↔↔	↔↔↔	↔
Traffic Volume (vph)	493	279	8	181	307	71	9	788	230	176	1055	1030
Future Volume (vph)	493	279	8	181	307	71	9	788	230	176	1055	1030
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	440		150	445		0	210		490	240		410
Storage Lanes	2		0	2		0	1		1	2		1
Taper Length (ft)	120			120			90			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		506			591			858			1135	
Travel Time (s)		6.3			7.3			10.6			14.1	
Confl. Peds. (#/hr)			5			5						
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Shared Lane Traffic (%)												
Turn Type	Prot	NA		Prot	NA		Prot	NA	Prot	Prot	NA	Free
Protected Phases	5	2		1	6		3	8	8	7	4	
Permitted Phases												Free
Detector Phase	5	2		1	6		3	8	8	7	4	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	11.0	22.0		11.0	22.0		11.0	22.0	22.0	11.0	27.0	
Total Split (s)	35.0	47.0		19.0	31.0		11.0	35.0	35.0	19.0	43.0	
Total Split (%)	29.2%	39.2%		15.8%	25.8%		9.2%	29.2%	29.2%	15.8%	35.8%	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.0	6.0	6.0	6.0	6.0	
Lead/Lag	Lag	Lead		Lag	Lead		Lag	Lag	Lag	Lead	Lead	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	C-Max		None	C-Max		None	Max	Max	None	Max	

Intersection Summary

Area Type: Other

Cycle Length: 120

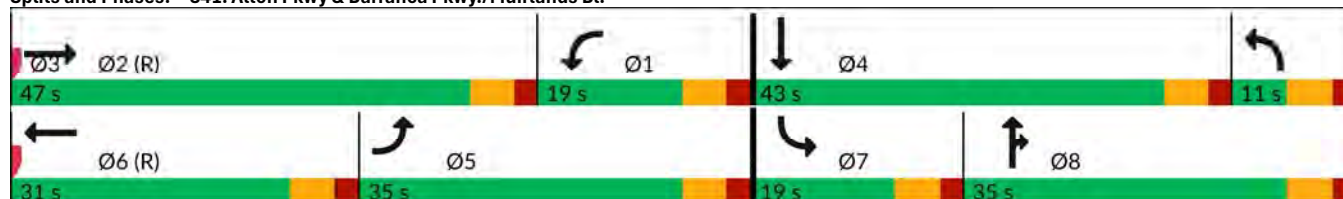
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green

Natural Cycle: 75

Control Type: Actuated-Coordinated

Splits and Phases: 341: Alton Pkwy & Barranca Pkwy./Muirlands Bl.

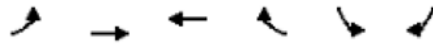


												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	493	279	8	181	307	71	9	788	230	176	1055	1030
Future Volume (veh/h)	493	279	8	181	307	71	9	788	230	176	1055	1030
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	493	279	8	181	307	71	9	788	230	176	1055	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	942	1205	34	481	598	136	19	1281	398	236	1574	
Arrive On Green	0.27	0.34	0.34	0.14	0.21	0.21	0.01	0.25	0.25	0.07	0.31	0.00
Sat Flow, veh/h	3456	3528	101	3456	2870	654	1781	5106	1585	3456	5106	1585
Grp Volume(v), veh/h	493	140	147	181	188	190	9	788	230	176	1055	0
Grp Sat Flow(s),veh/h/ln	1728	1777	1852	1728	1777	1747	1781	1702	1585	1728	1702	1585
Q Serve(g_s), s	14.5	6.8	6.8	5.7	11.3	11.6	0.6	16.4	10.4	6.0	21.6	0.0
Cycle Q Clear(g_c), s	14.5	6.8	6.8	5.7	11.3	11.6	0.6	16.4	10.4	6.0	21.6	0.0
Prop In Lane	1.00		0.05	1.00		0.37	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	942	607	633	481	370	364	19	1281	398	236	1574	
V/C Ratio(X)	0.52	0.23	0.23	0.38	0.51	0.52	0.47	0.62	0.58	0.75	0.67	
Avail Cap(c_a), veh/h	942	607	633	481	370	364	74	1281	398	374	1574	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	37.0	28.2	28.2	46.9	42.1	42.2	59.0	39.8	18.2	54.9	36.2	0.0
Incr Delay (d2), s/veh	0.5	0.9	0.9	0.5	4.9	5.3	16.6	2.2	6.0	4.7	2.3	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.9	2.9	3.0	2.4	5.2	5.3	0.4	6.8	4.2	2.7	8.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	37.6	29.1	29.1	47.4	47.0	47.4	75.6	42.0	24.3	59.5	38.5	0.0
LnGrp LOS	D	C	C	D	D	D	E	D	C	E	D	
Approach Vol, veh/h	780			559			1027			1231		
Approach Delay, s/veh	34.5			47.3			38.3			41.5		
Approach LOS	C			D			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	22.7	47.0	7.3	43.0	38.7	31.0	14.2	36.1				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	13.0	41.0	5.0	37.0	29.0	25.0	13.0	29.0				
Max Q Clear Time (g_c+I1), s	7.7	8.8	2.6	23.6	16.5	13.6	8.0	18.4				
Green Ext Time (p_c), s	0.2	0.8	0.0	3.6	1.4	0.9	0.2	2.7				
Intersection Summary												
HCM 7th Control Delay, s/veh	40.0											
HCM 7th LOS	D											
Notes												
Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.												

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			 			 
Traffic Volume (vph)	0	82	715	8	10	2339
Future Volume (vph)	0	82	715	8	10	2339
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		0	150	
Storage Lanes	0	1		0	1	
Taper Length (ft)	90				90	
Link Speed (mph)	30		45			45
Link Distance (ft)	247		523			808
Travel Time (s)	5.6		7.9			12.2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection						
Int Delay, s/veh	0.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	82	715	8	10	2339
Future Vol, veh/h	0	82	715	8	10	2339
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	150	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	82	715	8	10	2339
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	-	362	0	0	723	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	4.14	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	0	635	-	-	875	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	635	-	-	875	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	WB	NB		SB		
HCM Ctrl Dly, s/v	11.51	0		0.04		
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBR WBLn1	SBL	SBT		
Capacity (veh/h)	-	-	635	875	-	
HCM Lane V/C Ratio	-	-	0.129	0.011	-	
HCM Ctrl Dly (s/v)	-	-	11.5	9.2	-	
HCM Lane LOS	-	-	B	A	-	
HCM 95th %tile Q(veh)	-	-	0.4	0	-	

479: Barranca Pkwy/Barranca Pkwy. & Parcel 10 E. Access



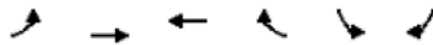
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑			↑
Traffic Volume (vph)	0	780	1344	2	0	15
Future Volume (vph)	0	780	1344	2	0	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)		55	55		30	
Link Distance (ft)		376	202		261	
Travel Time (s)		4.7	2.5		5.9	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑			↑
Traffic Vol, veh/h	0	780	1344	2	0	15
Future Vol, veh/h	0	780	1344	2	0	15
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	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	780	1344	2	0	15
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	-	0	-	0	-	673
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	-	0	398
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	398
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	WB		SB		
HCM Ctrl Dly, s/v	0	0		14.41		
HCM LOS	B					
Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1		
Capacity (veh/h)	-	-	-	398		
HCM Lane V/C Ratio	-	-	-	0.038		
HCM Ctrl Dly (s/v)	-	-	-	14.4		
HCM Lane LOS	-	-	-	B		
HCM 95th %tile Q(veh)	-	-	-	0.1		



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑	↑		↑
Traffic Volume (vph)	0	1232	310	27	0	202
Future Volume (vph)	0	1232	310	27	0	202
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0			50	0	0
Storage Lanes	0			1	0	1
Taper Length (ft)	90				90	
Link Speed (mph)		45	45		30	
Link Distance (ft)		444	184		298	
Travel Time (s)		6.7	2.8		6.8	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection						
Int Delay, s/veh	1.2					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑	↑		↑
Traffic Vol, veh/h	0	1232	310	27	0	202
Future Vol, veh/h	0	1232	310	27	0	202
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	50	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1232	310	27	0	202
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	-	0	-	0	-	155
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	-	0	863
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	863
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	WB		SB		
HCM Ctrl Dly, s/v	0	0		10.44		
HCM LOS				B		
Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1		
Capacity (veh/h)	-	-	-	863		
HCM Lane V/C Ratio	-	-	-	0.234		
HCM Ctrl Dly (s/v)	-	-	-	10.4		
HCM Lane LOS	-	-	-	B		
HCM 95th %tile Q(veh)	-	-	-	0.9		

496: Parcel 13 W. Access & Marine Wy.



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑		↑
Traffic Volume (vph)	1232	1	0	337	0	47
Future Volume (vph)	1232	1	0	337	0	47
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	45			45	30	
Link Distance (ft)	184			539	282	
Travel Time (s)	2.8			8.2	6.4	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	0.4					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↱			↑↑↱		↱
Traffic Vol, veh/h	1232	1	0	337	0	47
Future Vol, veh/h	1232	1	0	337	0	47
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	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1232	1	0	337	0	47
Major/Minor	Major1	Major2		Minor1		
Conflicting Flow All	0	0	-	-	-	617
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	-	-	0	-	0	433
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	433
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	WB		NB		
HCM Ctrl Dly, s/v	0	0		14.32		
HCM LOS	B					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT		
Capacity (veh/h)	433	-	-	-		
HCM Lane V/C Ratio	0.109	-	-	-		
HCM Ctrl Dly (s/v)	14.3	-	-	-		
HCM Lane LOS	B	-	-	-		
HCM 95th %tile Q(veh)	0.4	-	-	-		

498: MP Mod (BA 619) Access & Harrier

						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	200	1	3	105	4	16
Future Volume (vph)	200	1	3	105	4	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	45			45	30	
Link Distance (ft)	317			208	248	
Travel Time (s)	4.8			3.2	5.6	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

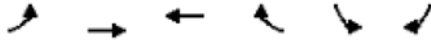
Intersection						
Int Delay, s/veh	0.7					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	200	1	3	105	4	16
Future Vol, veh/h	200	1	3	105	4	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	200	1	3	105	4	16
Major/Minor	Major1	Major2		Minor1		
Conflicting Flow All	0	0	201	0	312	201
Stage 1	-	-	-	-	201	-
Stage 2	-	-	-	-	111	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1371	-	681	840
Stage 1	-	-	-	-	833	-
Stage 2	-	-	-	-	914	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1371	-	679	840
Mov Cap-2 Maneuver	-	-	-	-	679	-
Stage 1	-	-	-	-	833	-
Stage 2	-	-	-	-	912	-
Approach	EB	WB		NB		
HCM Ctrl Dly, s/v	0	0.21		9.6		
HCM LOS	A					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	802	-	-	50	-	
HCM Lane V/C Ratio	0.025	-	-	0.002	-	
HCM Ctrl Dly (s/v)	9.6	-	-	7.6	0	
HCM Lane LOS	A	-	-	A	A	
HCM 95th %tile Q(veh)	0.1	-	-	0	-	

499: Parcel 12 W. Access & Marine Wy.

						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	337	10	0	275	0	16
Future Volume (vph)	337	10	0	275	0	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	45			45	30	
Link Distance (ft)	390			481	289	
Travel Time (s)	5.9			7.3	6.6	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection						
Int Delay, s/veh	0.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑		↑
Traffic Vol, veh/h	337	10	0	275	0	16
Future Vol, veh/h	337	10	0	275	0	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	337	10	0	275	0	16
Major/Minor	Major1	Major2		Minor1		
Conflicting Flow All	0	0	-	-	-	174
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	-	-	0	-	0	840
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-	-			
Mov Cap-1 Maneuver	-	-	-	-	-	840
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	WB		NB		
HCM Ctrl Dly, s/v	0	0		9.37		
HCM LOS	A					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT		
Capacity (veh/h)	840	-	-	-		
HCM Lane V/C Ratio	0.019	-	-	-		
HCM Ctrl Dly (s/v)	9.4	-	-	-		
HCM Lane LOS	A	-	-	-		
HCM 95th %tile Q(veh)	0.1	-	-	-		

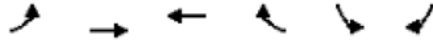
500: Barranca Pkwy. & Irvine Station E. Access



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	7	639	1870	112	21	2
Future Volume (vph)	7	639	1870	112	21	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	190			0	0	0
Storage Lanes	1			0	1	1
Taper Length (ft)	90				90	
Link Speed (mph)		55	55		30	
Link Distance (ft)		737	570		332	
Travel Time (s)		9.1	7.1		7.5	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection						
Int Delay, s/veh	1.8					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	7	639	1870	112	21	2
Future Vol, veh/h	7	639	1870	112	21	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	190	-	-	-	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	7	639	1870	112	21	2
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	1982	0	-	0	2260	991
Stage 1	-	-	-	-	1926	-
Stage 2	-	-	-	-	334	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	288	-	-	-	35	245
Stage 1	-	-	-	-	100	-
Stage 2	-	-	-	-	698	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	288	-	-	-	34	245
Mov Cap-2 Maneuver	-	-	-	-	34	-
Stage 1	-	-	-	-	97	-
Stage 2	-	-	-	-	698	-
Approach	EB		WB		SB	
HCM Ctrl Dly, s/v	0.19		0		201.14	
HCM LOS	F					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	288	-	-	-	34	245
HCM Lane V/C Ratio	0.024	-	-	-	0.621	0.008
HCM Ctrl Dly (s/v)	17.8	-	-	-	218.4	19.8
HCM Lane LOS	C	-	-	-	F	C
HCM 95th %tile Q(veh)	0.1	-	-	-	2.1	0

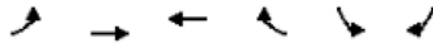
500: Barranca Pkwy. & Irvine Station E. Access



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑			↑
Traffic Volume (vph)	0	660	1870	112	0	2
Future Volume (vph)	0	660	1870	112	0	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	190			0	0	0
Storage Lanes	0			0	0	1
Taper Length (ft)	90				90	
Link Speed (mph)		55	55		30	
Link Distance (ft)		737	570		332	
Travel Time (s)		9.1	7.1		7.5	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑			↑
Traffic Vol, veh/h	0	660	1870	112	0	2
Future Vol, veh/h	0	660	1870	112	0	2
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	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	660	1870	112	0	2
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	-	0	-	0	-	991
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	-	0	245
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	245
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	WB		SB		
HCM Ctrl Dly, s/v	0	0		19.82		
HCM LOS				C		
Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1		
Capacity (veh/h)	-	-	-	245		
HCM Lane V/C Ratio	-	-	-	0.008		
HCM Ctrl Dly (s/v)	-	-	-	19.8		
HCM Lane LOS	-	-	-	C		
HCM 95th %tile Q(veh)	-	-	-	0		

500: Barranca Pkwy. & Irvine Station E. Access (w/ Traffic Signal)



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	7	639	1870	112	21	2
Future Volume (vph)	7	639	1870	112	21	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	190			0	0	0
Storage Lanes	1			0	1	1
Taper Length (ft)	90				90	
Right Turn on Red				Yes		Yes
Link Speed (mph)		55	55		30	
Link Distance (ft)		737	570		332	
Travel Time (s)		9.1	7.1		7.5	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Shared Lane Traffic (%)						
Turn Type	Prot	NA	NA		Prot	Perm
Protected Phases	5	2	6		4	
Permitted Phases						4
Detector Phase	5	2	6		4	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	9.5	20.5	20.5		20.5	20.5
Total Split (s)	9.8	99.2	89.4		20.8	20.8
Total Split (%)	8.2%	82.7%	74.5%		17.3%	17.3%
Yellow Time (s)	3.5	3.5	3.5		3.5	3.5
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5		4.5	4.5
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	None	C-Max	C-Max		Max	Max

Intersection Summary

Area Type: Other

Cycle Length: 120

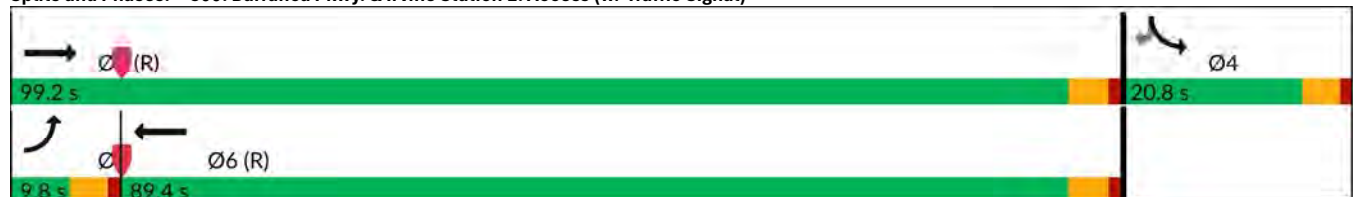
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Splits and Phases: 500: Barranca Pkwy. & Irvine Station E. Access (w/ Traffic Signal)



500: Barranca Pkwy. & Irvine Station E. Access (w/ Traffic Signal)

						
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	7	639	1870	112	21	2
Future Volume (veh/h)	7	639	1870	112	21	2
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No	No	No	No	No	No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	7	639	1870	112	21	2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	15	2804	2533	150	242	215
Arrive On Green	0.01	0.79	1.00	1.00	0.14	0.14
Sat Flow, veh/h	1781	3647	3502	202	1781	1585
Grp Volume(v), veh/h	7	639	966	1016	21	2
Grp Sat Flow(s),veh/h/ln	1781	1777	1777	1834	1781	1585
Q Serve(g_s), s	0.5	5.5	0.0	0.0	1.2	0.1
Cycle Q Clear(g_c), s	0.5	5.5	0.0	0.0	1.2	0.1
Prop In Lane	1.00			0.11	1.00	1.00
Lane Grp Cap(c), veh/h	15	2804	1320	1363	242	215
V/C Ratio(X)	0.45	0.23	0.73	0.75	0.09	0.01
Avail Cap(c_a), veh/h	79	2804	1320	1363	242	215
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.58	0.58	1.00	1.00
Uniform Delay (d), s/veh	59.2	3.3	0.0	0.0	45.3	44.9
Incr Delay (d2), s/veh	19.3	0.2	2.1	2.2	0.7	0.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	1.3	0.8	0.8	0.6	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	78.5	3.4	2.1	2.2	46.0	44.9
LnGrp LOS	E	A	A	A	D	D
Approach Vol, veh/h		646	1982		23	
Approach Delay, s/veh		4.3	2.2		46.0	
Approach LOS		A	A		D	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		99.2		20.8	5.5	93.7
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		94.7		16.3	5.3	84.9
Max Q Clear Time (g_c+I1), s		7.5		3.2	2.5	2.0
Green Ext Time (p_c), s		4.1		0.0	0.0	26.6
Intersection Summary						
HCM 7th Control Delay, s/veh			3.1			
HCM 7th LOS			A			

503: Parcel 2 E. Access/Parcel 3 S. Access & Marine Wy.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	72	732	6	26	1355	200	71	11	75	39	1	31
Future Volume (vph)	72	732	6	26	1355	200	71	11	75	39	1	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		150	430		50	200		0	250		0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		796			617			297			340	
Travel Time (s)		12.1			9.3			6.8			7.7	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases			2			6	8			4		
Detector Phase	5	2	2	1	6	6	8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Minimum Split (s)	11.0	22.5	22.5	9.5	24.0	24.0	20.5	20.5		22.0	22.0	
Total Split (s)	18.0	84.0	84.0	12.0	78.0	78.0	24.0	24.0		24.0	24.0	
Total Split (%)	15.0%	70.0%	70.0%	10.0%	65.0%	65.0%	20.0%	20.0%		20.0%	20.0%	
Yellow Time (s)	4.0	4.0	4.0	3.5	4.0	4.0	3.5	3.5		4.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	1.0	2.0	2.0	1.0	1.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0	6.0	4.5	6.0	6.0	4.5	4.5		6.0	6.0	
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None		None	None	

Intersection Summary

Area Type: Other

Cycle Length: 120

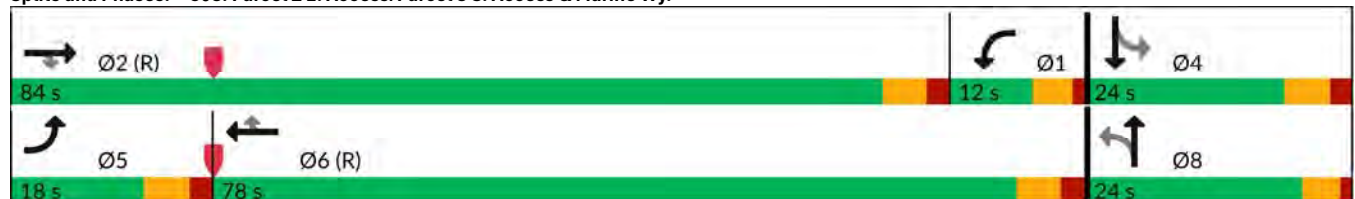
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green

Natural Cycle: 65

Control Type: Actuated-Coordinated

Splits and Phases: 503: Parcel 2 E. Access/Parcel 3 S. Access & Marine Wy.



503: Parcel 2 E. Access/Parcel 3 S. Access & Marine Wy.

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	72	732	6	26	1355	200	71	11	75	39	1	31
Future Volume (veh/h)	72	732	6	26	1355	200	71	11	75	39	1	31
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	72	732	6	26	1355	200	71	11	75	39	1	31
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	92	2310	1030	183	2491	1111	169	20	137	121	5	150
Arrive On Green	0.05	0.65	0.65	0.10	0.70	0.70	0.10	0.10	0.10	0.10	0.10	0.10
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1377	207	1410	1311	50	1543
Grp Volume(v), veh/h	72	732	6	26	1355	200	71	0	86	39	0	32
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1377	0	1617	1311	0	1593
Q Serve(g_s), s	4.8	10.9	0.2	1.6	22.1	5.2	6.0	0.0	6.1	3.5	0.0	2.2
Cycle Q Clear(g_c), s	4.8	10.9	0.2	1.6	22.1	5.2	8.2	0.0	6.1	9.6	0.0	2.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.87	1.00		0.97
Lane Grp Cap(c), veh/h	92	2310	1030	183	2491	1111	169	0	157	121	0	155
V/C Ratio(X)	0.78	0.32	0.01	0.14	0.54	0.18	0.42	0.00	0.55	0.32	0.00	0.21
Avail Cap(c_a), veh/h	178	2310	1030	183	2491	1111	258	0	263	190	0	239
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	56.2	9.3	7.4	49.0	8.7	6.1	53.7	0.0	51.6	56.2	0.0	49.9
Incr Delay (d2), s/veh	13.2	0.4	0.0	0.4	0.9	0.4	1.7	0.0	2.9	1.5	0.0	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	2.4	3.8	0.1	0.7	7.3	1.6	2.2	0.0	2.6	1.2	0.0	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	69.4	9.6	7.4	49.4	9.5	6.5	55.4	0.0	54.6	57.7	0.0	50.5
LnGrp LOS	E	A	A	D	A	A	E		D	E		D
Approach Vol, veh/h	810			1581			157			71		
Approach Delay, s/veh	14.9			9.8			54.9			54.5		
Approach LOS	B			A			D			D		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	18.3	84.0		17.7	12.2	90.1		17.7				
Change Period (Y+Rc), s	6.0	* 6		6.0	6.0	6.0		* 6				
Max Green Setting (Gmax), s	7.5	* 78		18.0	12.0	72.0		* 20				
Max Q Clear Time (g_c+I1), s	3.6	12.9		11.6	6.8	24.1		10.2				
Green Ext Time (p_c), s	0.0	3.2		0.1	0.0	7.9		0.4				

Intersection Summary

HCM 7th Control Delay, s/veh	15.3
HCM 7th LOS	B

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

504: Parcel 7 W. Access/City-2 W. Access & Marine Wy.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	12	762	20	11	1460	3	153	1	20	13	1	49
Future Volume (vph)	12	762	20	11	1460	3	153	1	20	13	1	49
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		50	210		50	260		0	150		0
Storage Lanes	1		0	1		1	1		0	1		0
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		799			581			431			414	
Travel Time (s)		12.1			8.8			9.8			9.4	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases			2			6	8			4		
Detector Phase	5	2	2	1	6	6	8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Minimum Split (s)	22.0	22.0	22.0	9.5	22.0	22.0	20.5	20.5		22.0	22.0	
Total Split (s)	22.0	82.2	82.2	9.6	69.8	69.8	28.2	28.2		28.2	28.2	
Total Split (%)	18.3%	68.5%	68.5%	8.0%	58.2%	58.2%	23.5%	23.5%		23.5%	23.5%	
Yellow Time (s)	4.0	4.0	4.0	3.5	4.0	4.0	3.5	3.5		4.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	1.0	2.0	2.0	1.0	1.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0	6.0	4.5	6.0	6.0	4.5	4.5		6.0	6.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None		Max	Max	

Intersection Summary

Area Type: Other

Cycle Length: 120

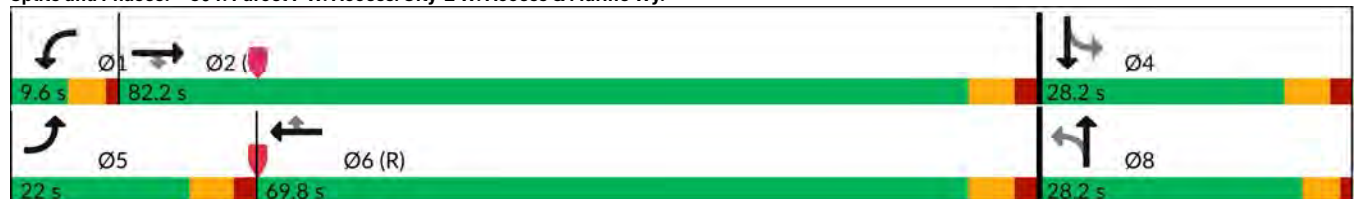
Actuated Cycle Length: 120

Offset: 50 (42%), Referenced to phase 2:EBT and 6:WBT, Start of Green

Natural Cycle: 80

Control Type: Actuated-Coordinated

Splits and Phases: 504: Parcel 7 W. Access/City-2 W. Access & Marine Wy.



												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	12	762	20	11	1460	3	153	1	20	13	1	49
Future Volume (veh/h)	12	762	20	11	1460	3	153	1	20	13	1	49
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	12	762	20	11	1460	3	153	1	20	13	1	49
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	74	2362	1054	23	2215	988	275	14	281	302	6	288
Arrive On Green	0.04	0.66	0.66	0.01	0.62	0.62	0.19	0.19	0.19	0.19	0.19	0.19
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1355	76	1521	1391	32	1558
Grp Volume(v), veh/h	12	762	20	11	1460	3	153	0	21	13	0	50
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1355	0	1597	1391	0	1590
Q Serve(g_s), s	0.8	11.0	0.5	0.7	31.5	0.1	12.9	0.0	1.3	0.9	0.0	3.2
Cycle Q Clear(g_c), s	0.8	11.0	0.5	0.7	31.5	0.1	16.0	0.0	1.3	2.2	0.0	3.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.95	1.00		0.98
Lane Grp Cap(c), veh/h	74	2362	1054	23	2215	988	275	0	295	302	0	294
V/C Ratio(X)	0.16	0.32	0.02	0.48	0.66	0.00	0.56	0.00	0.07	0.04	0.00	0.17
Avail Cap(c_a), veh/h	238	2362	1054	76	2215	988	292	0	315	302	0	294
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.92	0.92	0.92	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	55.5	8.6	6.8	58.8	14.4	8.5	47.9	0.0	40.4	41.3	0.0	41.1
Incr Delay (d2), s/veh	0.9	0.3	0.0	15.0	1.6	0.0	2.1	0.0	0.1	0.3	0.0	1.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	3.8	0.2	0.4	11.6	0.0	4.5	0.0	0.5	0.3	0.0	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	56.4	8.9	6.9	73.8	16.0	8.5	50.0	0.0	40.5	41.6	0.0	42.4
LnGrp LOS	E	A	A	E	B	A	D		D	D		D
Approach Vol, veh/h	794			1474			174			63		
Approach Delay, s/veh	9.6			16.4			48.8			42.2		
Approach LOS	A			B			D			D		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.0	85.8		28.2	11.0	80.8		28.2				
Change Period (Y+Rc), s	4.5	6.0		6.0	6.0	6.0		* 6				
Max Green Setting (Gmax), s	5.1	76.2		22.2	16.0	63.8		* 24				
Max Q Clear Time (g_c+I1), s	2.7	13.0		5.2	2.8	33.5		18.0				
Green Ext Time (p_c), s	0.0	3.4		0.2	0.0	7.9		0.2				
Intersection Summary												
HCM 7th Control Delay, s/veh	17.2											
HCM 7th LOS	B											
Notes												
* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.												

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	100	1	1	67	28	1	2	20	97	1	2
Future Volume (vph)	1	100	1	1	67	28	1	2	20	97	1	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	150		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	60			60			90			60		
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		634			322			312			571	
Travel Time (s)		9.6			4.9			7.1			13.0	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Shared Lane Traffic (%)												
Sign Control		Free			Free			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

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	1	100	1	1	67	28	1	2	20	97	1	2
Future Vol, veh/h	1	100	1	1	67	28	1	2	20	97	1	2
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	100	1	1	67	28	1	2	20	97	1	2
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	95	0	0	101	0	0	172	200	101	186	186	81
Stage 1	-	-	-	-	-	-	103	103	-	83	83	-
Stage 2	-	-	-	-	-	-	70	97	-	103	103	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1499	-	-	1491	-	-	791	696	955	775	708	979
Stage 1	-	-	-	-	-	-	903	810	-	925	826	-
Stage 2	-	-	-	-	-	-	941	815	-	903	810	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1499	-	-	1491	-	-	787	695	955	755	707	979
Mov Cap-2 Maneuver	-	-	-	-	-	-	787	695	-	755	707	-
Stage 1	-	-	-	-	-	-	903	810	-	925	825	-
Stage 2	-	-	-	-	-	-	937	814	-	881	809	-
Approach	EB			WB			NB			SB		
HCM Ctrl Dly, s/v	0.07			0.08			9.03			10.47		
HCM LOS							A			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	917	18	-	-	18	-	-	758				
HCM Lane V/C Ratio	0.025	0.001	-	-	0.001	-	-	0.132				
HCM Ctrl Dly (s/v)	9	7.4	0	-	7.4	0	-	10.5				
HCM Lane LOS	A	A	A	-	A	A	-	B				
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.5				

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 							
Traffic Volume (vph)	0	788	7	0	1455	2	0	0	9	0	0	19
Future Volume (vph)	0	788	7	0	1455	2	0	0	9	0	0	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		581			520			365			249	
Travel Time (s)		8.8			7.9			8.3			5.7	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Shared Lane Traffic (%)												
Sign Control		Free			Free			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection												
Int Delay, s/veh	0.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑			↑↑				↑			↑
Traffic Vol, veh/h	0	788	7	0	1455	2	0	0	9	0	0	19
Future Vol, veh/h	0	788	7	0	1455	2	0	0	9	0	0	19
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	-	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	788	7	0	1455	2	0	0	9	0	0	19
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	-	-	0	-	-	398	-	-	729
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	-	-	6.94	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	-	-	3.32	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	0	-	-	0	0	602	0	0	366
Stage 1	0	-	-	0	-	-	0	0	-	0	0	-
Stage 2	0	-	-	0	-	-	0	0	-	0	0	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	-	-	-	-	-	-	-	-	602	-	-	366
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Ctrl Dly, s/v	0			0			11.07			15.39		
HCM LOS							B			C		
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT	WBR	SBLn1						
Capacity (veh/h)	602	-	-	-	-	366						
HCM Lane V/C Ratio	0.015	-	-	-	-	0.052						
HCM Ctrl Dly (s/v)	11.1	-	-	-	-	15.4						
HCM Lane LOS	B	-	-	-	-	C						
HCM 95th %tile Q(veh)	0	-	-	-	-	0.2						

513: Parcel 2 W. Access & Marine Wy.



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑		↑
Traffic Volume (vph)	793	4	0	1457	0	17
Future Volume (vph)	793	4	0	1457	0	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	45			45	30	
Link Distance (ft)	520			796	427	
Travel Time (s)	7.9			12.1	9.7	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	0.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑		↑
Traffic Vol, veh/h	793	4	0	1457	0	17
Future Vol, veh/h	793	4	0	1457	0	17
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	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	793	4	0	1457	0	17
Major/Minor	Major1	Major2		Minor1		
Conflicting Flow All	0	0	-	-	-	399
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	-	-	0	-	0	601
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	-	601
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	WB		NB		
HCM Ctrl Dly, s/v	0	0		11.16		
HCM LOS	B					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT		
Capacity (veh/h)	601	-	-	-		
HCM Lane V/C Ratio	0.028	-	-	-		
HCM Ctrl Dly (s/v)	11.2	-	-	-		
HCM Lane LOS	B	-	-	-		
HCM 95th %tile Q(veh)	0.1	-	-	-		

519: TAZ 721 Access Roadway & Parcel 12 S. Access

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	27	1	1	1	1	53
Future Volume (vph)	27	1	1	1	1	53
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	90			0
Storage Lanes	1	0	1			0
Taper Length (ft)	90		90			
Link Speed (mph)	30			45	45	
Link Distance (ft)	255			404	617	
Travel Time (s)	5.8			6.1	9.3	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

519: TAZ 721 Access Roadway & Parcel 12 S. Access

Intersection

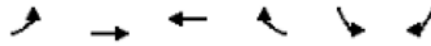
Int Delay, s/veh 3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	27	1	1	1	1	53
Future Vol, veh/h	27	1	1	1	1	53
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	90	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	27	1	1	1	1	53

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	31	28	54	0	-	0
Stage 1	28	-	-	-	-	-
Stage 2	3	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	984	1048	1551	-	-	-
Stage 1	995	-	-	-	-	-
Stage 2	1020	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	983	1048	1551	-	-	-
Mov Cap-2 Maneuver	983	-	-	-	-	-
Stage 1	994	-	-	-	-	-
Stage 2	1020	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	8.76	3.66	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1551	-	985	-	-
HCM Lane V/C Ratio	0.001	-	0.028	-	-
HCM Ctrl Dly (s/v)	7.3	-	8.8	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-



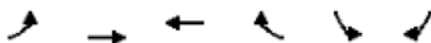
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	10	369	312	200	862	10
Future Volume (vph)	10	369	312	200	862	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150			300	220	220
Storage Lanes	1			1	1	1
Taper Length (ft)	90				90	
Right Turn on Red				Yes		Yes
Link Speed (mph)		45	45		40	
Link Distance (ft)		391	444		797	
Travel Time (s)		5.9	6.7		13.6	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Shared Lane Traffic (%)						
Turn Type	Prot	NA	NA	pm+ov	Prot	Perm
Protected Phases	5	2	6	7	7	
Permitted Phases				6		7
Detector Phase	5	2	6	7	7	7
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	20.5	20.5	9.5	9.5	9.5
Total Split (s)	11.0	32.0	30.5	58.0	58.0	58.0
Total Split (%)	11.1%	32.2%	30.7%	58.3%	58.3%	58.3%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	None	C-Max	C-Max	None	None	None

Intersection Summary

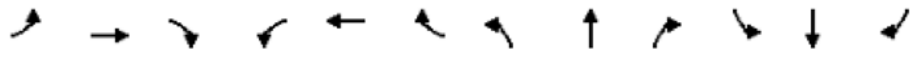
Area Type: Other
Cycle Length: 99.5
Actuated Cycle Length: 99.5
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
Natural Cycle: 55
Control Type: Actuated-Coordinated

Splits and Phases: 565: Marine Wy. & Treble





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↰	↱	↰	↱	↰	↱
Traffic Volume (veh/h)	10	369	312	200	862	10
Future Volume (veh/h)	10	369	312	200	862	10
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No	No	No	No	No	No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	10	369	312	200	862	10
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	22	2202	1999	1352	1003	460
Arrive On Green	0.01	0.62	0.56	0.56	0.29	0.29
Sat Flow, veh/h	1781	3647	3647	1585	3456	1585
Grp Volume(v), veh/h	10	369	312	200	862	10
Grp Sat Flow(s),veh/h/ln	1781	1777	1777	1585	1728	1585
Q Serve(g_s), s	0.6	4.4	4.2	2.1	23.6	0.5
Cycle Q Clear(g_c), s	0.6	4.4	4.2	2.1	23.6	0.5
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	22	2202	1999	1352	1003	460
V/C Ratio(X)	0.46	0.17	0.16	0.15	0.86	0.02
Avail Cap(c_a), veh/h	116	2202	1999	1352	1849	848
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.1	8.1	10.5	1.2	33.5	25.3
Incr Delay (d2), s/veh	14.6	0.2	0.2	0.2	2.3	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	1.5	1.5	6.5	9.7	0.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	63.7	8.2	10.7	1.5	35.8	25.4
LnGrp LOS	E	A	B	A	D	C
Approach Vol, veh/h		379	512		872	
Approach Delay, s/veh		9.7	7.1		35.7	
Approach LOS		A	A		D	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		66.5		33.5	5.7	60.8
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		27.5		53.5	6.5	26.0
Max Q Clear Time (g_c+I1), s		6.4		25.6	2.6	6.2
Green Ext Time (p_c), s		2.1		3.5	0.0	2.4
Intersection Summary						
HCM 7th Control Delay, s/veh			21.8			
HCM 7th LOS			C			

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	206	214	84	91	942	357	37	159	25	589	812	938
Future Volume (vph)	206	214	84	91	942	357	37	159	25	589	812	938
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	305		225	165		345	240		150	400		300
Storage Lanes	2		1	2		1	2		1	2		1
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			45			45	
Link Distance (ft)		921			945			993			788	
Travel Time (s)		11.4			11.7			15.0			11.9	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6	7	3	8		7	4	
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	7	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	20.5	20.5	9.5	20.5	9.5	9.5	20.5	20.5	9.5	20.5	20.5
Total Split (s)	12.0	37.1	37.1	11.4	36.5	32.8	9.5	38.7	38.7	32.8	62.0	62.0
Total Split (%)	10.0%	30.9%	30.9%	9.5%	30.4%	27.3%	7.9%	32.3%	32.3%	27.3%	51.7%	51.7%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	None	None	Max	Max	None	None	None

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green

Natural Cycle: 110

Control Type: Actuated-Coordinated

Splits and Phases: 566: Marine Wy. & Barranca Pkwy.



												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	206	214	84	91	942	357	37	159	25	589	812	938
Future Volume (veh/h)	206	214	84	91	942	357	37	159	25	589	812	938
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	206	214	84	91	942	357	37	159	25	589	812	938
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	223	1071	478	143	991	734	105	1153	514	656	1703	760
Arrive On Green	0.10	0.50	0.50	0.04	0.31	0.31	0.03	0.32	0.32	0.37	0.96	0.96
Sat Flow, veh/h	3563	3554	1585	3563	3554	1585	3563	3554	1585	3563	3554	1585
Grp Volume(v), veh/h	206	214	84	91	942	357	37	159	25	589	812	938
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	6.9	4.0	3.5	3.0	31.1	18.5	1.2	3.8	1.3	18.7	2.1	57.5
Cycle Q Clear(g_c), s	6.9	4.0	3.5	3.0	31.1	18.5	1.2	3.8	1.3	18.7	2.1	57.5
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	223	1071	478	143	991	734	105	1153	514	656	1703	760
V/C Ratio(X)	0.93	0.20	0.18	0.64	0.95	0.49	0.35	0.14	0.05	0.90	0.48	1.24
Avail Cap(c_a), veh/h	223	1071	478	205	991	734	148	1153	514	840	1703	760
HCM Platoon Ratio	1.67	1.67	1.67	1.10	1.10	1.10	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	0.99	0.99	0.99	0.87	0.87	0.87	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.5	21.8	21.7	56.5	40.8	21.4	57.1	28.7	27.8	36.8	1.3	2.5
Incr Delay (d2), s/veh	39.9	0.4	0.8	4.1	17.2	2.0	2.0	0.2	0.2	10.4	0.2	117.0
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	4.1	1.6	1.3	1.4	14.8	6.7	0.6	1.6	0.5	7.1	0.5	25.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	93.4	22.2	22.5	60.6	58.0	23.4	59.1	28.9	28.0	47.3	1.6	119.5
LnGrp LOS	F	C	C	E	E	C	E	C	C	D	A	F
Approach Vol, veh/h	504			1390			221			2339		
Approach Delay, s/veh	51.4			49.3			33.9			60.4		
Approach LOS	D			D			C			E		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.3	40.7	8.0	62.0	12.0	38.0	26.6	43.4				
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	6.9	32.6	5.0	57.5	7.5	32.0	28.3	34.2				
Max Q Clear Time (g_c+I1), s	5.0	6.0	3.2	59.5	8.9	33.1	20.7	5.8				
Green Ext Time (p_c), s	0.0	1.4	0.0	0.0	0.0	0.0	1.4	0.9				
Intersection Summary												
HCM 7th Control Delay, s/veh	54.6											
HCM 7th LOS	D											

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	169	558	506	280	346	88	735	251	676	11	8	12
Future Volume (vph)	169	558	506	280	346	88	735	251	676	11	8	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	310		200	150		200	330		490	150		280
Storage Lanes	2		1	2		1	2		1	2		1
Taper Length (ft)	120			120			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			45			45	
Link Distance (ft)		1060			763			799			754	
Travel Time (s)		13.1			9.5			12.1			11.4	
Confl. Peds. (#/hr)						5			5			5
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Free	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8	1	7	4	
Permitted Phases			Free			6			8			4
Detector Phase	5	2		1	6	6	3	8	1	7	4	4
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.0	22.0		11.0	22.0	22.0	11.0	22.0	11.0	11.0	22.0	22.0
Total Split (s)	16.0	24.0		36.0	44.0	44.0	38.0	49.0	36.0	11.0	22.0	22.0
Total Split (%)	13.3%	20.0%		30.0%	36.7%	36.7%	31.7%	40.8%	30.0%	9.2%	18.3%	18.3%
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lag	Lead	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max		None	C-Max	C-Max	None	None	None	None	None	None

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green
 Natural Cycle: 80
 Control Type: Actuated-Coordinated

Splits and Phases: 567: Marine Wy. & Alton Pkwy



												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	169	558	506	280	346	88	735	251	676	11	8	12
Future Volume (veh/h)	169	558	506	280	346	88	735	251	676	11	8	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	169	558	0	280	346	88	735	251	676	11	8	12
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	228	1844		357	2048	576	1123	1340	725	46	209	86
Arrive On Green	0.06	0.33	0.00	0.10	0.36	0.36	0.63	0.72	0.72	0.03	0.11	0.11
Sat Flow, veh/h	3563	5611	1585	3563	5611	1579	3563	3741	1578	3563	3741	1543
Grp Volume(v), veh/h	169	558	0	280	346	88	735	251	676	11	8	12
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1579	1781	1870	1578	1781	1870	1543
Q Serve(g_s), s	5.6	8.9	0.0	9.2	5.0	4.5	15.6	2.6	43.0	0.4	0.2	0.7
Cycle Q Clear(g_c), s	5.6	8.9	0.0	9.2	5.0	4.5	15.6	2.6	43.0	0.4	0.2	0.7
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	228	1844		357	2048	576	1123	1340	725	46	209	86
V/C Ratio(X)	0.74	0.30		0.78	0.17	0.15	0.65	0.19	0.93	0.24	0.04	0.14
Avail Cap(c_a), veh/h	297	1844		891	2048	576	1123	1340	725	148	499	206
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	0.76	0.76	0.76	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.2	30.0	0.0	52.7	25.8	25.6	18.1	11.3	15.9	57.9	50.4	34.6
Incr Delay (d2), s/veh	7.0	0.4	0.0	3.8	0.2	0.6	1.1	0.0	15.3	2.7	0.0	0.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	3.9	0.0	4.1	2.1	1.7	4.5	1.0	8.4	0.2	0.1	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	62.1	30.5	0.0	56.5	26.0	26.2	19.1	11.3	31.2	60.6	50.4	34.9
LnGrp LOS	E	C		E	C	C	B	B	C	E	D	C
Approach Vol, veh/h	727			714			1662			31		
Approach Delay, s/veh	37.8			38.0			22.9			48.0		
Approach LOS	D			D			C			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	18.0	45.4	43.8	12.7	13.7	49.8	7.5	49.0				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	30.0	18.0	32.0	16.0	10.0	38.0	5.0	43.0				
Max Q Clear Time (g_c+I1), s	11.2	10.9	17.6	2.7	7.6	7.0	2.4	45.0				
Green Ext Time (p_c), s	0.8	1.3	2.4	0.0	0.1	1.4	0.0	0.0				

Intersection Summary

HCM 7th Control Delay, s/veh	30.0
HCM 7th LOS	C

Notes

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

568: TAZ 721 Access Roadway & Marine Wy.

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↓	↑↑	↓	↑
Traffic Volume (vph)	341	8	45	267	8	18
Future Volume (vph)	341	8	45	267	8	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		150	200		0	200
Storage Lanes		1	1		1	1
Taper Length (ft)			90		90	
Right Turn on Red		Yes				Yes
Link Speed (mph)	45			45	45	
Link Distance (ft)	481			428	617	
Travel Time (s)	7.3			6.5	9.3	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Shared Lane Traffic (%)						
Turn Type	NA	Perm	Prot	NA	Prot	Perm
Protected Phases	2		1	6	8	
Permitted Phases		2				8
Detector Phase	2	2	1	6	8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	20.5	20.5	9.5	20.5	20.5	20.5
Total Split (s)	26.0	26.0	13.0	39.0	21.0	21.0
Total Split (%)	43.3%	43.3%	21.7%	65.0%	35.0%	35.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	C-Max	C-Max	None	C-Max	Max	Max

Intersection Summary

Area Type: Other

Cycle Length: 60

Actuated Cycle Length: 60

Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green

Natural Cycle: 55

Control Type: Actuated-Coordinated

Splits and Phases: 568: TAZ 721 Access Roadway & Marine Wy.



						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↓	↑↑	↓	↑
Traffic Volume (veh/h)	341	8	45	267	8	18
Future Volume (veh/h)	341	8	45	267	8	18
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	341	8	45	267	8	18
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1621	723	78	2043	490	436
Arrive On Green	0.46	0.46	0.04	0.57	0.28	0.28
Sat Flow, veh/h	3647	1585	1781	3647	1781	1585
Grp Volume(v), veh/h	341	8	45	267	8	18
Grp Sat Flow(s),veh/h/ln	1777	1585	1781	1777	1781	1585
Q Serve(g_s), s	3.5	0.2	1.5	2.1	0.2	0.5
Cycle Q Clear(g_c), s	3.5	0.2	1.5	2.1	0.2	0.5
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1621	723	78	2043	490	436
V/C Ratio(X)	0.21	0.01	0.57	0.13	0.02	0.04
Avail Cap(c_a), veh/h	1621	723	252	2043	490	436
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	9.8	8.9	28.1	5.9	15.8	15.9
Incr Delay (d2), s/veh	0.3	0.0	6.5	0.1	0.1	0.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	0.0	0.7	0.5	0.1	0.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	10.1	8.9	34.6	6.0	15.9	16.1
LnGrp LOS	B	A	C	A	B	B
Approach Vol, veh/h	349			312	26	
Approach Delay, s/veh	10.1			10.1	16.1	
Approach LOS	B			B	B	
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	7.1	31.9			39.0	21.0
Change Period (Y+Rc), s	4.5	4.5			4.5	4.5
Max Green Setting (Gmax), s	8.5	21.5			34.5	16.5
Max Q Clear Time (g_c+I1), s	3.5	5.5			4.1	2.5
Green Ext Time (p_c), s	0.0	1.7			1.6	0.0
Intersection Summary						
HCM 7th Control Delay, s/veh			10.3			
HCM 7th LOS			B			

569: Bake Pkwy. & Marine Wy./Marine Wy

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	288	20	536	37	9	24	937	2561	175	119	2667	636
Future Volume (vph)	288	20	536	37	9	24	937	2561	175	119	2667	636
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	450		450	200		50	400		300	300		50
Storage Lanes	2		1	1		1	2		1	1		1
Taper Length (ft)	120			120			270			90		
Right Turn on Red			No			Yes			Yes			Yes
Link Speed (mph)		45			45			55			55	
Link Distance (ft)		683			418			695			498	
Travel Time (s)		10.3			6.3			8.6			6.2	
Confl. Peds. (#/hr)						5			5			5
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Shared Lane Traffic (%)												
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Free
Protected Phases	7	4	5	3	8		5	2		1	6	
Permitted Phases			4			8			2			Free
Detector Phase	7	4	5	3	8	8	5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	16.0	27.0	34.0	11.0	22.0	22.0	34.0	70.0	70.0	12.0	48.0	
Total Split (s)	16.0	27.0	34.0	11.0	22.0	22.0	34.0	70.0	70.0	12.0	48.0	
Total Split (%)	13.3%	22.5%	28.3%	9.2%	18.3%	18.3%	28.3%	58.3%	58.3%	10.0%	40.0%	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green, Master Intersection

Natural Cycle: 120

Control Type: Actuated-Coordinated

Splits and Phases: 569: Bake Pkwy. & Marine Wy./Marine Wy



												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	288	20	536	37	9	24	937	2561	175	119	2667	636
Future Volume (veh/h)	288	20	536	37	9	24	937	2561	175	119	2667	636
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	288	20	536	37	9	24	937	2561	175	119	2667	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	297	223	1118	53	245	101	831	3374	949	89	3127	
Arrive On Green	0.08	0.12	0.12	0.03	0.07	0.07	0.42	1.00	1.00	0.09	0.75	0.00
Sat Flow, veh/h	3563	1870	3170	1781	3741	1549	3563	5611	1578	1781	7481	1585
Grp Volume(v), veh/h	288	20	536	37	9	24	937	2561	175	119	2667	0
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1549	1781	1870	1578	1781	1870	1585
Q Serve(g_s), s	9.7	1.1	11.4	2.5	0.3	1.8	28.0	0.0	0.0	6.0	29.6	0.0
Cycle Q Clear(g_c), s	9.7	1.1	11.4	2.5	0.3	1.8	28.0	0.0	0.0	6.0	29.6	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	297	223	1118	53	245	101	831	3374	949	89	3127	
V/C Ratio(X)	0.97	0.09	0.48	0.70	0.04	0.24	1.13	0.76	0.18	1.34	0.85	
Avail Cap(c_a), veh/h	297	327	1294	74	499	206	831	3374	949	89	3127	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.80	1.80	1.80	1.80	1.80	1.80
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	54.9	47.1	16.3	57.7	52.5	53.2	34.8	0.0	0.0	54.6	12.3	0.0
Incr Delay (d2), s/veh	43.9	0.1	0.1	15.7	0.0	0.4	72.4	1.7	0.4	209.3	3.2	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	6.0	0.5	3.9	1.3	0.1	0.7	17.0	0.5	0.1	7.7	5.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	98.8	47.1	16.4	73.4	52.6	53.7	107.2	1.7	0.4	263.9	15.5	0.0
LnGrp LOS	F	D	B	E	D	D	F	A	A	F	B	
Approach Vol, veh/h	844			70			3673			2786		
Approach Delay, s/veh	45.2			64.0			28.5			26.1		
Approach LOS	D			E			C			C		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.0	78.2	9.5	20.3	34.0	56.2	16.0	13.8				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	6.0	64.0	5.0	21.0	28.0	42.0	10.0	16.0				
Max Q Clear Time (g_c+I1), s	8.0	2.0	4.5	13.4	30.0	31.6	11.7	3.8				
Green Ext Time (p_c), s	0.0	23.2	0.0	0.9	0.0	8.2	0.0	0.0				
Intersection Summary												
HCM 7th Control Delay, s/veh	29.9											
HCM 7th LOS	C											
Notes												
Unsignalized Delav for [SBR] is excluded from calculations of the approach delay and intersection delay.												

582: Parcel 13 E. Access/Lynx & Marine Wy.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	27	1249	3	28	271	498	7	4	106	994	3	59
Future Volume (vph)	27	1249	3	28	271	498	7	4	106	994	3	59
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300		50	200		325	90		90	350		350
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			30			45	
Link Distance (ft)		539			808			400			749	
Travel Time (s)		8.2			12.2			9.1			11.3	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	
Protected Phases	5	2		1	6	7	3	8		7	4	
Permitted Phases			2			6			8			
Detector Phase	5	2	2	1	6	7	3	8	8	7	4	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	9.5	20.5	20.5	9.5	20.5	9.5	9.5	20.5	20.5	9.5	20.5	
Total Split (s)	10.6	49.0	49.0	9.5	47.9	41.0	9.5	20.5	20.5	41.0	52.0	
Total Split (%)	8.8%	40.8%	40.8%	7.9%	39.9%	34.2%	7.9%	17.1%	17.1%	34.2%	43.3%	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	C-Max	C-Max	None	C-Max	None	None	Max	Max	None	Max	

Intersection Summary

Area Type: Other

Cycle Length: 120

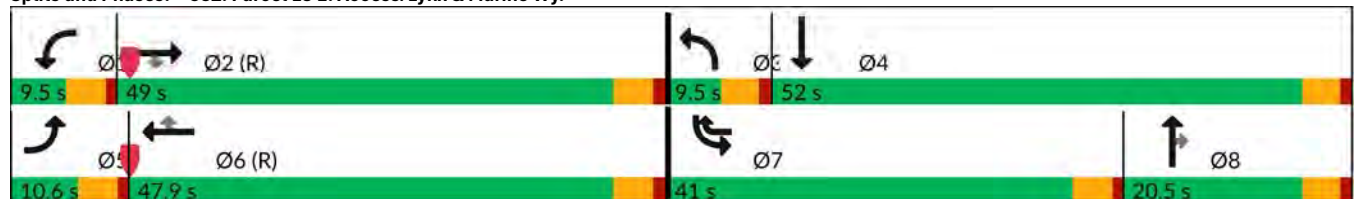
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green

Natural Cycle: 110

Control Type: Actuated-Coordinated

Splits and Phases: 582: Parcel 13 E. Access/Lynx & Marine Wy.



												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	27	1249	3	28	271	498	7	4	106	994	3	59
Future Volume (veh/h)	27	1249	3	28	271	498	7	4	106	994	3	59
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	27	1249	3	28	271	498	7	4	106	994	3	59
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	44	1386	618	45	1388	1097	15	249	211	1042	33	647
Arrive On Green	0.02	0.39	0.39	0.03	0.39	0.39	0.01	0.13	0.13	0.30	0.43	0.43
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1781	1870	1585	3456	77	1520
Grp Volume(v), veh/h	27	1249	3	28	271	498	7	4	106	994	0	62
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1781	1870	1585	1728	0	1597
Q Serve(g_s), s	1.8	39.7	0.1	1.9	6.0	16.9	0.5	0.2	7.5	33.8	0.0	2.8
Cycle Q Clear(g_c), s	1.8	39.7	0.1	1.9	6.0	16.9	0.5	0.2	7.5	33.8	0.0	2.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.95
Lane Grp Cap(c), veh/h	44	1386	618	45	1388	1097	15	249	211	1042	0	680
V/C Ratio(X)	0.61	0.90	0.00	0.62	0.20	0.45	0.45	0.02	0.50	0.95	0.00	0.09
Avail Cap(c_a), veh/h	91	1386	618	74	1388	1097	74	249	211	1051	0	680
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	57.9	34.4	22.4	57.9	24.1	8.3	59.2	45.2	48.3	41.1	0.0	20.6
Incr Delay (d2), s/veh	13.0	9.7	0.0	13.2	0.3	1.4	19.3	0.1	8.3	17.7	0.0	0.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	18.0	0.1	1.0	2.5	5.8	0.3	0.1	3.4	16.3	0.0	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	71.0	44.2	22.4	71.1	24.4	9.7	78.5	45.3	56.6	58.8	0.0	20.8
LnGrp LOS	E	D	C	E	C	A	E	D	E	E		C
Approach Vol, veh/h	1279			797			117			1056		
Approach Delay, s/veh	44.7			16.8			57.5			56.6		
Approach LOS	D			B			E			E		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.5	51.3	5.5	55.6	7.5	51.4	40.7	20.5				
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	5.0	44.5	5.0	47.5	6.1	43.4	36.5	16.0				
Max Q Clear Time (g_c+I1), s	3.9	41.7	2.5	4.8	3.8	18.9	35.8	9.5				
Green Ext Time (p_c), s	0.0	2.0	0.0	0.3	0.0	3.5	0.3	0.1				
Intersection Summary												
HCM 7th Control Delay, s/veh	42.2											
HCM 7th LOS	D											

595: Skyhawk & Great Park Blvd.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↔			↔↔		↔	↔			↔↔	
Traffic Volume (vph)	1	903	1	154	753	63	1	1	236	19	1	1
Future Volume (vph)	1	903	1	154	753	63	1	1	236	19	1	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		563			727			999			360	
Travel Time (s)		12.8			16.5			22.7			8.2	
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
Shared Lane Traffic (%)												
Sign Control		Yield			Yield			Yield			Yield	
Intersection Summary												
Area Type:	Other											
Control Type:	Roundabout											

Intersection							
Intersection Delay, s/veh	7.3						
Intersection LOS	A						
Approach	EB		WB		NB		SB
Entry Lanes	2		2		2		1
Conflicting Circle Lanes	2		2		2		2
Adj Approach Flow, veh/h	953		1021		250		22
Demand Flow Rate, veh/h	972		1041		255		22
Vehicles Circulating, veh/h	186		3		991		975
Vehicles Exiting, veh/h	811		1243		167		69
Ped Vol Crossing Leg, #/h	0		0		0		0
Ped Cap Adj	1.000		1.000		1.000		1.000
Approach Delay, s/veh	7.4		6.1		12.3		6.2
Approach LOS	A		A		B		A
Lane	Left	Right	Left	Right	Left	Right	Left
Designated Moves	LT	TR	LT	TR	L	TR	LTR
Assumed Moves	LT	TR	LT	TR	L	TR	LTR
RT Channelized							
Lane Util	0.470	0.530	0.470	0.530	0.004	0.996	1.000
Follow-Up Headway, s	2.667	2.535	2.667	2.535	2.667	2.535	2.535
Critical Headway, s	4.645	4.328	4.645	4.328	4.645	4.328	4.328
A (Intercept)	1350	1420	1350	1420	1350	1420	1420
B (Slope)	9.199e-48.501e-4		9.199e-48.501e-4		9.199e-48.501e-4		8.501e-4
Entry Flow, veh/h	457	515	489	552	1	254	22
Cap Entry Lane, veh/h	1138	1212	1346	1417	542	612	620
Entry HV Adj Factor	0.980	0.981	0.981	0.980	1.000	0.980	0.999
Flow Entry, veh/h	448	505	480	541	1	249	22
Cap Entry, veh/h	1115	1189	1321	1389	542	599	619
V/C Ratio	0.402	0.425	0.363	0.390	0.002	0.415	0.035
Control Delay, s/veh	7.4	7.4	6.1	6.2	6.7	12.3	6.2
LOS	A	A	A	A	A	B	A
95th %tile Queue, veh	2	2	2	2	0	2	0

602: Vertical/Parcel 10 W. Access & Barranca Pkwy.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	740	73	36	1318	5	17	1	8	32	3	55
Future Volume (vph)	15	740	73	36	1318	5	17	1	8	32	3	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	230		300	355		180	300		300	200		0
Storage Lanes	1		1	0		1	1		1	1		0
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			30			30	
Link Distance (ft)		945			376			379			381	
Travel Time (s)		11.7			4.7			8.6			8.7	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6			8			
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	9.5	20.5	20.5	9.5	20.5	20.5	9.5	20.5	20.5	9.5	20.5	
Total Split (s)	9.5	20.5	20.5	9.5	20.5	20.5	9.5	20.5	20.5	9.5	20.5	
Total Split (%)	15.8%	34.2%	34.2%	15.8%	34.2%	34.2%	15.8%	34.2%	34.2%	15.8%	34.2%	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None	None	None	None	

Intersection Summary

Area Type: Other

Cycle Length: 60

Actuated Cycle Length: 60

Offset: 20.5 (34%), Referenced to phase 2:EBT and 6:WBT, Start of Green

Natural Cycle: 75

Control Type: Actuated-Coordinated

Splits and Phases: 602: Vertical/Parcel 10 W. Access & Barranca Pkwy.



												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	740	73	36	1318	5	17	1	8	32	3	55
Future Volume (veh/h)	15	740	73	36	1318	5	17	1	8	32	3	55
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	15	740	73	36	1318	5	17	1	8	32	3	55
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	33	2008	896	67	2077	926	37	117	100	61	6	116
Arrive On Green	0.04	1.00	1.00	0.04	0.58	0.58	0.02	0.06	0.06	0.03	0.08	0.08
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1781	1870	1585	1781	83	1515
Grp Volume(v), veh/h	15	740	73	36	1318	5	17	1	8	32	0	58
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1781	1870	1585	1781	0	1598
Q Serve(g_s), s	0.5	0.0	0.0	1.2	14.7	0.1	0.6	0.0	0.3	1.1	0.0	2.1
Cycle Q Clear(g_c), s	0.5	0.0	0.0	1.2	14.7	0.1	0.6	0.0	0.3	1.1	0.0	2.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.95
Lane Grp Cap(c), veh/h	33	2008	896	67	2077	926	37	117	100	61	0	122
V/C Ratio(X)	0.46	0.37	0.08	0.54	0.63	0.01	0.46	0.01	0.08	0.52	0.00	0.47
Avail Cap(c_a), veh/h	148	2008	896	148	2077	926	148	499	423	148	0	426
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.74	0.74	0.74	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	28.6	0.0	0.0	28.4	8.2	5.2	29.1	26.4	26.5	28.5	0.0	26.5
Incr Delay (d2), s/veh	7.2	0.4	0.1	6.5	1.5	0.0	8.9	0.0	0.3	6.7	0.0	2.8
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	0.2	0.1	0.0	0.6	3.5	0.0	0.3	0.0	0.1	0.5	0.0	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	35.8	0.4	0.1	34.9	9.7	5.2	37.9	26.4	26.8	35.2	0.0	29.4
LnGrp LOS	D	A	A	C	A	A	D	C	C	D		C
Approach Vol, veh/h	828			1359			26			90		
Approach Delay, s/veh	1.0			10.4			34.1			31.4		
Approach LOS	A			B			C			C		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.8	38.4	5.7	9.1	5.6	39.6	6.6	8.3				
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	5.0	16.0	5.0	16.0	5.0	16.0	5.0	16.0				
Max Q Clear Time (g_c+I1), s	3.2	2.0	2.6	4.1	2.5	16.7	3.1	2.3				
Green Ext Time (p_c), s	0.0	3.9	0.0	0.2	0.0	0.0	0.0	0.0				
Intersection Summary												
HCM 7th Control Delay, s/veh	8.1											
HCM 7th LOS	A											

603: Launch/Parcel 11/City-1 Access & Barranca Pkwy.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	16	491	153	37	1876	4	25	1	3	10	2	81
Future Volume (vph)	16	491	153	37	1876	4	25	1	3	10	2	81
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300		95	240		300	290		50	200		200
Storage Lanes	1		1	1		1	2		1	1		1
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			30			30	
Link Distance (ft)		570			921			403			367	
Travel Time (s)		7.1			11.4			9.2			8.3	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	20.5	20.5	9.5	20.5	20.5	9.5	20.5	20.5	9.5	20.5	20.5
Total Split (s)	9.5	78.7	78.7	11.3	80.5	80.5	9.5	20.5	20.5	9.5	20.5	20.5
Total Split (%)	7.9%	65.6%	65.6%	9.4%	67.1%	67.1%	7.9%	17.1%	17.1%	7.9%	17.1%	17.1%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	Max	Max	None	None	None

Intersection Summary

Area Type: Other

Cycle Length: 120

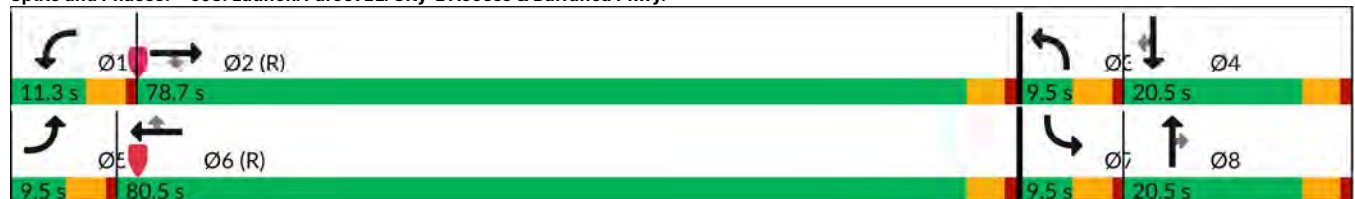
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Splits and Phases: 603: Launch/Parcel 11/City-1 Access & Barranca Pkwy.



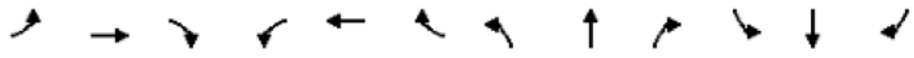
												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	16	491	153	37	1876	4	25	1	3	10	2	81
Future Volume (veh/h)	16	491	153	37	1876	4	25	1	3	10	2	81
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	16	491	153	37	1876	4	25	1	3	10	2	81
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	31	2400	1070	53	2444	1090	81	249	211	21	227	193
Arrive On Green	0.03	1.00	1.00	0.06	1.00	1.00	0.02	0.13	0.13	0.01	0.12	0.12
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	3456	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	16	491	153	37	1876	4	25	1	3	10	2	81
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1728	1870	1585	1781	1870	1585
Q Serve(g_s), s	1.1	0.0	0.0	2.4	0.0	0.0	0.9	0.1	0.2	0.7	0.1	5.7
Cycle Q Clear(g_c), s	1.1	0.0	0.0	2.4	0.0	0.0	0.9	0.1	0.2	0.7	0.1	5.7
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	31	2400	1070	53	2444	1090	81	249	211	21	227	193
V/C Ratio(X)	0.52	0.20	0.14	0.70	0.77	0.00	0.31	0.00	0.01	0.48	0.01	0.42
Avail Cap(c_a), veh/h	74	2400	1070	101	2444	1090	144	249	211	74	249	211
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.10	0.10	0.10	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	57.4	0.0	0.0	55.9	0.0	0.0	57.6	45.1	45.2	58.9	46.3	48.8
Incr Delay (d2), s/veh	13.0	0.2	0.3	1.7	0.2	0.0	2.1	0.0	0.1	15.7	0.0	1.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.1	0.1	1.1	0.1	0.0	0.4	0.0	0.1	0.4	0.1	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	70.5	0.2	0.3	57.7	0.2	0.0	59.7	45.1	45.3	74.6	46.4	50.2
LnGrp LOS	E	A	A	E	A	A	E	D	D	E	D	D
Approach Vol, veh/h	660			1917			29			93		
Approach Delay, s/veh	1.9			1.4			57.7			52.8		
Approach LOS	A			A			E			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.0	85.5	7.3	19.1	6.6	87.0	5.9	20.5				
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	6.8	74.2	5.0	16.0	5.0	76.0	5.0	16.0				
Max Q Clear Time (g_c+I1), s	4.4	2.0	2.9	7.7	3.1	2.0	2.7	2.2				
Green Ext Time (p_c), s	0.0	3.5	0.0	0.1	0.0	24.2	0.0	0.0				
Intersection Summary												
HCM 7th Control Delay, s/veh	3.9											
HCM 7th LOS	A											

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	114	33	187	11	9	724
Future Volume (vph)	114	33	187	11	9	724
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		0	150	
Storage Lanes	1	0		0	1	
Taper Length (ft)	90				90	
Link Speed (mph)	30		40			40
Link Distance (ft)	242		797			359
Travel Time (s)	5.5		13.6			6.1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection						
Int Delay, s/veh	3.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	114	33	187	11	9	724
Future Vol, veh/h	114	33	187	11	9	724
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	150	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	114	33	187	11	9	724
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	935	193	0	0	198	0
Stage 1	193	-	-	-	-	-
Stage 2	742	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	295	849	-	-	1375	-
Stage 1	840	-	-	-	-	-
Stage 2	471	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	293	849	-	-	1375	-
Mov Cap-2 Maneuver	293	-	-	-	-	-
Stage 1	840	-	-	-	-	-
Stage 2	468	-	-	-	-	-
Approach	WB	NB		SB		
HCM Ctrl Dly, s/v	23.11	0		0.09		
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBR WBLn1	SBL	SBT		
Capacity (veh/h)	-	-	343	1375	-	
HCM Lane V/C Ratio	-	-	0.428	0.007	-	
HCM Ctrl Dly (s/v)	-	-	23.1	7.6	-	
HCM Lane LOS	-	-	C	A	-	
HCM 95th %tile Q(veh)	-	-	2.1	0	-	

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	12	209	92	437	847	16
Future Volume (vph)	12	209	92	437	847	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	90	200			0
Storage Lanes	1	0	1			0
Taper Length (ft)	60		90			
Link Speed (mph)	45			45	45	
Link Distance (ft)	208			749	1308	
Travel Time (s)	3.2			11.3	19.8	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection						
Int Delay, s/veh	5.2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	12	209	92	437	847	16
Future Vol, veh/h	12	209	92	437	847	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	200	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	12	209	92	437	847	16
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1476	855	863	0	-	0
Stage 1	855	-	-	-	-	-
Stage 2	621	-	-	-	-	-
Critical Hdwy	6.42	6	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	139	377	779	-	-	-
Stage 1	417	-	-	-	-	-
Stage 2	536	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	123	377	779	-	-	-
Mov Cap-2 Maneuver	123	-	-	-	-	-
Stage 1	368	-	-	-	-	-
Stage 2	536	-	-	-	-	-
Approach	EB	NB		SB		
HCM Ctrl Dly, s/v	33.49	1.78		0		
HCM LOS	D					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	779	-	339	-	-	
HCM Lane V/C Ratio	0.118	-	0.652	-	-	
HCM Ctrl Dly (s/v)	10.2	-	33.5	-	-	
HCM Lane LOS	B	-	D	-	-	
HCM 95th %tile Q(veh)	0.4	-	4.3	-	-	

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	37	1338	42	74	820	41	57	77	187	120	110	53
Future Volume (vph)	37	1338	42	74	820	41	57	77	187	120	110	53
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		50	200		200	115		0	170		100
Storage Lanes	1		1	1		1	1		0	2		1
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			35			35	
Link Distance (ft)		417			737			356			367	
Travel Time (s)		5.2			9.1			6.9			7.1	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6						4
Detector Phase	5	2	2	1	6	6	3	8		7	4	4
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	9.5	20.5	20.5	9.5	20.5	20.5	9.5	20.5		9.5	20.5	20.5
Total Split (s)	9.5	20.5	20.5	9.5	20.5	20.5	9.5	20.5		9.5	20.5	20.5
Total Split (%)	15.8%	34.2%	34.2%	15.8%	34.2%	34.2%	15.8%	34.2%		15.8%	34.2%	34.2%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None		None	None	None

Intersection Summary

Area Type: Other

Cycle Length: 60

Actuated Cycle Length: 60

Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green

Natural Cycle: 75

Control Type: Actuated-Coordinated

Splits and Phases: 326: Ada & Barranca Pkwy.



												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	37	1338	42	74	820	41	57	77	187	120	110	53
Future Volume (veh/h)	37	1338	42	74	820	41	57	77	187	120	110	53
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	37	1338	42	74	820	41	57	77	187	120	110	53
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	68	1455	649	105	1528	682	91	283	253	249	338	286
Arrive On Green	0.04	0.41	0.41	0.12	0.86	0.86	0.05	0.16	0.16	0.07	0.18	0.18
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1781	1777	1585	3456	1870	1585
Grp Volume(v), veh/h	37	1338	42	74	820	41	57	77	187	120	110	53
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1781	1777	1585	1728	1870	1585
Q Serve(g_s), s	1.2	21.4	1.0	2.4	3.6	0.2	1.9	2.3	6.7	2.0	3.1	1.7
Cycle Q Clear(g_c), s	1.2	21.4	1.0	2.4	3.6	0.2	1.9	2.3	6.7	2.0	3.1	1.7
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	68	1455	649	105	1528	682	91	283	253	249	338	286
V/C Ratio(X)	0.54	0.92	0.06	0.70	0.54	0.06	0.63	0.27	0.74	0.48	0.33	0.19
Avail Cap(c_a), veh/h	148	1455	649	148	1528	682	148	474	423	288	499	423
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.3	16.8	10.8	26.0	2.6	2.4	27.9	22.2	24.0	26.8	21.4	20.8
Incr Delay (d2), s/veh	6.5	10.9	0.2	8.3	1.4	0.2	6.9	0.5	4.2	1.4	0.6	0.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	8.5	0.3	1.1	0.9	0.1	0.9	0.9	2.6	0.8	1.3	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	34.8	27.7	10.9	34.2	4.0	2.6	34.8	22.7	28.2	28.2	22.0	21.2
LnGrp LOS	C	C	B	C	A	A	C	C	C	C	C	C
Approach Vol, veh/h	1417			935			321			283		
Approach Delay, s/veh	27.4			6.3			28.1			24.5		
Approach LOS	C			A			C			C		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.0	29.1	7.6	15.3	6.8	30.3	8.8	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	5.0	16.0	5.0	16.0	5.0	16.0	5.0	16.0				
Max Q Clear Time (g_c+I1), s	4.4	23.4	3.9	5.1	3.2	5.6	4.0	8.7				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.5	0.0	3.6	0.0	0.8				
Intersection Summary												
HCM 7th Control Delay, s/veh	20.5											
HCM 7th LOS	C											

341: Alton Pkwy & Barranca Pkwy./Muirlands Bl.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	708	455	4	122	243	147	7	1006	347	121	729	569
Future Volume (vph)	708	455	4	122	243	147	7	1006	347	121	729	569
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	440		150	445		0	210		490	240		410
Storage Lanes	2		0	2		0	1		1	2		1
Taper Length (ft)	120			120			90			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		506			591			858			1135	
Travel Time (s)		6.3			7.3			10.6			14.1	
Confl. Peds. (#/hr)			5			5						
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Shared Lane Traffic (%)												
Turn Type	Prot	NA		Prot	NA		Prot	NA	Prot	Prot	NA	Free
Protected Phases	5	2		1	6		3	8	8	7	4	
Permitted Phases												Free
Detector Phase	5	2		1	6		3	8	8	7	4	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	11.0	22.0		11.0	22.0		11.0	22.0	22.0	11.0	27.0	
Total Split (s)	41.0	55.0		14.0	28.0		11.0	37.0	37.0	14.0	40.0	
Total Split (%)	34.2%	45.8%		11.7%	23.3%		9.2%	30.8%	30.8%	11.7%	33.3%	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.0	6.0	6.0	6.0	6.0	
Lead/Lag	Lag	Lead		Lag	Lead		Lag	Lag	Lag	Lead	Lead	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	C-Max		None	C-Max		None	Max	Max	None	Max	

Intersection Summary

Area Type: Other

Cycle Length: 120

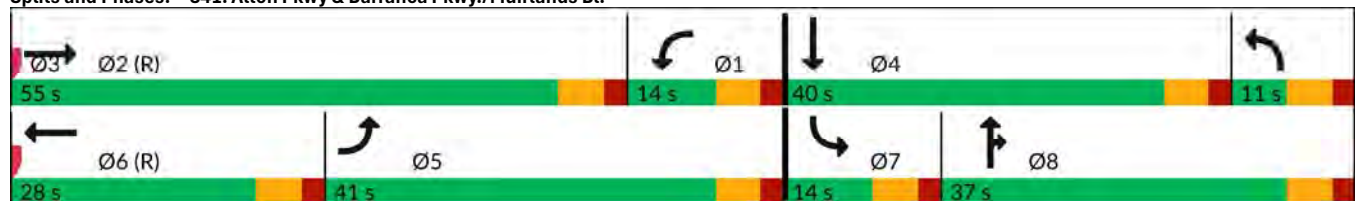
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green

Natural Cycle: 80

Control Type: Actuated-Coordinated

Splits and Phases: 341: Alton Pkwy & Barranca Pkwy./Muirlands Bl.

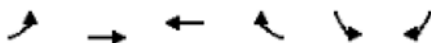


												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	708	455	4	122	243	147	7	1006	347	121	729	569
Future Volume (veh/h)	708	455	4	122	243	147	7	1006	347	121	729	569
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	708	455	4	122	243	147	7	1006	347	121	729	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	1063	1474	13	286	395	230	46	1319	409	175	1447	
Arrive On Green	0.31	0.41	0.41	0.08	0.18	0.18	0.03	0.26	0.26	0.05	0.28	0.00
Sat Flow, veh/h	3456	3610	32	3456	2155	1254	1781	5106	1585	3456	5106	1585
Grp Volume(v), veh/h	708	224	235	122	199	191	7	1006	347	121	729	0
Grp Sat Flow(s),veh/h/ln	1728	1777	1865	1728	1777	1632	1781	1702	1585	1728	1702	1585
Q Serve(g_s), s	21.4	10.2	10.2	4.0	12.3	13.0	0.5	21.8	18.8	4.1	14.3	0.0
Cycle Q Clear(g_c), s	21.4	10.2	10.2	4.0	12.3	13.0	0.5	21.8	18.8	4.1	14.3	0.0
Prop In Lane	1.00		0.02	1.00		0.77	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	1063	726	761	286	326	299	46	1319	409	175	1447	
V/C Ratio(X)	0.67	0.31	0.31	0.43	0.61	0.64	0.15	0.76	0.85	0.69	0.50	
Avail Cap(c_a), veh/h	1063	726	761	286	326	299	74	1319	409	230	1447	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	36.2	24.0	24.0	52.3	45.1	45.3	57.2	41.1	24.0	56.0	35.9	0.0
Incr Delay (d2), s/veh	1.6	1.1	1.1	1.0	8.3	10.0	1.5	4.2	19.1	5.7	1.3	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.7	4.2	4.4	1.7	5.9	5.9	0.2	9.2	8.7	1.9	5.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	37.8	25.1	25.1	53.3	53.3	55.4	58.7	45.3	43.1	61.7	37.2	0.0
LnGrp LOS	D	C	C	D	D	E	E	D	D	E	D	
Approach Vol, veh/h	1167			512			1360			850		
Approach Delay, s/veh	32.8			54.1			44.8			40.7		
Approach LOS	C			D			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.9	55.0	9.1	40.0	42.9	28.0	12.1	37.0				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	8.0	49.0	5.0	34.0	35.0	22.0	8.0	31.0				
Max Q Clear Time (g_c+I1), s	6.0	12.2	2.5	16.3	23.4	15.0	6.1	23.8				
Green Ext Time (p_c), s	0.1	1.3	0.0	2.6	2.1	0.7	0.1	2.9				
Intersection Summary												
HCM 7th Control Delay, s/veh	41.5											
HCM 7th LOS	D											
Notes												
Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.												

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			 			 
Traffic Volume (vph)	0	34	2133	47	16	1199
Future Volume (vph)	0	34	2133	47	16	1199
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		0	150	
Storage Lanes	0	1		0	1	
Taper Length (ft)	90				90	
Link Speed (mph)	30		45			45
Link Distance (ft)	247		523			808
Travel Time (s)	5.6		7.9			12.2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection						
Int Delay, s/veh	0.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	34	2133	47	16	1199
Future Vol, veh/h	0	34	2133	47	16	1199
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	150	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	34	2133	47	16	1199
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	-	1090	0	0	2180	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	4.14	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	0	210	-	-	240	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	210	-	-	240	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	WB	NB		SB		
HCM Ctrl Dly, s/v	25.4	0		0.28		
HCM LOS	D					
Minor Lane/Major Mvmt	NBT	NBR WBLn1	SBL	SBT		
Capacity (veh/h)	-	-	210	240	-	
HCM Lane V/C Ratio	-	-	0.162	0.067	-	
HCM Ctrl Dly (s/v)	-	-	25.4	21	-	
HCM Lane LOS	-	-	D	C	-	
HCM 95th %tile Q(veh)	-	-	0.6	0.2	-	

479: Barranca Pkwy/Barranca Pkwy. & Parcel 10 E. Access



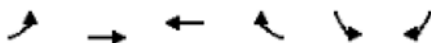
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑			↑
Traffic Volume (vph)	0	1167	812	7	0	8
Future Volume (vph)	0	1167	812	7	0	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)		55	55		30	
Link Distance (ft)		376	202		261	
Travel Time (s)		4.7	2.5		5.9	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑			↑
Traffic Vol, veh/h	0	1167	812	7	0	8
Future Vol, veh/h	0	1167	812	7	0	8
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	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1167	812	7	0	8
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	-	0	-	0	-	410
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	-	0	591
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	591
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	WB		SB		
HCM Ctrl Dly, s/v	0	0		11.17		
HCM LOS				B		
Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1		
Capacity (veh/h)	-	-	-	591		
HCM Lane V/C Ratio	-	-	-	0.014		
HCM Ctrl Dly (s/v)	-	-	-	11.2		
HCM Lane LOS	-	-	-	B		
HCM 95th %tile Q(veh)	-	-	-	0		



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑	↑		↑
Traffic Volume (vph)	0	564	1127	137	0	14
Future Volume (vph)	0	564	1127	137	0	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0			50	0	0
Storage Lanes	0			1	0	1
Taper Length (ft)	90				90	
Link Speed (mph)		45	45		30	
Link Distance (ft)		444	184		298	
Travel Time (s)		6.7	2.8		6.8	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑	↑		↑
Traffic Vol, veh/h	0	564	1127	137	0	14
Future Vol, veh/h	0	564	1127	137	0	14
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	50	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	564	1127	137	0	14
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	-	0	-	0	-	564
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	-	0	469
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	469
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	WB		SB		
HCM Ctrl Dly, s/v	0	0		12.91		
HCM LOS				B		
Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1		
Capacity (veh/h)	-	-	-	469		
HCM Lane V/C Ratio	-	-	-	0.03		
HCM Ctrl Dly (s/v)	-	-	-	12.9		
HCM Lane LOS	-	-	-	B		
HCM 95th %tile Q(veh)	-	-	-	0.1		

496: Parcel 13 W. Access & Marine Wy.

						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	562	2	0	1264	0	16
Future Volume (vph)	562	2	0	1264	0	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	45			45	30	
Link Distance (ft)	184			539	282	
Travel Time (s)	2.8			8.2	6.4	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection						
Int Delay, s/veh	0.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑		↑
Traffic Vol, veh/h	562	2	0	1264	0	16
Future Vol, veh/h	562	2	0	1264	0	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	562	2	0	1264	0	16
Major/Minor	Major1	Major2		Minor1		
Conflicting Flow All	0	0	-	-	-	282
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	-	-	0	-	0	715
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	-	715
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	WB		NB		
HCM Ctrl Dly, s/v	0	0		10.15		
HCM LOS	B					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT		
Capacity (veh/h)	715	-	-	-		
HCM Lane V/C Ratio	0.022	-	-	-		
HCM Ctrl Dly (s/v)	10.2	-	-	-		
HCM Lane LOS	B	-	-	-		
HCM 95th %tile Q(veh)	0.1	-	-	-		

498: MP Mod (BA 619) Access & Harrier

						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	147	3	12	185	2	6
Future Volume (vph)	147	3	12	185	2	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	45			45	30	
Link Distance (ft)	317			208	248	
Travel Time (s)	4.8			3.2	5.6	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

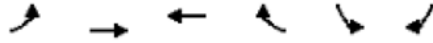
Intersection						
Int Delay, s/veh	0.5					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	147	3	12	185	2	6
Future Vol, veh/h	147	3	12	185	2	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	147	3	12	185	2	6
Major/Minor	Major1	Major2		Minor1		
Conflicting Flow All	0	0	150	0	358	149
Stage 1	-	-	-	-	149	-
Stage 2	-	-	-	-	209	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1431	-	641	898
Stage 1	-	-	-	-	879	-
Stage 2	-	-	-	-	826	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1431	-	635	898
Mov Cap-2 Maneuver	-	-	-	-	635	-
Stage 1	-	-	-	-	879	-
Stage 2	-	-	-	-	818	-
Approach	EB	WB		NB		
HCM Ctrl Dly, s/v	0	0.46		9.47		
HCM LOS	A					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	814	-	-	110	-	
HCM Lane V/C Ratio	0.01	-	-	0.008	-	
HCM Ctrl Dly (s/v)	9.5	-	-	7.5	0	
HCM Lane LOS	A	-	-	A	A	
HCM 95th %tile Q(veh)	0	-	-	0	-	

499: Parcel 12 W. Access & Marine Wy.

						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	245	21	0	439	0	27
Future Volume (vph)	245	21	0	439	0	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	45			45	30	
Link Distance (ft)	390			481	289	
Travel Time (s)	5.9			7.3	6.6	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection						
Int Delay, s/veh	0.3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↱			↑↑↱		↱
Traffic Vol, veh/h	245	21	0	439	0	27
Future Vol, veh/h	245	21	0	439	0	27
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	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	245	21	0	439	0	27
Major/Minor	Major1	Major2		Minor1		
Conflicting Flow All	0	0	-	-	-	133
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	-	-	0	-	0	892
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-	-			
Mov Cap-1 Maneuver	-	-	-	-	-	892
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	WB		NB		
HCM Ctrl Dly, s/v	0	0		9.16		
HCM LOS	A					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT		
Capacity (veh/h)	892	-	-	-		
HCM Lane V/C Ratio	0.03	-	-	-		
HCM Ctrl Dly (s/v)	9.2	-	-	-		
HCM Lane LOS	A	-	-	-		
HCM 95th %tile Q(veh)	0.1	-	-	-		

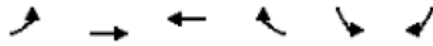
500: Barranca Pkwy. & Irvine Station E. Access



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	5	1640	930	44	77	5
Future Volume (vph)	5	1640	930	44	77	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	190			0	0	0
Storage Lanes	1			0	1	1
Taper Length (ft)	90				90	
Link Speed (mph)		55	55		30	
Link Distance (ft)		737	570		332	
Travel Time (s)		9.1	7.1		7.5	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection						
Int Delay, s/veh	1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	5	1640	930	44	77	5
Future Vol, veh/h	5	1640	930	44	77	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	190	-	-	-	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	1640	930	44	77	5
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	974	0	-	0	1782	487
Stage 1	-	-	-	-	952	-
Stage 2	-	-	-	-	830	-
Critical Hdwy	4.14	-	-	-	5	5.9
Critical Hdwy Stg 1	-	-	-	-	4.5	-
Critical Hdwy Stg 2	-	-	-	-	4.5	-
Follow-up Hdwy	2.22	-	-	-	2.9	3.32
Pot Cap-1 Maneuver	704	-	-	-	197	606
Stage 1	-	-	-	-	541	-
Stage 2	-	-	-	-	603	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	704	-	-	-	195	606
Mov Cap-2 Maneuver	-	-	-	-	195	-
Stage 1	-	-	-	-	537	-
Stage 2	-	-	-	-	603	-
Approach	EB	WB		SB		
HCM Ctrl Dly, s/v	0.03	0		33.46		
HCM LOS				D		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	704	-	-	-	195	606
HCM Lane V/C Ratio	0.007	-	-	-	0.394	0.008
HCM Ctrl Dly (s/v)	10.2	-	-	-	34.9	11
HCM Lane LOS	B	-	-	-	D	B
HCM 95th %tile Q(veh)	0	-	-	-	1.7	0

500: Barranca Pkwy. & Irvine Station E. Access



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑			↑
Traffic Volume (vph)	0	1717	930	44	0	5
Future Volume (vph)	0	1717	930	44	0	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	190			0	0	0
Storage Lanes	0			0	0	1
Taper Length (ft)	90				90	
Link Speed (mph)		55	55		30	
Link Distance (ft)		737	570		332	
Travel Time (s)		9.1	7.1		7.5	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑			↑
Traffic Vol, veh/h	0	1717	930	44	0	5
Future Vol, veh/h	0	1717	930	44	0	5
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	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1717	930	44	0	5
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	-	0	-	0	-	487
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	5.9
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	-	0	606
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	606
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB		WB		SB	
HCM Ctrl Dly, s/v	0		0		10.99	
HCM LOS					B	
Minor Lane/Major Mvmt	EBT		WBT	WBR	SBLn1	
Capacity (veh/h)	-		-	-	606	
HCM Lane V/C Ratio	-		-	-	0.008	
HCM Ctrl Dly (s/v)	-		-	-	11	
HCM Lane LOS	-		-	-	B	
HCM 95th %tile Q(veh)	-		-	-	0	

500: Barranca Pkwy. & Irvine Station E. Access (w/ Traffic Signal)

						
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	5	1640	930	44	77	5
Future Volume (vph)	5	1640	930	44	77	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	190			0	0	0
Storage Lanes	1			0	1	1
Taper Length (ft)	90				90	
Right Turn on Red				Yes		Yes
Link Speed (mph)		55	55		30	
Link Distance (ft)		737	570		332	
Travel Time (s)		9.1	7.1		7.5	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Shared Lane Traffic (%)						
Turn Type	Prot	NA	NA		Prot	Perm
Protected Phases	5	2	6		4	
Permitted Phases						4
Detector Phase	5	2	6		4	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	9.5	20.5	20.5		20.5	20.5
Total Split (s)	11.0	96.0	85.0		24.0	24.0
Total Split (%)	9.2%	80.0%	70.8%		20.0%	20.0%
Yellow Time (s)	3.5	3.5	3.5		3.5	3.5
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5		4.5	4.5
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	None	C-Max	C-Max		Max	Max

Intersection Summary

Area Type: Other

Cycle Length: 120

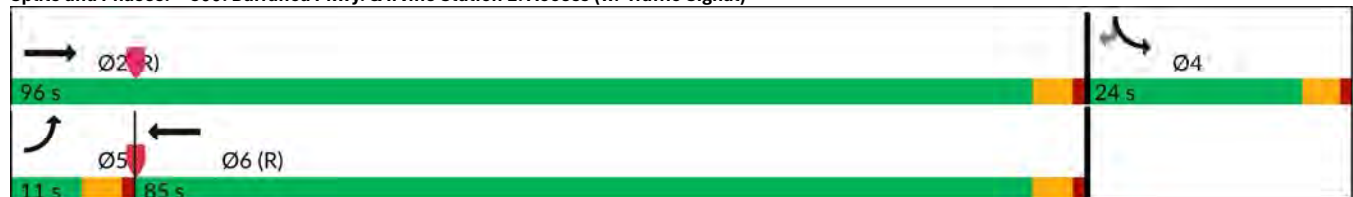
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green

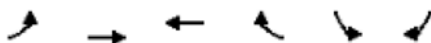
Natural Cycle: 60

Control Type: Actuated-Coordinated

Splits and Phases: 500: Barranca Pkwy. & Irvine Station E. Access (w/ Traffic Signal)



500: Barranca Pkwy. & Irvine Station E. Access (w/ Traffic Signal)



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	5	1640	930	44	77	5
Future Volume (veh/h)	5	1640	930	44	77	5
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No	No	No	No	No	No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	5	1640	930	44	77	5
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	11	2710	2482	117	289	258
Arrive On Green	0.01	0.76	0.96	0.96	0.16	0.16
Sat Flow, veh/h	1781	3647	3548	163	1781	1585
Grp Volume(v), veh/h	5	1640	478	496	77	5
Grp Sat Flow(s),veh/h/ln	1781	1777	1777	1841	1781	1585
Q Serve(g_s), s	0.3	24.4	2.2	2.2	4.5	0.3
Cycle Q Clear(g_c), s	0.3	24.4	2.2	2.2	4.5	0.3
Prop In Lane	1.00			0.09	1.00	1.00
Lane Grp Cap(c), veh/h	11	2710	1277	1323	289	258
V/C Ratio(X)	0.44	0.61	0.37	0.37	0.27	0.02
Avail Cap(c_a), veh/h	96	2710	1277	1323	289	258
HCM Platoon Ratio	1.00	1.00	1.33	1.33	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.94	0.94	1.00	1.00
Uniform Delay (d), s/veh	59.4	6.3	0.8	0.8	44.0	42.2
Incr Delay (d2), s/veh	24.3	1.0	0.8	0.8	2.2	0.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	6.3	0.7	0.7	2.2	0.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	83.7	7.3	1.6	1.6	46.2	42.4
LnGrp LOS	F	A	A	A	D	D
Approach Vol, veh/h		1645	974		82	
Approach Delay, s/veh		7.5	1.6		46.0	
Approach LOS		A	A		D	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		96.0		24.0	5.3	90.7
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		91.5		19.5	6.5	80.5
Max Q Clear Time (g_c+I1), s		26.4		6.5	2.3	4.2
Green Ext Time (p_c), s		17.7		0.1	0.0	6.2
Intersection Summary						
HCM 7th Control Delay, s/veh			6.5			
HCM 7th LOS			A			

503: Parcel 2 E. Access/Parcel 3 S. Access & Marine Wy.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	70	1141	50	55	749	55	30	2	30	129	8	104
Future Volume (vph)	70	1141	50	55	749	55	30	2	30	129	8	104
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		150	430		50	200		0	250		0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		796			617			297			340	
Travel Time (s)		12.1			9.3			6.8			7.7	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases			2			6	8			4		
Detector Phase	5	2	2	1	6	6	8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Minimum Split (s)	11.0	22.5	22.5	9.5	24.0	24.0	20.5	20.5		22.0	22.0	
Total Split (s)	20.0	72.0	72.0	17.0	69.0	69.0	31.0	31.0		31.0	31.0	
Total Split (%)	16.7%	60.0%	60.0%	14.2%	57.5%	57.5%	25.8%	25.8%		25.8%	25.8%	
Yellow Time (s)	4.0	4.0	4.0	3.5	4.0	4.0	3.5	3.5		4.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	1.0	2.0	2.0	1.0	1.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0	6.0	4.5	6.0	6.0	4.5	4.5		6.0	6.0	
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None		None	None	

Intersection Summary

Area Type: Other

Cycle Length: 120

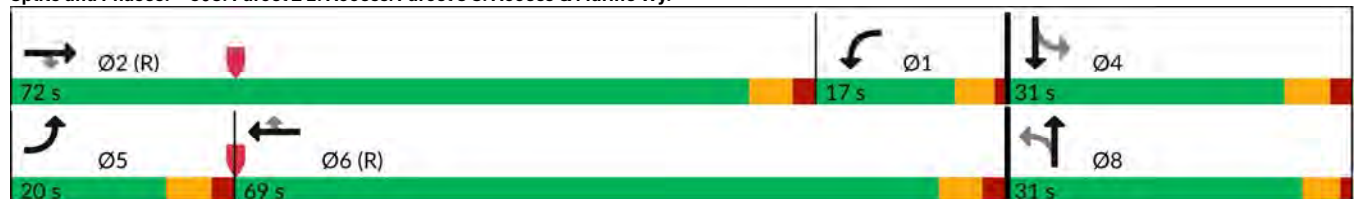
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated

Splits and Phases: 503: Parcel 2 E. Access/Parcel 3 S. Access & Marine Wy.



503: Parcel 2 E. Access/Parcel 3 S. Access & Marine Wy.

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	1141	50	55	749	55	30	2	30	129	8	104
Future Volume (veh/h)	70	1141	50	55	749	55	30	2	30	129	8	104
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	70	1141	50	55	749	55	30	2	30	129	8	104
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	90	1955	872	300	2373	1058	145	13	198	217	15	196
Arrive On Green	0.05	0.55	0.55	0.17	0.67	0.67	0.13	0.13	0.13	0.13	0.13	0.13
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1281	100	1500	1377	114	1488
Grp Volume(v), veh/h	70	1141	50	55	749	55	30	0	32	129	0	112
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1281	0	1600	1377	0	1603
Q Serve(g_s), s	4.7	25.5	1.8	3.2	10.6	1.4	2.7	0.0	2.1	11.0	0.0	7.8
Cycle Q Clear(g_c), s	4.7	25.5	1.8	3.2	10.6	1.4	10.5	0.0	2.1	13.1	0.0	7.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.94	1.00		0.93
Lane Grp Cap(c), veh/h	90	1955	872	300	2373	1058	145	0	211	217	0	211
V/C Ratio(X)	0.78	0.58	0.06	0.18	0.32	0.05	0.21	0.00	0.15	0.59	0.00	0.53
Avail Cap(c_a), veh/h	208	1955	872	300	2373	1058	259	0	353	323	0	334
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	56.3	17.9	12.5	42.8	8.4	6.9	53.5	0.0	46.2	52.0	0.0	48.6
Incr Delay (d2), s/veh	13.3	1.3	0.1	0.3	0.3	0.1	0.7	0.0	0.3	2.6	0.0	2.1
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	2.4	10.0	0.6	1.4	3.7	0.5	0.9	0.0	0.9	4.0	0.0	3.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	69.6	19.2	12.7	43.1	8.7	7.0	54.2	0.0	46.5	54.6	0.0	50.7
LnGrp LOS	E	B	B	D	A	A	D		D	D		D
Approach Vol, veh/h	1261			859			62			241		
Approach Delay, s/veh	21.7			10.8			50.2			52.8		
Approach LOS	C			B			D			D		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	26.2	72.0		21.8	12.1	86.1		21.8				
Change Period (Y+Rc), s	6.0	* 6		6.0	6.0	6.0		* 6				
Max Green Setting (Gmax), s	12.5	* 66		25.0	14.0	63.0		* 27				
Max Q Clear Time (g_c+I1), s	5.2	27.5		15.1	6.7	12.6		12.5				
Green Ext Time (p_c), s	0.0	5.7		0.7	0.1	3.3		0.1				
Intersection Summary												
HCM 7th Control Delay, s/veh	21.7											
HCM 7th LOS	C											

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

504: Parcel 7 W. Access/City-2 W. Access & Marine Wy.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	51	1266	96	24	856	7	56	1	13	8	1	16
Future Volume (vph)	51	1266	96	24	856	7	56	1	13	8	1	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		50	210		50	260		0	150		0
Storage Lanes	1		0	1		1	1		0	1		0
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		799			581			431			414	
Travel Time (s)		12.1			8.8			9.8			9.4	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases			2			6	8			4		
Detector Phase	5	2	2	1	6	6	8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Minimum Split (s)	22.0	22.0	22.0	9.5	22.0	22.0	20.5	20.5		22.0	22.0	
Total Split (s)	26.0	82.0	82.0	13.0	69.0	69.0	25.0	25.0		25.0	25.0	
Total Split (%)	21.7%	68.3%	68.3%	10.8%	57.5%	57.5%	20.8%	20.8%		20.8%	20.8%	
Yellow Time (s)	4.0	4.0	4.0	3.5	4.0	4.0	3.5	3.5		4.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	1.0	2.0	2.0	1.0	1.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0	6.0	4.5	6.0	6.0	4.5	4.5		6.0	6.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None		Max	Max	

Intersection Summary

Area Type: Other

Cycle Length: 120

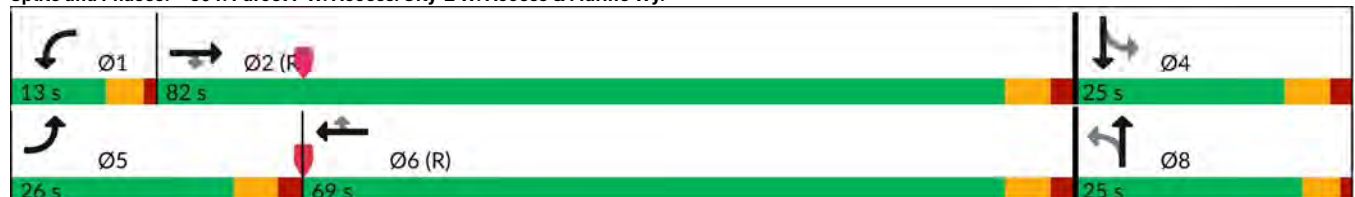
Actuated Cycle Length: 120

Offset: 50 (42%), Referenced to phase 2:EBT and 6:WBT, Start of Green

Natural Cycle: 70

Control Type: Actuated-Coordinated

Splits and Phases: 504: Parcel 7 W. Access/City-2 W. Access & Marine Wy.



504: Parcel 7 W. Access/City-2 W. Access & Marine Wy.

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	51	1266	96	24	856	7	56	1	13	8	1	16
Future Volume (veh/h)	51	1266	96	24	856	7	56	1	13	8	1	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	51	1266	96	24	856	7	56	1	13	8	1	16
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	81	2421	1080	41	2297	1024	268	18	236	271	15	238
Arrive On Green	0.05	0.68	0.68	0.02	0.65	0.65	0.16	0.16	0.16	0.16	0.16	0.16
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1396	114	1488	1400	94	1505
Grp Volume(v), veh/h	51	1266	96	24	856	7	56	0	14	8	0	17
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1396	0	1603	1400	0	1599
Q Serve(g_s), s	3.4	21.2	2.5	1.6	13.5	0.2	4.3	0.0	0.9	0.6	0.0	1.1
Cycle Q Clear(g_c), s	3.4	21.2	2.5	1.6	13.5	0.2	5.4	0.0	0.9	1.5	0.0	1.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.93	1.00		0.94
Lane Grp Cap(c), veh/h	81	2421	1080	41	2297	1024	268	0	254	271	0	253
V/C Ratio(X)	0.63	0.52	0.09	0.59	0.37	0.01	0.21	0.00	0.06	0.03	0.00	0.07
Avail Cap(c_a), veh/h	297	2421	1080	126	2297	1024	286	0	274	271	0	253
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)	0.82	0.82	0.82	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	56.3	9.5	6.5	58.1	9.9	7.5	45.2	0.0	42.9	43.5	0.0	43.0
Incr Delay (d2), s/veh	6.5	0.7	0.1	12.7	0.5	0.0	0.4	0.0	0.1	0.2	0.0	0.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	7.2	0.8	0.8	4.8	0.1	1.5	0.0	0.4	0.2	0.0	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	62.8	10.1	6.6	70.7	10.4	7.6	45.6	0.0	43.0	43.7	0.0	43.5
LnGrp LOS	E	B	A	E	B	A	D		D	D		D
Approach Vol, veh/h	1413			887			70			25		
Approach Delay, s/veh	11.8			12.0			45.1			43.5		
Approach LOS	B			B			D			D		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.3	87.7		25.0	11.4	83.6		25.0				
Change Period (Y+Rc), s	4.5	6.0		6.0	6.0	6.0		* 6				
Max Green Setting (Gmax), s	8.5	76.0		19.0	20.0	63.0		* 21				
Max Q Clear Time (g_c+I1), s	3.6	23.2		3.5	5.4	15.5		7.4				
Green Ext Time (p_c), s	0.0	6.9		0.0	0.1	3.9		0.1				
Intersection Summary												
HCM 7th Control Delay, s/veh	13.2											
HCM 7th LOS	B											

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	25	2	11	100	75	1	1	60	67	2	2
Future Volume (vph)	1	25	2	11	100	75	1	1	60	67	2	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	150		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	60			60			90			60		
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		634			322			312			571	
Travel Time (s)		9.6			4.9			7.1			13.0	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Shared Lane Traffic (%)												
Sign Control		Free			Free			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

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	1	25	2	11	100	75	1	1	60	67	2	2
Future Vol, veh/h	1	25	2	11	100	75	1	1	60	67	2	2
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	25	2	11	100	75	1	1	60	67	2	2
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	175	0	0	27	0	0	151	225	26	187	189	138
Stage 1	-	-	-	-	-	-	28	28	-	160	160	-
Stage 2	-	-	-	-	-	-	123	197	-	28	29	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1401	-	-	1587	-	-	816	674	1050	774	706	911
Stage 1	-	-	-	-	-	-	989	872	-	843	766	-
Stage 2	-	-	-	-	-	-	881	738	-	990	871	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1401	-	-	1587	-	-	806	668	1050	722	700	911
Mov Cap-2 Maneuver	-	-	-	-	-	-	806	668	-	722	700	-
Stage 1	-	-	-	-	-	-	988	871	-	836	760	-
Stage 2	-	-	-	-	-	-	870	732	-	931	870	-
Approach	EB			WB			NB			SB		
HCM Ctrl Dly, s/v	0.27			0.43			8.7			10.5		
HCM LOS							A			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	1035	63	-	-	98	-	-	726				
HCM Lane V/C Ratio	0.06	0.001	-	-	0.007	-	-	0.098				
HCM Ctrl Dly (s/v)	8.7	7.6	0	-	7.3	0	-	10.5				
HCM Lane LOS	A	A	A	-	A	A	-	B				
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	0.3				

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1267	20	0	879	4	0	0	5	0	0	8
Future Volume (vph)	0	1267	20	0	879	4	0	0	5	0	0	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		581			520			365			249	
Travel Time (s)		8.8			7.9			8.3			5.7	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Shared Lane Traffic (%)												
Sign Control		Free			Free			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection												
Int Delay, s/veh	0.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑			↑↑				↑			↑
Traffic Vol, veh/h	0	1267	20	0	879	4	0	0	5	0	0	8
Future Vol, veh/h	0	1267	20	0	879	4	0	0	5	0	0	8
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	-	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	1267	20	0	879	4	0	0	5	0	0	8
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	-	-	0	-	-	644	-	-	442
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	-	-	6.94	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	-	-	3.32	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	0	-	-	0	0	416	0	0	564
Stage 1	0	-	-	0	-	-	0	0	-	0	0	-
Stage 2	0	-	-	0	-	-	0	0	-	0	0	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	-	-	-	-	-	-	-	-	416	-	-	564
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Ctrl Dly, s/v	0			0			13.76			11.48		
HCM LOS							B			B		
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT	WBR	SBLn1						
Capacity (veh/h)	416	-	-	-	-	564						
HCM Lane V/C Ratio	0.012	-	-	-	-	0.014						
HCM Ctrl Dly (s/v)	13.8	-	-	-	-	11.5						
HCM Lane LOS	B	-	-	-	-	B						
HCM 95th %tile Q(veh)	0	-	-	-	-	0						

513: Parcel 2 W. Access & Marine Wy.

						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1252	20	0	883	0	9
Future Volume (vph)	1252	20	0	883	0	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	45			45	30	
Link Distance (ft)	520			796	427	
Travel Time (s)	7.9			12.1	9.7	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection						
Int Delay, s/veh	0.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑		↑
Traffic Vol, veh/h	1252	20	0	883	0	9
Future Vol, veh/h	1252	20	0	883	0	9
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	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1252	20	0	883	0	9
Major/Minor	Major1	Major2		Minor1		
Conflicting Flow All	0	0	-	-	-	636
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	-	-	0	-	0	421
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	-	421
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	WB		NB		
HCM Ctrl Dly, s/v	0	0		13.75		
HCM LOS	B					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT		
Capacity (veh/h)	421	-	-	-		
HCM Lane V/C Ratio	0.021	-	-	-		
HCM Ctrl Dly (s/v)	13.7	-	-	-		
HCM Lane LOS	B	-	-	-		
HCM 95th %tile Q(veh)	0.1	-	-	-		

519: TAZ 721 Access Roadway & Parcel 12 S. Access



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	71	1	1	1	1	91
Future Volume (vph)	71	1	1	1	1	91
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	90			0
Storage Lanes	1	0	1			0
Taper Length (ft)	90		90			
Link Speed (mph)	30			45	45	
Link Distance (ft)	255			404	617	
Travel Time (s)	5.8			6.1	9.3	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

519: TAZ 721 Access Roadway & Parcel 12 S. Access

Intersection

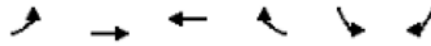
Int Delay, s/veh 4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	71	1	1	1	1	91
Future Vol, veh/h	71	1	1	1	1	91
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	90	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	71	1	1	1	1	91

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	50	47	92	0	-	0
Stage 1	47	-	-	-	-	-
Stage 2	3	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	960	1023	1503	-	-	-
Stage 1	976	-	-	-	-	-
Stage 2	1020	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	959	1023	1503	-	-	-
Mov Cap-2 Maneuver	959	-	-	-	-	-
Stage 1	975	-	-	-	-	-
Stage 2	1020	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	9.05	3.7	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1503	-	960	-	-
HCM Lane V/C Ratio	0.001	-	0.075	-	-
HCM Ctrl Dly (s/v)	7.4	-	9.1	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	77	224	418	723	340	71
Future Volume (vph)	77	224	418	723	340	71
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150			300	220	220
Storage Lanes	1			1	1	1
Taper Length (ft)	90				90	
Right Turn on Red				Yes		Yes
Link Speed (mph)		45	45		40	
Link Distance (ft)		391	444		797	
Travel Time (s)		5.9	6.7		13.6	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Shared Lane Traffic (%)						
Turn Type	Prot	NA	NA	pm+ov	Prot	Perm
Protected Phases	5	2	6	7	7	
Permitted Phases				6		7
Detector Phase	5	2	6	7	7	7
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	20.5	20.5	9.5	9.5	9.5
Total Split (s)	18.0	39.0	30.5	51.0	51.0	51.0
Total Split (%)	18.1%	39.2%	30.7%	51.3%	51.3%	51.3%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	None	C-Max	C-Max	None	None	None

Intersection Summary

Area Type: Other

Cycle Length: 99.5

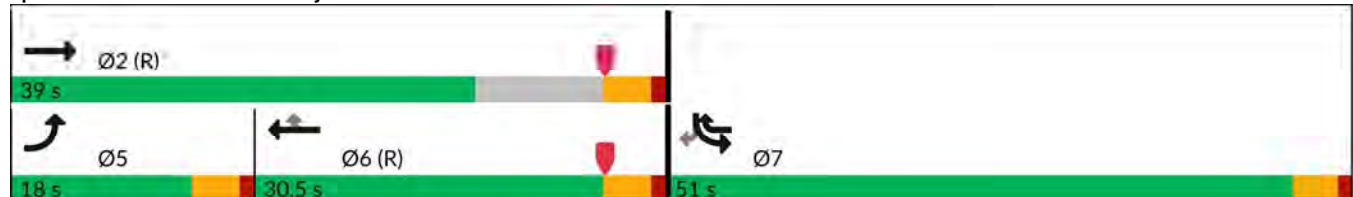
Actuated Cycle Length: 99.5

Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow

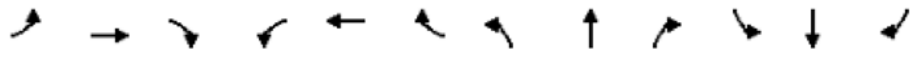
Natural Cycle: 45

Control Type: Actuated-Coordinated

Splits and Phases: 565: Marine Wy. & Treble



						
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	77	224	418	723	340	71
Future Volume (veh/h)	77	224	418	723	340	71
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No	No	No	No	No	No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	77	224	418	723	340	71
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	100	2774	2416	1282	447	205
Arrive On Green	0.06	0.78	0.68	0.68	0.13	0.13
Sat Flow, veh/h	1781	3647	3647	1585	3456	1585
Grp Volume(v), veh/h	77	224	418	723	340	71
Grp Sat Flow(s),veh/h/ln	1781	1777	1777	1585	1728	1585
Q Serve(g_s), s	4.3	1.5	4.3	16.0	9.5	4.1
Cycle Q Clear(g_c), s	4.3	1.5	4.3	16.0	9.5	4.1
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	100	2774	2416	1282	447	205
V/C Ratio(X)	0.77	0.08	0.17	0.56	0.76	0.35
Avail Cap(c_a), veh/h	240	2774	2416	1282	1607	737
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.6	2.6	5.8	3.4	42.0	39.7
Incr Delay (d2), s/veh	11.9	0.1	0.2	1.8	2.7	1.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	0.3	1.3	24.5	4.1	3.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	58.5	2.6	6.0	5.1	44.7	40.7
LnGrp LOS	E	A	A	A	D	D
Approach Vol, veh/h		301	1141		411	
Approach Delay, s/veh		16.9	5.4		44.0	
Approach LOS		B	A		D	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		82.6		17.4	10.1	72.5
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		34.5		46.5	13.5	26.0
Max Q Clear Time (g_c+I1), s		3.5		11.5	6.3	18.0
Green Ext Time (p_c), s		1.3		1.4	0.1	3.5
Intersection Summary						
HCM 7th Control Delay, s/veh			15.9			
HCM 7th LOS			B			

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	951	663	61	48	215	622	132	607	97	447	225	527
Future Volume (vph)	951	663	61	48	215	622	132	607	97	447	225	527
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	305		225	165		345	240		150	400		300
Storage Lanes	2		1	2		1	2		1	2		1
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			45			45	
Link Distance (ft)		921			945			993			788	
Travel Time (s)		11.4			11.7			15.0			11.9	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6	7	3	8		7	4	
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	7	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	20.5	20.5	9.5	20.5	9.5	9.5	20.5	20.5	9.5	20.5	20.5
Total Split (s)	39.0	52.5	52.5	9.5	23.0	31.0	13.2	27.0	27.0	31.0	44.8	44.8
Total Split (%)	32.5%	43.8%	43.8%	7.9%	19.2%	25.8%	11.0%	22.5%	22.5%	25.8%	37.3%	37.3%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	None	None	Max	Max	None	None	None

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Splits and Phases: 566: Marine Wy. & Barranca Pkwy.



												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	951	663	61	48	215	622	132	607	97	447	225	527
Future Volume (veh/h)	951	663	61	48	215	622	132	607	97	447	225	527
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	951	663	61	48	215	622	132	607	97	447	225	527
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	1006	1520	678	118	636	603	189	666	297	717	1193	532
Arrive On Green	0.28	0.43	0.43	0.04	0.20	0.20	0.05	0.19	0.19	0.40	0.67	0.67
Sat Flow, veh/h	3563	3554	1585	3563	3554	1585	3563	3554	1585	3563	3554	1585
Grp Volume(v), veh/h	951	663	61	48	215	622	132	607	97	447	225	527
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	31.4	15.7	2.7	1.6	6.2	21.5	4.4	20.1	5.5	12.0	2.9	39.1
Cycle Q Clear(g_c), s	31.4	15.7	2.7	1.6	6.2	21.5	4.4	20.1	5.5	12.0	2.9	39.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	1006	1520	678	118	636	603	189	666	297	717	1193	532
V/C Ratio(X)	0.95	0.44	0.09	0.41	0.34	1.03	0.70	0.91	0.33	0.62	0.19	0.99
Avail Cap(c_a), veh/h	1024	1520	678	148	636	603	258	666	297	787	1193	532
HCM Platoon Ratio	1.00	1.00	1.00	1.10	1.10	1.10	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	0.69	0.69	0.69	0.93	0.93	0.93	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.2	24.1	20.4	56.6	42.1	16.2	55.9	47.8	31.7	32.2	13.6	19.5
Incr Delay (d2), s/veh	12.6	0.6	0.2	2.1	1.3	43.8	5.0	18.8	2.9	1.3	0.1	36.3
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	14.7	6.3	1.0	0.7	2.7	14.1	2.0	10.3	2.6	4.4	1.1	11.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	54.8	24.8	20.6	58.7	43.4	60.1	60.8	66.6	34.6	33.5	13.6	55.8
LnGrp LOS	D	C	C	E	D	F	E	E	C	C	B	E
Approach Vol, veh/h	1675			885			836			1199		
Approach Delay, s/veh	41.6			56.0			62.0			39.6		
Approach LOS	D			E			E			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.5	55.8	10.9	44.8	38.4	26.0	28.7	27.0				
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	5.0	48.0	8.7	40.3	34.5	18.5	26.5	22.5				
Max Q Clear Time (g_c+I1), s	3.6	17.7	6.4	41.1	33.4	23.5	14.0	22.1				
Green Ext Time (p_c), s	0.0	4.3	0.1	0.0	0.5	0.0	1.3	0.2				
Intersection Summary												
HCM 7th Control Delay, s/veh	47.6											
HCM 7th LOS	D											

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	116	462	756	489	350	61	454	38	436	81	168	89
Future Volume (vph)	116	462	756	489	350	61	454	38	436	81	168	89
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	310		200	150		200	330		490	150		280
Storage Lanes	2		1	2		1	2		1	2		1
Taper Length (ft)	120			120			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			45			45	
Link Distance (ft)		1060			763			799			754	
Travel Time (s)		13.1			9.5			12.1			11.4	
Confl. Peds. (#/hr)						5			5			5
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Free	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8	1	7	4	
Permitted Phases			Free			6			8			4
Detector Phase	5	2		1	6	6	3	8	1	7	4	4
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.0	22.0		11.0	22.0	22.0	11.0	22.0	11.0	11.0	22.0	22.0
Total Split (s)	16.0	27.0		36.0	47.0	47.0	33.0	44.0	36.0	13.0	24.0	24.0
Total Split (%)	13.3%	22.5%		30.0%	39.2%	39.2%	27.5%	36.7%	30.0%	10.8%	20.0%	20.0%
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lag	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max		None	C-Max	C-Max	None	None	None	None	None	None

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green
 Natural Cycle: 80
 Control Type: Actuated-Coordinated

Splits and Phases: 567: Marine Wy. & Alton Pkwy



												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	116	462	756	489	350	61	454	38	436	81	168	89
Future Volume (veh/h)	116	462	756	489	350	61	454	38	436	81	168	89
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	116	462	0	489	350	61	454	38	436	81	168	89
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	173	1921		575	2555	719	780	963	661	138	289	120
Arrive On Green	0.05	0.34	0.00	0.16	0.46	0.46	0.44	0.51	0.51	0.08	0.15	0.15
Sat Flow, veh/h	3563	5611	1585	3563	5611	1580	3563	3741	1576	3563	3741	1554
Grp Volume(v), veh/h	116	462	0	489	350	61	454	38	436	81	168	89
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1580	1781	1870	1576	1781	1870	1554
Q Serve(g_s), s	3.8	7.1	0.0	16.0	4.3	2.6	11.5	0.6	28.2	2.6	5.0	5.5
Cycle Q Clear(g_c), s	3.8	7.1	0.0	16.0	4.3	2.6	11.5	0.6	28.2	2.6	5.0	5.5
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	173	1921		575	2555	719	780	963	661	138	289	120
V/C Ratio(X)	0.67	0.24		0.85	0.14	0.08	0.58	0.04	0.66	0.58	0.58	0.74
Avail Cap(c_a), veh/h	297	1921		891	2555	719	802	1185	755	208	561	233
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	0.94	0.94	0.94	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.2	28.3	0.0	48.9	19.0	18.5	29.6	21.8	18.6	54.4	48.9	34.9
Incr Delay (d2), s/veh	4.5	0.3	0.0	4.9	0.1	0.2	1.0	0.0	1.1	3.9	0.7	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	3.1	0.0	7.2	1.8	1.0	4.1	0.3	5.7	1.2	2.2	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	60.6	28.6	0.0	53.8	19.1	18.7	30.6	21.8	19.7	58.3	49.6	38.2
LnGrp LOS	E	C		D	B	B	C	C	B	E	D	D
Approach Vol, veh/h	578			900			928			338		
Approach Delay, s/veh	35.0			37.9			25.1			48.7		
Approach LOS	D			D			C			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	25.4	47.1	32.3	15.3	11.8	60.6	10.7	36.9				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	30.0	21.0	27.0	18.0	10.0	41.0	7.0	38.0				
Max Q Clear Time (g_c+I1), s	18.0	9.1	13.5	7.5	5.8	6.3	4.6	30.2				
Green Ext Time (p_c), s	1.4	1.4	1.3	0.5	0.1	1.4	0.0	0.6				

Intersection Summary												
HCM 7th Control Delay, s/veh	34.3											
HCM 7th LOS	C											

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

568: TAZ 721 Access Roadway & Marine Wy.

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↓	↑↑	↓	↑
Traffic Volume (vph)	260	10	81	409	30	41
Future Volume (vph)	260	10	81	409	30	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		150	200		0	200
Storage Lanes		1	1		1	1
Taper Length (ft)			90		90	
Right Turn on Red		Yes				Yes
Link Speed (mph)	45			45	45	
Link Distance (ft)	481			428	617	
Travel Time (s)	7.3			6.5	9.3	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Shared Lane Traffic (%)						
Turn Type	NA	Perm	Prot	NA	Prot	Perm
Protected Phases	2		1	6	8	
Permitted Phases		2				8
Detector Phase	2	2	1	6	8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	20.5	20.5	9.5	20.5	20.5	20.5
Total Split (s)	24.0	24.0	14.0	38.0	22.0	22.0
Total Split (%)	40.0%	40.0%	23.3%	63.3%	36.7%	36.7%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	C-Max	C-Max	None	C-Max	Max	Max

Intersection Summary

Area Type: Other

Cycle Length: 60

Actuated Cycle Length: 60

Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green

Natural Cycle: 55

Control Type: Actuated-Coordinated

Splits and Phases: 568: TAZ 721 Access Roadway & Marine Wy.



						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↑	↑↑	↑	↑
Traffic Volume (veh/h)	260	10	81	409	30	41
Future Volume (veh/h)	260	10	81	409	30	41
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	260	10	81	409	30	41
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1498	668	110	1984	520	462
Arrive On Green	0.42	0.42	0.06	0.56	0.29	0.29
Sat Flow, veh/h	3647	1585	1781	3647	1781	1585
Grp Volume(v), veh/h	260	10	81	409	30	41
Grp Sat Flow(s),veh/h/ln	1777	1585	1781	1777	1781	1585
Q Serve(g_s), s	2.7	0.2	2.7	3.4	0.7	1.1
Cycle Q Clear(g_c), s	2.7	0.2	2.7	3.4	0.7	1.1
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1498	668	110	1984	520	462
V/C Ratio(X)	0.17	0.01	0.74	0.21	0.06	0.09
Avail Cap(c_a), veh/h	1498	668	282	1984	520	462
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	10.8	10.1	27.7	6.6	15.3	15.5
Incr Delay (d2), s/veh	0.3	0.0	9.2	0.2	0.2	0.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.1	1.3	0.9	0.3	0.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	11.1	10.1	36.9	6.8	15.5	15.8
LnGrp LOS	B	B	D	A	B	B
Approach Vol, veh/h	270			490	71	
Approach Delay, s/veh	11.0			11.8	15.7	
Approach LOS	B			B	B	
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	8.2	29.8			38.0	22.0
Change Period (Y+Rc), s	4.5	4.5			4.5	4.5
Max Green Setting (Gmax), s	9.5	19.5			33.5	17.5
Max Q Clear Time (g_c+I1), s	4.7	4.7			5.4	3.1
Green Ext Time (p_c), s	0.1	1.2			2.5	0.1
Intersection Summary						
HCM 7th Control Delay, s/veh			11.9			
HCM 7th LOS			B			

569: Bake Pkwy. & Marine Wy./Marine Wy

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	483	13	802	148	17	89	555	2654	73	41	2451	286
Future Volume (vph)	483	13	802	148	17	89	555	2654	73	41	2451	286
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	450		450	200		50	400		300	300		50
Storage Lanes	2		1	1		1	2		1	1		1
Taper Length (ft)	120			120			270			90		
Right Turn on Red			No			Yes			Yes			Yes
Link Speed (mph)		45			45			55			55	
Link Distance (ft)		683			418			695			498	
Travel Time (s)		10.3			6.3			8.6			6.2	
Confl. Peds. (#/hr)						5			5			5
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Shared Lane Traffic (%)												
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Free
Protected Phases	7	4	5	3	8		5	2		1	6	
Permitted Phases			4			8			2			Free
Detector Phase	7	4	5	3	8	8	5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	16.0	27.0	34.0	11.0	22.0	22.0	34.0	70.0	70.0	12.0	48.0	
Total Split (s)	16.0	27.0	34.0	11.0	22.0	22.0	34.0	70.0	70.0	12.0	48.0	
Total Split (%)	13.3%	22.5%	28.3%	9.2%	18.3%	18.3%	28.3%	58.3%	58.3%	10.0%	40.0%	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green, Master Intersection

Natural Cycle: 120

Control Type: Actuated-Coordinated

Splits and Phases: 569: Bake Pkwy. & Marine Wy./Marine Wy



												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	483	13	802	148	17	89	555	2654	73	41	2451	286
Future Volume (veh/h)	483	13	802	148	17	89	555	2654	73	41	2451	286
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	483	13	802	148	17	89	555	2654	73	41	2451	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	297	324	1106	74	492	206	626	3109	874	55	3064	
Arrive On Green	0.08	0.17	0.17	0.04	0.13	0.13	0.32	1.00	1.00	0.06	0.74	0.00
Sat Flow, veh/h	3563	1870	3170	1781	3741	1567	3563	5611	1578	1781	7481	1585
Grp Volume(v), veh/h	483	13	802	148	17	89	555	2654	73	41	2451	0
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1567	1781	1870	1578	1781	1870	1585
Q Serve(g_s), s	10.0	0.7	18.7	5.0	0.5	6.3	17.8	1.0	0.0	2.7	25.2	0.0
Cycle Q Clear(g_c), s	10.0	0.7	18.7	5.0	0.5	6.3	17.8	1.0	0.0	2.7	25.2	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	297	324	1106	74	492	206	626	3109	874	55	3064	
V/C Ratio(X)	1.63	0.04	0.73	1.99	0.03	0.43	0.89	0.85	0.08	0.74	0.80	
Avail Cap(c_a), veh/h	297	327	1112	74	499	209	831	3109	874	89	3064	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.80	1.80	1.80	1.80	1.80	1.80
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	55.0	41.3	17.6	57.5	45.5	48.0	39.9	0.1	0.0	56.2	12.6	0.0
Incr Delay (d2), s/veh	297.1	0.0	2.1	491.6	0.0	0.5	9.2	3.2	0.2	17.5	2.3	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	16.6	0.3	6.6	12.3	0.2	2.4	7.0	1.0	0.1	1.4	5.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	352.1	41.3	19.7	549.1	45.5	48.5	49.0	3.3	0.2	73.7	14.9	0.0
LnGrp LOS	F	D	B	F	D	D	D	A	A	E	B	
Approach Vol, veh/h	1298			254			3282			2492		
Approach Delay, s/veh	143.6			340.0			11.0			15.9		
Approach LOS	F			F			B			B		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.7	72.5	11.0	26.8	27.1	55.1	16.0	21.8				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	6.0	64.0	5.0	21.0	28.0	42.0	10.0	16.0				
Max Q Clear Time (g_c+I1), s	4.7	3.0	7.0	20.7	19.8	27.2	12.0	8.3				
Green Ext Time (p_c), s	0.0	24.5	0.0	0.1	1.3	10.0	0.0	0.1				

Intersection Summary

HCM 7th Control Delay, s/veh	47.5
HCM 7th LOS	D

Notes

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

582: Parcel 13 E. Access/Lynx & Marine Wy.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	63	511	4	116	1221	828	4	6	42	663	5	39
Future Volume (vph)	63	511	4	116	1221	828	4	6	42	663	5	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300		50	200		325	90		90	350		350
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			30			45	
Link Distance (ft)		539			808			400			749	
Travel Time (s)		8.2			12.2			9.1			11.3	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	
Protected Phases	5	2		1	6	7	3	8		7	4	
Permitted Phases			2			6			8			
Detector Phase	5	2	2	1	6	7	3	8	8	7	4	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	9.5	20.5	20.5	9.5	20.5	9.5	9.5	20.5	20.5	9.5	20.5	
Total Split (s)	11.4	46.6	46.6	19.9	55.1	33.0	9.5	20.5	20.5	33.0	44.0	
Total Split (%)	9.5%	38.8%	38.8%	16.6%	45.9%	27.5%	7.9%	17.1%	17.1%	27.5%	36.7%	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	C-Max	C-Max	None	C-Max	None	None	Max	Max	None	Max	

Intersection Summary

Area Type: Other

Cycle Length: 120

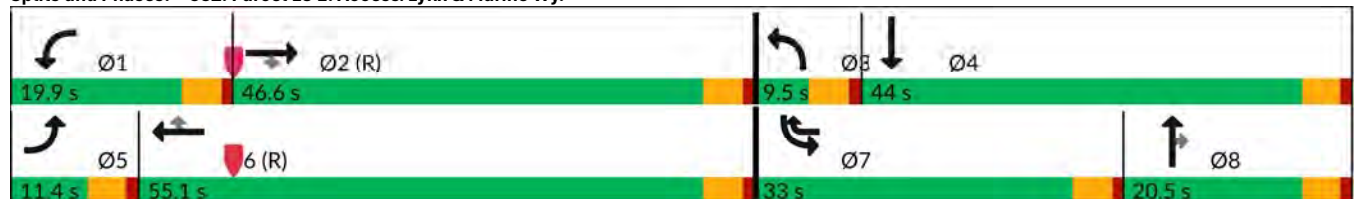
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Splits and Phases: 582: Parcel 13 E. Access/Lynx & Marine Wy.



												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	63	511	4	116	1221	828	4	6	42	663	5	39
Future Volume (veh/h)	63	511	4	116	1221	828	4	6	42	663	5	39
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	63	511	4	116	1221	828	4	6	42	663	5	39
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	81	1508	673	142	1631	1064	9	249	211	734	62	487
Arrive On Green	0.05	0.42	0.42	0.08	0.46	0.46	0.01	0.13	0.13	0.21	0.34	0.34
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1781	1870	1585	3456	183	1430
Grp Volume(v), veh/h	63	511	4	116	1221	828	4	6	42	663	0	44
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1781	1870	1585	1728	0	1613
Q Serve(g_s), s	4.2	11.6	0.2	7.7	34.0	43.1	0.3	0.3	2.8	22.4	0.0	2.2
Cycle Q Clear(g_c), s	4.2	11.6	0.2	7.7	34.0	43.1	0.3	0.3	2.8	22.4	0.0	2.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.89
Lane Grp Cap(c), veh/h	81	1508	673	142	1631	1064	9	249	211	734	0	549
V/C Ratio(X)	0.78	0.34	0.01	0.81	0.75	0.78	0.43	0.02	0.20	0.90	0.00	0.08
Avail Cap(c_a), veh/h	102	1508	673	229	1631	1064	74	249	211	821	0	549
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	56.7	23.2	19.9	54.3	26.8	13.6	59.5	45.2	46.3	46.1	0.0	26.8
Incr Delay (d2), s/veh	24.9	0.6	0.0	11.1	3.2	5.6	28.7	0.2	2.1	12.5	0.0	0.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	4.8	0.1	3.8	14.2	15.6	0.2	0.2	1.2	10.6	0.0	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	81.6	23.8	19.9	65.5	30.0	19.2	88.2	45.4	48.4	58.5	0.0	27.1
LnGrp LOS	F	C	B	E	C	B	F	D	D	E		C
Approach Vol, veh/h	578			2165			52			707		
Approach Delay, s/veh	30.1			27.7			51.1			56.6		
Approach LOS	C			C			D			E		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.1	55.4	5.1	45.4	9.9	59.6	30.0	20.5				
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	15.4	42.1	5.0	39.5	6.9	50.6	28.5	16.0				
Max Q Clear Time (g_c+I1), s	9.7	13.6	2.3	4.2	6.2	45.1	24.4	4.8				
Green Ext Time (p_c), s	0.1	3.2	0.0	0.2	0.0	4.4	1.0	0.1				
Intersection Summary												
HCM 7th Control Delay, s/veh	34.3											
HCM 7th LOS	C											

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	3	709	63	213	1042	9	154	1	353	42	4	18
Future Volume (vph)	3	709	63	213	1042	9	154	1	353	42	4	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		563			727			999			360	
Travel Time (s)		12.8			16.5			22.7			8.2	
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
Shared Lane Traffic (%)												
Sign Control		Yield			Yield			Yield			Yield	
Intersection Summary												
Area Type:	Other											
Control Type:	Roundabout											

Intersection							
Intersection Delay, s/veh	9.6						
Intersection LOS	A						
Approach	EB		WB		NB		SB
Entry Lanes	2		2		2		1
Conflicting Circle Lanes	2		2		2		2
Adj Approach Flow, veh/h	815		1330		535		67
Demand Flow Rate, veh/h	831		1356		545		68
Vehicles Circulating, veh/h	277		169		809		1512
Vehicles Exiting, veh/h	1303		1185		299		13
Ped Vol Crossing Leg, #/h	0		0		0		0
Ped Cap Adj	1.000		1.000		1.000		1.000
Approach Delay, s/veh	7.4		9.9		12.1		12.1
Approach LOS	A		A		B		B
Lane	Left	Right	Left	Right	Left	Right	Left
Designated Moves	LT	TR	LT	TR	L	TR	LTR
Assumed Moves	LT	TR	LT	TR	L	TR	LTR
RT Channelized							
Lane Util	0.471	0.529	0.470	0.530	0.303	0.697	1.000
Follow-Up Headway, s	2.667	2.535	2.667	2.535	2.667	2.535	2.535
Critical Headway, s	4.645	4.328	4.645	4.328	4.645	4.328	4.328
A (Intercept)	1350	1420	1350	1420	1350	1420	1420
B (Slope)	9.199e-48.501e-4		9.199e-48.501e-4		9.199e-48.501e-4		8.501e-4
Entry Flow, veh/h	391	440	637	719	165	380	68
Cap Entry Lane, veh/h	1046	1122	1155	1230	641	714	393
Entry HV Adj Factor	0.980	0.982	0.981	0.980	0.982	0.982	0.984
Flow Entry, veh/h	383	432	625	705	162	373	67
Cap Entry, veh/h	1025	1102	1134	1206	630	701	386
V/C Ratio	0.374	0.392	0.551	0.585	0.257	0.532	0.173
Control Delay, s/veh	7.5	7.3	9.8	10.0	9.0	13.5	12.1
LOS	A	A	A	B	A	B	B
95th %tile Queue, veh	2	2	3	4	1	3	1

602: Vertical/Parcel 10 W. Access & Barranca Pkwy.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	56	1114	37	15	789	16	76	2	39	14	1	20
Future Volume (vph)	56	1114	37	15	789	16	76	2	39	14	1	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	230		300	355		180	300		300	200		0
Storage Lanes	1		1	0		1	1		1	1		0
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			30			30	
Link Distance (ft)		945			376			379			381	
Travel Time (s)		11.7			4.7			8.6			8.7	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6			8			
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	9.5	20.5	20.5	9.5	20.5	20.5	9.5	20.5	20.5	9.5	20.5	
Total Split (s)	9.5	20.5	20.5	9.5	20.5	20.5	9.5	20.5	20.5	9.5	20.5	
Total Split (%)	15.8%	34.2%	34.2%	15.8%	34.2%	34.2%	15.8%	34.2%	34.2%	15.8%	34.2%	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None	None	None	None	

Intersection Summary

Area Type: Other

Cycle Length: 60

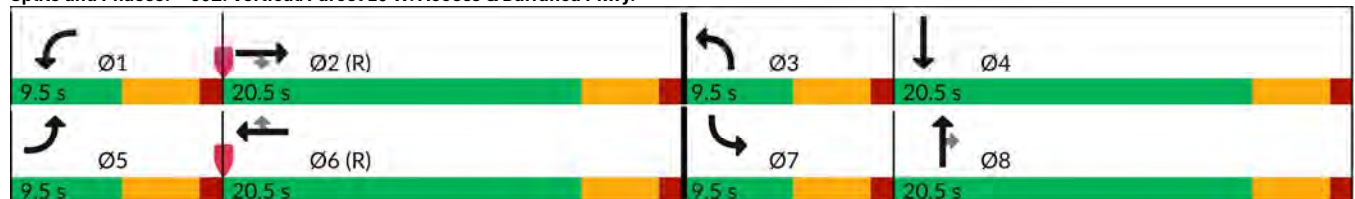
Actuated Cycle Length: 60

Offset: 20.5 (34%), Referenced to phase 2:EBT and 6:WBT, Start of Green

Natural Cycle: 65

Control Type: Actuated-Coordinated

Splits and Phases: 602: Vertical/Parcel 10 W. Access & Barranca Pkwy.



												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	56	1114	37	15	789	16	76	2	39	14	1	20
Future Volume (veh/h)	56	1114	37	15	789	16	76	2	39	14	1	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	56	1114	37	15	789	16	76	2	39	14	1	20
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	90	1997	891	33	1882	840	107	191	162	31	5	91
Arrive On Green	0.10	1.00	1.00	0.02	0.53	0.53	0.06	0.10	0.10	0.02	0.06	0.06
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1781	1870	1585	1781	76	1521
Grp Volume(v), veh/h	56	1114	37	15	789	16	76	2	39	14	0	21
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1781	1870	1585	1781	0	1597
Q Serve(g_s), s	1.8	0.0	0.0	0.5	8.1	0.3	2.5	0.1	1.4	0.5	0.0	0.8
Cycle Q Clear(g_c), s	1.8	0.0	0.0	0.5	8.1	0.3	2.5	0.1	1.4	0.5	0.0	0.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.95
Lane Grp Cap(c), veh/h	90	1997	891	33	1882	840	107	191	162	31	0	96
V/C Ratio(X)	0.62	0.56	0.04	0.46	0.42	0.02	0.71	0.01	0.24	0.45	0.00	0.22
Avail Cap(c_a), veh/h	148	1997	891	148	1882	840	148	499	423	148	0	426
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.87	0.87	0.87	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	26.4	0.0	0.0	29.1	8.5	6.7	27.7	24.2	24.8	29.2	0.0	26.9
Incr Delay (d2), s/veh	6.0	1.0	0.1	9.6	0.7	0.0	9.2	0.0	0.8	10.0	0.0	1.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.3	0.0	0.3	2.1	0.1	1.3	0.0	0.5	0.3	0.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	32.4	1.0	0.1	38.7	9.2	6.7	36.9	24.2	25.5	39.2	0.0	28.0
LnGrp LOS	C	A	A	D	A	A	D	C	C	D		C
Approach Vol, veh/h	1207			820			117			35		
Approach Delay, s/veh	2.4			9.7			32.9			32.5		
Approach LOS	A			A			C			C		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.6	38.2	8.1	8.1	7.5	36.3	5.5	10.6				
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	5.0	16.0	5.0	16.0	5.0	16.0	5.0	16.0				
Max Q Clear Time (g_c+I1), s	2.5	2.0	4.5	2.8	3.8	10.1	2.5	3.4				
Green Ext Time (p_c), s	0.0	6.0	0.0	0.0	0.0	2.4	0.0	0.1				
Intersection Summary												
HCM 7th Control Delay, s/veh	7.3											
HCM 7th LOS	A											

603: Launch/Parcel 11/City-1 Access & Barranca Pkwy.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	55	1616	46	13	846	15	102	1	47	12	0	26
Future Volume (vph)	55	1616	46	13	846	15	102	1	47	12	0	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300		95	240		300	290		50	200		200
Storage Lanes	1		1	1		1	2		1	1		1
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			30			30	
Link Distance (ft)		570			921			403			367	
Travel Time (s)		7.1			11.4			9.2			8.3	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot		Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	20.5	20.5	9.5	20.5	20.5	9.5	20.5	20.5	9.5	20.5	20.5
Total Split (s)	14.0	78.0	78.0	9.5	73.5	73.5	12.0	23.0	23.0	9.5	20.5	20.5
Total Split (%)	11.7%	65.0%	65.0%	7.9%	61.3%	61.3%	10.0%	19.2%	19.2%	7.9%	17.1%	17.1%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	Max	Max	None	None	None

Intersection Summary

Area Type: Other

Cycle Length: 120

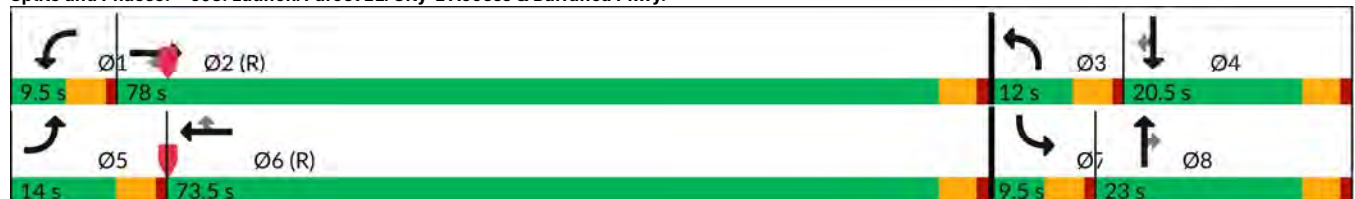
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green

Natural Cycle: 80

Control Type: Actuated-Coordinated

Splits and Phases: 603: Launch/Parcel 11/City-1 Access & Barranca Pkwy.



												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	55	1616	46	13	846	15	102	1	47	12	0	26
Future Volume (veh/h)	55	1616	46	13	846	15	102	1	47	12	0	26
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	55	1616	46	13	846	15	102	1	47	12	0	26
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	71	2372	1058	26	2283	1018	154	288	244	24	231	195
Arrive On Green	0.08	1.00	1.00	0.00	0.21	0.21	0.04	0.15	0.15	0.01	0.00	0.12
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	3456	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	55	1616	46	13	846	15	102	1	47	12	0	26
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1728	1870	1585	1781	1870	1585
Q Serve(g_s), s	3.6	0.0	0.0	0.9	24.4	0.9	3.5	0.1	3.1	0.8	0.0	1.8
Cycle Q Clear(g_c), s	3.6	0.0	0.0	0.9	24.4	0.9	3.5	0.1	3.1	0.8	0.0	1.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	71	2372	1058	26	2283	1018	154	288	244	24	231	195
V/C Ratio(X)	0.78	0.68	0.04	0.50	0.37	0.01	0.66	0.00	0.19	0.49	0.00	0.13
Avail Cap(c_a), veh/h	141	2372	1058	74	2283	1018	216	288	244	74	249	211
HCM Platoon Ratio	2.00	2.00	2.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.83	0.83	0.83	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	54.7	0.0	0.0	59.3	26.5	17.3	56.4	42.9	44.2	58.8	0.0	46.9
Incr Delay (d2), s/veh	16.7	1.6	0.1	11.7	0.4	0.0	4.8	0.0	1.7	14.4	0.0	0.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	0.5	0.0	0.5	11.6	0.3	1.6	0.0	1.3	0.5	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	71.4	1.6	0.1	70.9	26.9	17.3	61.2	43.0	46.0	73.2	0.0	47.2
LnGrp LOS	E	A	A	E	C	B	E	D	D	E		D
Approach Vol, veh/h	1717			874			150			38		
Approach Delay, s/veh	3.8			27.4			56.3			55.4		
Approach LOS	A			C			E			E		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.3	84.6	9.8	19.3	9.3	81.6	6.1	23.0				
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	5.0	73.5	7.5	16.0	9.5	69.0	5.0	18.5				
Max Q Clear Time (g_c+I1), s	2.9	2.0	5.5	3.8	5.6	26.4	2.8	5.1				
Green Ext Time (p_c), s	0.0	17.8	0.0	0.0	0.0	5.9	0.0	0.1				
Intersection Summary												
HCM 7th Control Delay, s/veh	14.8											
HCM 7th LOS	B											

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	25	17	655	115	20	386
Future Volume (vph)	25	17	655	115	20	386
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		0	150	
Storage Lanes	1	0		0	1	
Taper Length (ft)	90				90	
Link Speed (mph)	30		40			40
Link Distance (ft)	242		797			359
Travel Time (s)	5.5		13.6			6.1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection						
Int Delay, s/veh	0.9					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	25	17	655	115	20	386
Future Vol, veh/h	25	17	655	115	20	386
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	150	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	25	17	655	115	20	386
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	1139	713	0	0	770	0
Stage 1	713	-	-	-	-	-
Stage 2	426	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	223	432	-	-	844	-
Stage 1	486	-	-	-	-	-
Stage 2	659	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	217	432	-	-	844	-
Mov Cap-2 Maneuver	217	-	-	-	-	-
Stage 1	486	-	-	-	-	-
Stage 2	643	-	-	-	-	-
Approach	WB	NB		SB		
HCM Ctrl Dly, s/v	20.63	0		0.46		
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBR WBLn1	SBL	SBT		
Capacity (veh/h)	-	-	272	844	-	
HCM Lane V/C Ratio	-	-	0.154	0.024	-	
HCM Ctrl Dly (s/v)	-	-	20.6	9.4	-	
HCM Lane LOS	-	-	C	A	-	
HCM 95th %tile Q(veh)	-	-	0.5	0.1	-	

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W		W	W	W	
Traffic Volume (vph)	10	148	182	715	559	15
Future Volume (vph)	10	148	182	715	559	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	90	200			0
Storage Lanes	1	0	1			0
Taper Length (ft)	60		90			
Link Speed (mph)	45			45	45	
Link Distance (ft)	208			749	1308	
Travel Time (s)	3.2			11.3	19.8	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection						
Int Delay, s/veh	3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	10	148	182	715	559	15
Future Vol, veh/h	10	148	182	715	559	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	200	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	10	148	182	715	559	15
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1646	567	574	0	-	0
Stage 1	567	-	-	-	-	-
Stage 2	1079	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	109	523	999	-	-	-
Stage 1	568	-	-	-	-	-
Stage 2	326	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	89	523	999	-	-	-
Mov Cap-2 Maneuver	89	-	-	-	-	-
Stage 1	464	-	-	-	-	-
Stage 2	326	-	-	-	-	-
Approach	EB	NB		SB		
HCM Ctrl Dly, s/v	19.73	1.91		0		
HCM LOS	C					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	999	-	400	-	-	
HCM Lane V/C Ratio	0.182	-	0.395	-	-	
HCM Ctrl Dly (s/v)	9.4	-	19.7	-	-	
HCM Lane LOS	A	-	C	-	-	
HCM 95th %tile Q(veh)	0.7	-	1.8	-	-	

326 - Ada @ Barranca Pkwy. Short Term Approved-ITAM TC V1.8							IRVINE	
	Ln	Cap	AM Peak Hour		PM Peak Hour			
			Vol	V/C	Vol	V/C		
NBL	1	1700	26	0.02*	57	0.03*		
NBT	2	3400	70	0.02	77	0.02		
NBR	D	1700	65	0.04	187	0.11		
SBL	2	3400	61	0.02	120	0.04		
SBT	1	1700	90	0.05*	110	0.06*		
SBR	1	1700	13	0.01	53	0.03		
EBL	1	1700	12	0.01*	37	0.02		
EBT	2	3400	520	0.15	1338	0.39*		
EBR	D	1700	157	0.09	42	0.02		
WBL	1	1700	199	0.12	74	0.04*		
WBT	2	3400	1625	0.48*	820	0.24		
WBR	1	1700	48	0.03	41	0.02		
Adjustment Overlaps					NBR Clearance	0.03 0.05		
Total ICU				0.61		0.60		

341 - Alton Pkwy. @ Barranca Pkwy./Muirlands Short Term Approved-ITAM TC V1.8							IRVINE	
	Ln	Cap	AM Peak Hour		PM Peak Hour			
			Vol	V/C	Vol	V/C		
NBL	1	1700	9	0.01*	7	0.00		
NBT	3	5100	788	0.15	1006	0.20*		
NBR	1	1700	230	0.14	347	0.20		
SBL	2	3400	176	0.05	121	0.04*		
SBT	3	5100	1055	0.21*	729	0.14		
SBR	F		1030		569			
EBL	2	3400	493	0.14*	708	0.21*		
EBT	2	3400	279	0.08	455	0.14		
EBR	0		8		4			
WBL	2	3400	181	0.05	122	0.04		
WBT	2	3400	307	0.11*	243	0.11*		
WBR	0		71		147			
Adjustment Overlaps		N			Clearance	0.05		
Total ICU				0.52		0.61		

565 - Treble @ Marine Wy. Short Term Approved-ITAM TC V1.8							IRVINE	
	Ln	Cap	AM Peak Hour		PM Peak Hour			
			Vol	V/C	Vol	V/C		
NBL	1	1700	0		0			
NBT	1	1700	0	*	0	*		
NBR	0		0		0			
SBL	2	3400	862	0.25*	340	0.10*		
SBT	1	1700	0	0.01	0	0.04		
SBR	0		10		71			
EBL	1	1700	10	0.01	77	0.05*		
EBT	2	3400	369	0.11*	224	0.07		
EBR	D	1700	0		0			
WBL	1	1700	0	*	0			
WBT	2	3400	312	0.09	418	0.12*		
WBR	1	1700	200	0.12	723	0.43		
Adjustment Overlaps		W			WBR Clearance	0.21 0.05		
Total ICU				0.41		0.53		

566 - Marine Wy. @ Barranca Pkwy. Short Term Approved-ITAM TC V1.8							IRVINE	
	Ln	Cap	AM Peak Hour		PM Peak Hour			
			Vol	V/C	Vol	V/C		
NBL	2	3400	37	0.01*	132	0.04		
NBT	2	3400	159	0.05	607	0.18*		
NBR	1	1700	25	0.01	97	0.06		
SBL	2	3400	589	0.17	447	0.13*		
SBT	2	3400	812	0.24*	225	0.07		
SBR	1	1700	938	0.55	527	0.31		
EBL	2	3400	206	0.06*	951	0.28*		
EBT	2	3400	214	0.06	663	0.20		
EBR	1	1700	84	0.05	61	0.04		
WBL	2	3400	91	0.03	48	0.01		
WBT	2	3400	942	0.28*	215	0.06*		
WBR	1	1700	357	0.21	622	0.37		
Adjustment Overlaps		W	SBR	0.26	WBR Clearance	0.18 0.05		
Total ICU				0.90		0.88		

567 - Marine Wy. @ Alton Pkwy. Short Term Approved-ITAM TC V1.8							IRVINE	
	Ln	Cap	AM Peak Hour		PM Peak Hour			
			Vol	V/C	Vol	V/C		
NBL	2	3400	735	0.22*	454	0.13*		
NBT	2	3400	251	0.07	38	0.01		
NBR	1	1700	676	0.40	436	0.26		
SBL	2	3400	11	0.00	81	0.02		
SBT	2	3400	8	0.00*	168	0.05*		
SBR	1	1700	12	0.01	89	0.05		
EBL	2	3400	169	0.05	116	0.03		
EBT	3	5100	558	0.11*	462	0.09*		
EBR	F		506		756			
WBL	2	3400	280	0.08*	489	0.14*		
WBT	3	5100	346	0.07	350	0.07		
WBR	1	1700	88	0.05	61	0.04		
Adjustment Overlaps		N	NBR	0.10	Clearance	0.05		
Total ICU				0.56		0.46		

568 - Ada @ Marine Wy. Short Term Approved-ITAM TC V1.8							IRVINE	
	Ln	Cap	AM Peak Hour		PM Peak Hour			
			Vol	V/C	Vol	V/C		
NBL	1	1700	8	0.00*	30	0.02*		
NBT	0		0		0			
NBR	1	1700	18	0.01	41	0.02		
SBL	0		0		0			
SBT	0		0	*	0	*		
SBR	0		0		0			
EBL	1	1700	0		0	*		
EBT	2	3400	341	0.10*	260	0.08		
EBR	0		8		10			
WBL	0		45	*	81			
WBT	2	3400	267	0.09	409	0.14*		
WBR	1	1700	0		0			
Adjustment Overlaps			NBR	0.01	Clearance	0.05		
Total ICU				0.16		0.21		

569 - Bake Pkwy @ Marine Wy. Short Term Approved-ITAM TC V1.8							IRVINE	
	Ln	Cap	AM Peak Hour		PM Peak Hour			
			Vol	V/C	Vol	V/C		
NBL	2	3400	937	0.28*	555	0.16		
NBT	3	5100	2561	0.50	2654	0.52*		
NBR	1	1700	175	0.10	73	0.04		
SBL	1	1700	119	0.07	41	0.02*		
SBT	4	6800	2667	0.39*	2451	0.36		
SBR	F		636		286			
EBL	2	3400	288	0.08*	483	0.14*		
EBT	1	1700	20	0.01	13	0.01		
EBR	2	3400	536	0.16	802	0.24		
WBL	1	1700	37	0.02	148	0.09		
WBT	2	3400	9	0.00*	17	0.01*		
WBR	D	1700	24	0.01	89	0.05		
Adjustment Overlaps		E			EBR	0.01		
					Clearance	0.05		
Total ICU				0.80		0.75		

582 - Lynx @ Marine Wy. Short Term Approved-ITAM TC V1.8							IRVINE	
	Ln	Cap	AM Peak Hour		PM Peak Hour			
			Vol	V/C	Vol	V/C		
NBL	1	1700	7	0.00	4	0.00		
NBT	1	1700	4	0.06*	6	0.03*		
NBR	0		106		42			
SBL	2	3400	994	0.29*	663	0.20*		
SBT	1	1700	3	0.04	5	0.03		
SBR	0		59		39			
EBL	1	1700	27	0.02	63	0.04*		
EBT	2	3400	1249	0.37*	511	0.15		
EBR	D	1700	3	0.00	4	0.00		
WBL	1	1700	28	0.02*	116	0.07		
WBT	2	3400	271	0.08	1221	0.36*		
WBR	1	1700	498	0.29	828	0.49		
Adjustment Overlaps		W			Clearance	0.05		
Total ICU				0.79		0.68		

602 - Vertical @ Barranca Pkwy. Short Term Approved-ITAM TC V1.8							IRVINE	
	Ln	Cap	AM Peak Hour		PM Peak Hour			
			Vol	V/C	Vol	V/C		
NBL	1	1700	17	0.01*	76	0.04*		
NBT	1	1700	1	0.01	2	0.02		
NBR	0		8		39			
SBL	1	1700	32	0.02	14	0.01		
SBT	1	1700	3	0.03*	1	0.01*		
SBR	0		55		20			
EBL	1	1700	15	0.01*	56	0.03		
EBT	2	3400	740	0.22	1114	0.33*		
EBR	1	1700	73	0.04	37	0.02		
WBL	1	1700	36	0.02	15	0.01*		
WBT	2	3400	1318	0.39*	789	0.23		
WBR	1	1700	5	0.00	16	0.01		
Adjustment Overlaps					Clearance	0.05		
Total ICU				0.49		0.44		

603 - Launch @ Barranca Pkwy. Short Term Approved-ITAM TC V1.8							IRVINE	
	Ln	Cap	AM Peak Hour		PM Peak Hour			
			Vol	V/C	Vol	V/C		
NBL	1	1700	25	0.01*	102	0.06*		
NBT	1	1700	1	0.00	1	0.03		
NBR	0		3		47			
SBL	1	1700	10	0.01	12	0.01		
SBT	1	1700	2	0.05*	0	0.02*		
SBR	0		81		26			
EBL	1	1700	16	0.01*	55	0.03		
EBT	2	3400	491	0.14	1616	0.48*		
EBR	1	1700	153	0.09	46	0.03		
WBL	1	1700	37	0.02	13	0.01*		
WBT	2	3400	1876	0.55*	846	0.25		
WBR	1	1700	4	0.00	15	0.01		
Adjustment Overlaps					Clearance	0.05		
Total ICU				0.67		0.62		

606 - Marine Wy. @ 202S Access Short Term Approved-ITAM TC V1.8							IRVINE	
	Ln	Cap	AM Peak Hour		PM Peak Hour			
			Vol	V/C	Vol	V/C		
NBL	1	1700	153	0.09*	56	0.03*		
NBT	1	1700	1	0.01	1	0.01		
NBR	0		20		13			
SBL	1	1700	13	0.01	8	0.00		
SBT	1	1700	1	0.03*	1	0.01*		
SBR	0		49		16			
EBL	1	1700	12	0.01*	51	0.03		
EBT	2	3400	762	0.22	1266	0.37*		
EBR	1	1700	20	0.01	96	0.06		
WBL	1	1700	11	0.01	24	0.01*		
WBT	2	3400	1460	0.43*	859	0.25		
WBR	D	1700	3	0.00	7	0.00		
Adjustment Overlaps					Clearance	0.05		
Total ICU				0.61		0.47		

607 - Marine Wy. @ 203S Access Short Term Approved-ITAM TC V1.8							IRVINE	
	Ln	Cap	AM Peak Hour		PM Peak Hour			
			Vol	V/C	Vol	V/C		
NBL	1	1700	71	0.04	30	0.02		
NBT	1	1700	11	0.05*	2	0.02*		
NBR	0		75		30			
SBL	1	1700	39	0.02*	129	0.08*		
SBT	1	1700	1	0.02	8	0.07		
SBR	0		31		104			
EBL	1	1700	72	0.04*	70	0.04		
EBT	2	3400	732	0.22	1141	0.34*		
EBR	1	1700	6	0.00	50	0.03		
WBL	1	1700	26	0.02	55	0.03*		
WBT	2	3400	1355	0.40*	749	0.22		
WBR	D	1700	200	0.12	55	0.03		
Adjustment Overlaps					Clearance	0.05		
Total ICU				0.56		0.52		

APPENDIX 5.2:

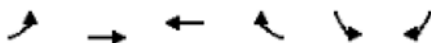
BOA ON-SITE ROADWAYS, INTERSECTION LOS SUMMARY (HCM) AND ICU WORKSHEETS WITH PROJECT

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Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			 			 
Traffic Volume (vph)	0	82	555	7	11	2588
Future Volume (vph)	0	82	555	7	11	2588
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		0	150	
Storage Lanes	0	1		0	1	
Taper Length (ft)	90				90	
Link Speed (mph)	30		45			45
Link Distance (ft)	247		523			808
Travel Time (s)	5.6		7.9			12.2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection						
Int Delay, s/veh	0.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	82	555	7	11	2588
Future Vol, veh/h	0	82	555	7	11	2588
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	150	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	82	555	7	11	2588
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	-	281	0	0	562	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	4.14	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	0	716	-	-	1005	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	716	-	-	1005	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	WB	NB		SB		
HCM Ctrl Dly, s/v	10.68	0		0.04		
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBR WBLn1	SBL	SBT		
Capacity (veh/h)	-	-	716	1005	-	
HCM Lane V/C Ratio	-	-	0.115	0.011	-	
HCM Ctrl Dly (s/v)	-	-	10.7	8.6	-	
HCM Lane LOS	-	-	B	A	-	
HCM 95th %tile Q(veh)	-	-	0.4	0	-	

479: Barranca Pkwy/Barranca Pkwy. & Parcel 10 E. Access



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑			↑
Traffic Volume (vph)	0	806	1331	2	0	15
Future Volume (vph)	0	806	1331	2	0	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)		55	55		30	
Link Distance (ft)		376	202		261	
Travel Time (s)		4.7	2.5		5.9	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

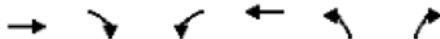
Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑			↑
Traffic Vol, veh/h	0	806	1331	2	0	15
Future Vol, veh/h	0	806	1331	2	0	15
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	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	806	1331	2	0	15
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	-	0	-	0	-	667
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	-	0	402
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	402
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	WB		SB		
HCM Ctrl Dly, s/v	0	0		14.31		
HCM LOS	B					
Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1		
Capacity (veh/h)	-	-	-	402		
HCM Lane V/C Ratio	-	-	-	0.037		
HCM Ctrl Dly (s/v)	-	-	-	14.3		
HCM Lane LOS	-	-	-	B		
HCM 95th %tile Q(veh)	-	-	-	0.1		

496: Parcel 13 W. Access & Marine Wy.



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑		↑
Traffic Volume (vph)	1172	1	0	378	0	47
Future Volume (vph)	1172	1	0	378	0	47
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	45			45	30	
Link Distance (ft)	184			539	282	
Travel Time (s)	2.8			8.2	6.4	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	0.4					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑		↑
Traffic Vol, veh/h	1172	1	0	378	0	47
Future Vol, veh/h	1172	1	0	378	0	47
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	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1172	1	0	378	0	47
Major/Minor	Major1	Major2		Minor1		
Conflicting Flow All	0	0	-	-	-	587
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	-	-	0	-	0	453
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-				
Mov Cap-1 Maneuver	-	-	-	-	-	453
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	WB		NB		
HCM Ctrl Dly, s/v	0	0		13.86		
HCM LOS	B					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT		
Capacity (veh/h)	453	-	-	-		
HCM Lane V/C Ratio	0.104	-	-	-		
HCM Ctrl Dly (s/v)	13.9	-	-	-		
HCM Lane LOS	B	-	-	-		
HCM 95th %tile Q(veh)	0.3	-	-	-		

498: MP Mod (BA 619) Access & Harrier

						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	182	1	3	43	4	16
Future Volume (vph)	182	1	3	43	4	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	45			45	30	
Link Distance (ft)	317			208	248	
Travel Time (s)	4.8			3.2	5.6	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection						
Int Delay, s/veh	0.8					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	182	1	3	43	4	16
Future Vol, veh/h	182	1	3	43	4	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	182	1	3	43	4	16
Major/Minor	Major1	Major2		Minor1		
Conflicting Flow All	0	0	183	0	232	183
Stage 1	-	-	-	-	183	-
Stage 2	-	-	-	-	49	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1392	-	757	860
Stage 1	-	-	-	-	849	-
Stage 2	-	-	-	-	973	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1392	-	755	860
Mov Cap-2 Maneuver	-	-	-	-	755	-
Stage 1	-	-	-	-	849	-
Stage 2	-	-	-	-	971	-
Approach	EB	WB		NB		
HCM Ctrl Dly, s/v	0	0.5		9.41		
HCM LOS	A					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	837	-	-	117	-	
HCM Lane V/C Ratio	0.024	-	-	0.002	-	
HCM Ctrl Dly (s/v)	9.4	-	-	7.6	0	
HCM Lane LOS	A	-	-	A	A	
HCM 95th %tile Q(veh)	0.1	-	-	0	-	

499: Parcel 12 W. Access & Marine Wy.

						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1078	10	0	1668	0	16
Future Volume (vph)	1078	10	0	1668	0	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	45			45	30	
Link Distance (ft)	390			481	289	
Travel Time (s)	5.9			7.3	6.6	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection						
Int Delay, s/veh	0.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑		↑
Traffic Vol, veh/h	1078	10	0	1668	0	16
Future Vol, veh/h	1078	10	0	1668	0	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1078	10	0	1668	0	16
Major/Minor	Major1	Major2		Minor1		
Conflicting Flow All	0	0	-	-	-	544
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	-	-	0	-	0	483
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-	-			
Mov Cap-1 Maneuver	-	-	-	-	-	483
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	WB		NB		
HCM Ctrl Dly, s/v	0	0		12.71		
HCM LOS	B					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT		
Capacity (veh/h)	483	-	-	-		
HCM Lane V/C Ratio	0.033	-	-	-		
HCM Ctrl Dly (s/v)	12.7	-	-	-		
HCM Lane LOS	B	-	-	-		
HCM 95th %tile Q(veh)	0.1	-	-	-		

503: Parcel 2 E. Access/Parcel 3 S. Access & Marine Wy.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	94	1152	10	23	1380	171	69	9	79	41	1	30
Future Volume (vph)	94	1152	10	23	1380	171	69	9	79	41	1	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		150	430		50	200		0	250		0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		796			617			297			340	
Travel Time (s)		12.1			9.3			6.8			7.7	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases			2			6	8			4		
Detector Phase	5	2	2	1	6	6	8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Minimum Split (s)	11.0	22.5	22.5	9.5	24.0	24.0	20.5	20.5		22.0	22.0	
Total Split (s)	21.0	85.0	85.0	12.0	76.0	76.0	23.0	23.0		23.0	23.0	
Total Split (%)	17.5%	70.8%	70.8%	10.0%	63.3%	63.3%	19.2%	19.2%		19.2%	19.2%	
Yellow Time (s)	4.0	4.0	4.0	3.5	4.0	4.0	3.5	3.5		4.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	1.0	2.0	2.0	1.0	1.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0	6.0	4.5	6.0	6.0	4.5	4.5		6.0	6.0	
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None		None	None	

Intersection Summary

Area Type: Other

Cycle Length: 120

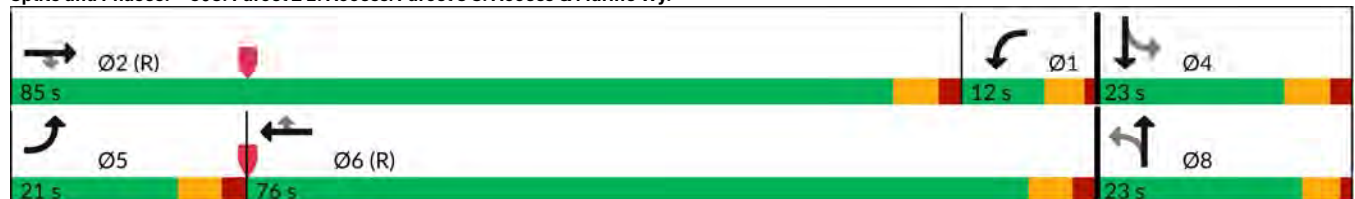
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green

Natural Cycle: 65

Control Type: Actuated-Coordinated

Splits and Phases: 503: Parcel 2 E. Access/Parcel 3 S. Access & Marine Wy.



503: Parcel 2 E. Access/Parcel 3 S. Access & Marine Wy.

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	94	1152	10	23	1380	171	69	9	79	41	1	30
Future Volume (veh/h)	94	1152	10	23	1380	171	69	9	79	41	1	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	94	1152	10	23	1380	171	69	9	79	41	1	30
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	118	2340	1043	163	2429	1083	173	16	145	123	5	154
Arrive On Green	0.07	0.66	0.66	0.09	0.68	0.68	0.10	0.10	0.10	0.10	0.10	0.10
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1378	165	1445	1309	51	1542
Grp Volume(v), veh/h	94	1152	10	23	1380	171	69	0	88	41	0	31
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1378	0	1610	1309	0	1593
Q Serve(g_s), s	6.2	19.7	0.3	1.4	24.1	4.6	5.8	0.0	6.2	3.7	0.0	2.1
Cycle Q Clear(g_c), s	6.2	19.7	0.3	1.4	24.1	4.6	7.9	0.0	6.2	9.9	0.0	2.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.90	1.00		0.97
Lane Grp Cap(c), veh/h	118	2340	1043	163	2429	1083	173	0	161	123	0	159
V/C Ratio(X)	0.79	0.49	0.01	0.14	0.57	0.16	0.40	0.00	0.55	0.33	0.00	0.19
Avail Cap(c_a), veh/h	223	2340	1043	163	2429	1083	248	0	248	177	0	226
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	55.2	10.4	7.0	50.2	9.8	6.7	53.2	0.0	51.4	56.1	0.0	49.6
Incr Delay (d2), s/veh	11.3	0.7	0.0	0.4	1.0	0.3	1.5	0.0	2.9	1.6	0.0	0.6
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	6.9	0.1	0.6	8.2	1.4	2.1	0.0	2.7	1.3	0.0	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	66.5	11.1	7.1	50.5	10.8	7.0	54.7	0.0	54.3	57.7	0.0	50.1
LnGrp LOS	E	B	A	D	B	A	D		D	E		D
Approach Vol, veh/h	1256			1574			157			72		
Approach Delay, s/veh	15.2			11.0			54.5			54.5		
Approach LOS	B			B			D			D		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	17.0	85.0		18.0	14.0	88.0		18.0				
Change Period (Y+Rc), s	6.0	* 6		6.0	6.0	6.0		* 6				
Max Green Setting (Gmax), s	7.5	* 79		17.0	15.0	70.0		* 19				
Max Q Clear Time (g_c+I1), s	3.4	21.7		11.9	8.2	26.1		9.9				
Green Ext Time (p_c), s	0.0	5.8		0.1	0.1	8.0		0.4				
Intersection Summary												
HCM 7th Control Delay, s/veh	16.0											
HCM 7th LOS	B											

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

504: Parcel 7 W. Access/City-2 W. Access & Marine Wy.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	13	1197	22	10	1485	2	146	0	27	17	0	45
Future Volume (vph)	13	1197	22	10	1485	2	146	0	27	17	0	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		50	210		50	260		0	150		0
Storage Lanes	1		0	1		1	1		0	1		0
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		799			581			431			414	
Travel Time (s)		12.1			8.8			9.8			9.4	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases			2			6	8			4		
Detector Phase	5	2	2	1	6	6	8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Minimum Split (s)	22.0	22.0	22.0	9.5	22.0	22.0	20.5	20.5		22.0	22.0	
Total Split (s)	22.0	82.8	82.8	9.6	70.4	70.4	27.6	27.6		27.6	27.6	
Total Split (%)	18.3%	69.0%	69.0%	8.0%	58.7%	58.7%	23.0%	23.0%		23.0%	23.0%	
Yellow Time (s)	4.0	4.0	4.0	3.5	4.0	4.0	3.5	3.5		4.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	1.0	2.0	2.0	1.0	1.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0	6.0	4.5	6.0	6.0	4.5	4.5		6.0	6.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None		Max	Max	

Intersection Summary

Area Type: Other

Cycle Length: 120

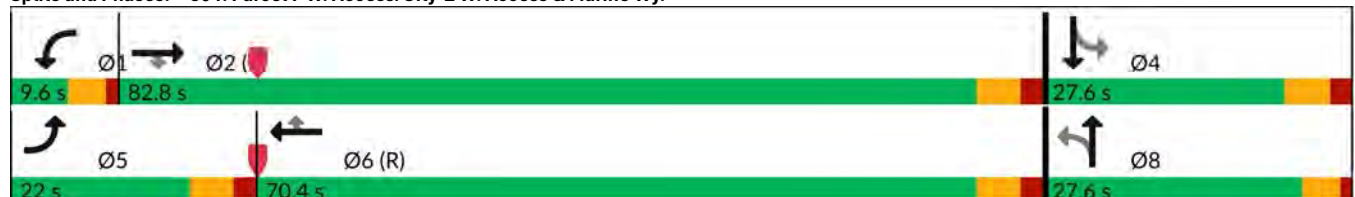
Actuated Cycle Length: 120

Offset: 50 (42%), Referenced to phase 2:EBT and 6:WBT, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Splits and Phases: 504: Parcel 7 W. Access/City-2 W. Access & Marine Wy.



												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	1197	22	10	1485	2	146	0	27	17	0	45
Future Volume (veh/h)	13	1197	22	10	1485	2	146	0	27	17	0	45
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	13	1197	22	10	1485	2	146	0	27	17	0	45
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	74	2383	1063	21	2233	996	272	0	285	289	0	285
Arrive On Green	0.04	0.67	0.67	0.01	0.63	0.63	0.18	0.00	0.18	0.18	0.00	0.18
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1361	0	1585	1383	0	1585
Grp Volume(v), veh/h	13	1197	22	10	1485	2	146	0	27	17	0	45
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1361	0	1585	1383	0	1585
Q Serve(g_s), s	0.8	20.1	0.6	0.7	32.0	0.1	12.2	0.0	1.7	1.2	0.0	2.9
Cycle Q Clear(g_c), s	0.8	20.1	0.6	0.7	32.0	0.1	15.0	0.0	1.7	3.0	0.0	2.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	74	2383	1063	21	2233	996	272	0	285	289	0	285
V/C Ratio(X)	0.18	0.50	0.02	0.48	0.67	0.00	0.54	0.00	0.09	0.06	0.00	0.16
Avail Cap(c_a), veh/h	238	2383	1063	76	2233	996	289	0	305	289	0	285
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)	0.82	0.82	0.82	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	55.5	9.8	6.6	58.9	14.2	8.3	47.9	0.0	41.0	42.3	0.0	41.5
Incr Delay (d2), s/veh	0.9	0.6	0.0	15.7	1.6	0.0	1.7	0.0	0.1	0.4	0.0	1.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	6.9	0.2	0.4	11.7	0.0	4.3	0.0	0.7	0.5	0.0	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	56.4	10.4	6.6	74.6	15.8	8.3	49.6	0.0	41.2	42.7	0.0	42.7
LnGrp LOS	E	B	A	E	B	A	D		D	D		D
Approach Vol, veh/h	1232			1497			173			62		
Approach Delay, s/veh	10.9			16.2			48.3			42.7		
Approach LOS	B			B			D			D		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.9	86.5		27.6	11.0	81.4		27.6				
Change Period (Y+Rc), s	4.5	6.0		6.0	6.0	6.0		* 6				
Max Green Setting (Gmax), s	5.1	76.8		21.6	16.0	64.4		* 23				
Max Q Clear Time (g_c+I1), s	2.7	22.1		5.0	2.8	34.0		17.0				
Green Ext Time (p_c), s	0.0	6.2		0.2	0.0	8.1		0.3				

Intersection Summary

HCM 7th Control Delay, s/veh	16.4
HCM 7th LOS	B

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1233	7	0	1478	2	0	0	9	0	0	19
Future Volume (vph)	0	1233	7	0	1478	2	0	0	9	0	0	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		581			520			365			249	
Travel Time (s)		8.8			7.9			8.3			5.7	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Shared Lane Traffic (%)												
Sign Control		Free			Free			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection												
Int Delay, s/veh	0.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑			↑↑				↑			↑
Traffic Vol, veh/h	0	1233	7	0	1478	2	0	0	9	0	0	19
Future Vol, veh/h	0	1233	7	0	1478	2	0	0	9	0	0	19
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	-	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	1233	7	0	1478	2	0	0	9	0	0	19
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	-	-	0	-	-	620	-	-	740
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	-	-	6.94	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	-	-	3.32	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	0	-	-	0	0	431	0	0	359
Stage 1	0	-	-	0	-	-	0	0	-	0	0	-
Stage 2	0	-	-	0	-	-	0	0	-	0	0	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	-	-	-	-	431	-	-	359
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Ctrl Dly, s/v	0			0			13.53			15.58		
HCM LOS							B			C		
Minor Lane/Major Mvmt	NBLn1			EBT			WBT			SBLn1		
Capacity (veh/h)	431			-			-			359		
HCM Lane V/C Ratio	0.021			-			-			0.053		
HCM Ctrl Dly (s/v)	13.5			-			-			15.6		
HCM Lane LOS	B			-			-			C		
HCM 95th %tile Q(veh)	0.1			-			-			0.2		

513: Parcel 2 W. Access & Marine Wy.

						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1239	4	0	1479	0	17
Future Volume (vph)	1239	4	0	1479	0	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	45			45	30	
Link Distance (ft)	520			796	427	
Travel Time (s)	7.9			12.1	9.7	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection						
Int Delay, s/veh	0.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑		↑
Traffic Vol, veh/h	1239	4	0	1479	0	17
Future Vol, veh/h	1239	4	0	1479	0	17
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	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1239	4	0	1479	0	17
Major/Minor	Major1	Major2		Minor1		
Conflicting Flow All	0	0	-	-	-	622
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	-	-	0	-	0	430
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	-	430
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	WB		NB		
HCM Ctrl Dly, s/v	0	0		13.72		
HCM LOS	B					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT		
Capacity (veh/h)	430	-	-	-		
HCM Lane V/C Ratio	0.04	-	-	-		
HCM Ctrl Dly (s/v)	13.7	-	-	-		
HCM Lane LOS	B	-	-	-		
HCM 95th %tile Q(veh)	0.1	-	-	-		

519: TAZ 721 Access Roadway & Parcel 12 S. Access

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	3	24	44	964	638	9
Future Volume (vph)	3	24	44	964	638	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	90			0
Storage Lanes	1	0	1			0
Taper Length (ft)	90		90			
Link Speed (mph)	30			45	45	
Link Distance (ft)	255			404	617	
Travel Time (s)	5.8			6.1	9.3	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

519: TAZ 721 Access Roadway & Parcel 12 S. Access

Intersection						
Int Delay, s/veh	0.5					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	24	44	964	638	9
Future Vol, veh/h	3	24	44	964	638	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	90	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	24	44	964	638	9
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1695	643	647	0	-	0
Stage 1	643	-	-	-	-	-
Stage 2	1052	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	102	474	939	-	-	-
Stage 1	524	-	-	-	-	-
Stage 2	336	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	97	474	939	-	-	-
Mov Cap-2 Maneuver	97	-	-	-	-	-
Stage 1	499	-	-	-	-	-
Stage 2	336	-	-	-	-	-
Approach	EB	NB		SB		
HCM Ctrl Dly, s/v	16.83	0.39		0		
HCM LOS	C					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	939	-	331	-	-	
HCM Lane V/C Ratio	0.047	-	0.082	-	-	
HCM Ctrl Dly (s/v)	9	-	16.8	-	-	
HCM Lane LOS	A	-	C	-	-	
HCM 95th %tile Q(veh)	0.1	-	0.3	-	-	

568: TAZ 721 Access Roadway & Marine Wy.

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↓	↑↑	↓	↑
Traffic Volume (vph)	708	382	266	1003	665	302
Future Volume (vph)	708	382	266	1003	665	302
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		150	200		0	200
Storage Lanes		1	1		1	1
Taper Length (ft)			90		90	
Right Turn on Red		Yes				Yes
Link Speed (mph)	45			45	45	
Link Distance (ft)	481			428	617	
Travel Time (s)	7.3			6.5	9.3	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Shared Lane Traffic (%)						
Turn Type	NA	Perm	Prot	NA	Prot	Perm
Protected Phases	2		1	6	8	
Permitted Phases		2				8
Detector Phase	2	2	1	6	8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	20.5	20.5	9.5	20.5	20.5	20.5
Total Split (s)	20.6	20.6	13.6	34.2	25.8	25.8
Total Split (%)	34.3%	34.3%	22.7%	57.0%	43.0%	43.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	C-Max	C-Max	None	C-Max	Max	Max

Intersection Summary

Area Type: Other

Cycle Length: 60

Actuated Cycle Length: 60

Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green

Natural Cycle: 75

Control Type: Actuated-Coordinated

Splits and Phases: 568: TAZ 721 Access Roadway & Marine Wy.



						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↓	↑↑	↓	↑
Traffic Volume (veh/h)	708	382	266	1003	665	302
Future Volume (veh/h)	708	382	266	1003	665	302
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	708	382	266	1003	665	302
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	954	425	270	1759	632	563
Arrive On Green	0.27	0.27	0.15	0.50	0.35	0.35
Sat Flow, veh/h	3647	1585	1781	3647	1781	1585
Grp Volume(v), veh/h	708	382	266	1003	665	302
Grp Sat Flow(s),veh/h/ln	1777	1585	1781	1777	1781	1585
Q Serve(g_s), s	10.9	13.9	8.9	11.9	21.3	9.1
Cycle Q Clear(g_c), s	10.9	13.9	8.9	11.9	21.3	9.1
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	954	425	270	1759	632	563
V/C Ratio(X)	0.74	0.90	0.98	0.57	1.05	0.54
Avail Cap(c_a), veh/h	954	425	270	1759	632	563
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.1	21.2	25.4	10.7	19.3	15.4
Incr Delay (d2), s/veh	5.2	24.4	50.3	1.3	50.1	3.6
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.5	7.2	7.1	3.7	15.8	3.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	25.3	45.5	75.7	12.0	69.5	19.1
LnGrp LOS	C	D	E	B	F	B
Approach Vol, veh/h	1090			1269	967	
Approach Delay, s/veh	32.4			25.4	53.7	
Approach LOS	C			C	D	
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	13.6	20.6			34.2	25.8
Change Period (Y+Rc), s	4.5	4.5			4.5	4.5
Max Green Setting (Gmax), s	9.1	16.1			29.7	21.3
Max Q Clear Time (g_c+I1), s	10.9	15.9			13.9	23.3
Green Ext Time (p_c), s	0.0	0.1			5.9	0.0
Intersection Summary						
HCM 7th Control Delay, s/veh			35.9			
HCM 7th LOS			D			

582: Parcel 13 E. Access/Lynx & Marine Wy.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	75	1106	38	118	184	333	78	63	661	831	48	116
Future Volume (vph)	75	1106	38	118	184	333	78	63	661	831	48	116
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300		50	200		325	90		90	350		350
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			30			45	
Link Distance (ft)		539			808			400			749	
Travel Time (s)		8.2			12.2			9.1			11.3	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	
Protected Phases	5	2		1	6	7	3	8		7	4	
Permitted Phases			2			6			8			
Detector Phase	5	2	2	1	6	7	3	8	8	7	4	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	9.5	20.5	20.5	9.5	20.5	9.5	9.5	20.5	20.5	9.5	20.5	
Total Split (s)	16.1	40.0	40.0	12.0	35.9	29.0	16.3	39.0	39.0	29.0	51.7	
Total Split (%)	13.4%	33.3%	33.3%	10.0%	29.9%	24.2%	13.6%	32.5%	32.5%	24.2%	43.1%	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	C-Max	C-Max	None	C-Max	None	None	Max	Max	None	Max	

Intersection Summary

Area Type: Other

Cycle Length: 120

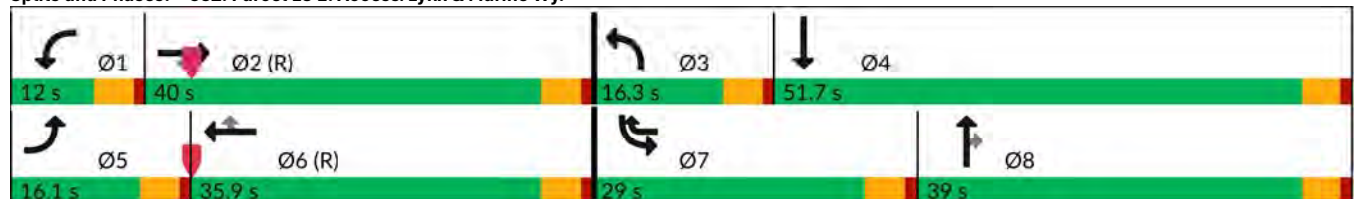
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green

Natural Cycle: 110

Control Type: Actuated-Coordinated

Splits and Phases: 582: Parcel 13 E. Access/Lynx & Marine Wy.



												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	75	1106	38	118	184	333	78	63	661	831	48	116
Future Volume (veh/h)	75	1106	38	118	184	333	78	63	661	831	48	116
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	75	1106	38	118	184	333	78	63	661	831	48	116
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	95	1051	469	111	1084	807	100	538	456	706	212	511
Arrive On Green	0.11	0.59	0.59	0.06	0.30	0.30	0.06	0.29	0.29	0.20	0.44	0.44
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1781	1870	1585	3456	486	1174
Grp Volume(v), veh/h	75	1106	38	118	184	333	78	63	661	831	0	164
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1781	1870	1585	1728	0	1659
Q Serve(g_s), s	4.9	35.5	1.2	7.5	4.6	15.7	5.2	3.0	34.5	24.5	0.0	7.4
Cycle Q Clear(g_c), s	4.9	35.5	1.2	7.5	4.6	15.7	5.2	3.0	34.5	24.5	0.0	7.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.71
Lane Grp Cap(c), veh/h	95	1051	469	111	1084	807	100	538	456	706	0	723
V/C Ratio(X)	0.79	1.05	0.08	1.06	0.17	0.41	0.78	0.12	1.45	1.18	0.00	0.23
Avail Cap(c_a), veh/h	172	1051	469	111	1084	807	175	538	456	706	0	723
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	52.9	24.5	17.5	56.3	30.6	18.3	55.9	31.5	42.8	47.8	0.0	21.2
Incr Delay (d2), s/veh	13.4	42.5	0.3	102.3	0.3	1.6	12.5	0.4	214.7	94.4	0.0	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	2.4	14.6	0.5	6.5	2.0	6.0	2.7	1.4	40.5	19.4	0.0	2.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	66.3	67.0	17.8	158.6	30.9	19.9	68.5	32.0	257.5	142.1	0.0	21.9
LnGrp LOS	E	F	B	F	C	B	E	C	F	F		C
Approach Vol, veh/h	1219			635			802			995		
Approach Delay, s/veh	65.4			48.8			221.4			122.3		
Approach LOS	E			D			F			F		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.0	40.0	11.2	56.8	10.9	41.1	29.0	39.0				
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	7.5	35.5	11.8	47.2	11.6	31.4	24.5	34.5				
Max Q Clear Time (g_c+I1), s	9.5	37.5	7.2	9.4	6.9	17.7	26.5	36.5				
Green Ext Time (p_c), s	0.0	0.0	0.1	0.9	0.0	1.9	0.0	0.0				
Intersection Summary												
HCM 7th Control Delay, s/veh	112.3											
HCM 7th LOS	F											

602: Vertical/Parcel 10 W. Access & Barranca Pkwy.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	14	747	226	129	1211	6	44	1	24	35	7	49
Future Volume (vph)	14	747	226	129	1211	6	44	1	24	35	7	49
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	230		300	355		180	300		300	200		0
Storage Lanes	1		1	0		1	1		1	1		0
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			30			30	
Link Distance (ft)		945			376			379			381	
Travel Time (s)		11.7			4.7			8.6			8.7	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6			8			
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	9.5	20.5	20.5	9.5	20.5	20.5	9.5	20.5	20.5	9.5	20.5	
Total Split (s)	9.5	20.5	20.5	9.5	20.5	20.5	9.5	20.5	20.5	9.5	20.5	
Total Split (%)	15.8%	34.2%	34.2%	15.8%	34.2%	34.2%	15.8%	34.2%	34.2%	15.8%	34.2%	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None	None	None	None	

Intersection Summary

Area Type: Other

Cycle Length: 60

Actuated Cycle Length: 60

Offset: 20.5 (34%), Referenced to phase 2:EBT and 6:WBT, Start of Green

Natural Cycle: 70

Control Type: Actuated-Coordinated

Splits and Phases: 602: Vertical/Parcel 10 W. Access & Barranca Pkwy.



												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	747	226	129	1211	6	44	1	24	35	7	49
Future Volume (veh/h)	14	747	226	129	1211	6	44	1	24	35	7	49
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	14	747	226	129	1211	6	44	1	24	35	7	49
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	31	1784	796	148	2019	900	77	145	123	66	14	101
Arrive On Green	0.01	0.17	0.17	0.08	0.57	0.57	0.04	0.08	0.08	0.04	0.07	0.07
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1781	1870	1585	1781	202	1414
Grp Volume(v), veh/h	14	747	226	129	1211	6	44	1	24	35	0	56
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1781	1870	1585	1781	0	1616
Q Serve(g_s), s	0.5	11.3	7.5	4.3	13.4	0.1	1.5	0.0	0.9	1.2	0.0	2.0
Cycle Q Clear(g_c), s	0.5	11.3	7.5	4.3	13.4	0.1	1.5	0.0	0.9	1.2	0.0	2.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.88
Lane Grp Cap(c), veh/h	31	1784	796	148	2019	900	77	145	123	66	0	115
V/C Ratio(X)	0.45	0.42	0.28	0.87	0.60	0.01	0.57	0.01	0.19	0.53	0.00	0.49
Avail Cap(c_a), veh/h	148	1784	796	148	2019	900	148	499	423	148	0	431
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.71	0.71	0.71	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	29.5	17.2	15.6	27.2	8.5	5.6	28.2	25.5	25.9	28.4	0.0	26.8
Incr Delay (d2), s/veh	7.2	0.5	0.6	38.6	1.3	0.0	6.5	0.0	0.8	6.6	0.0	3.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	4.3	2.8	3.2	3.3	0.0	0.7	0.0	0.3	0.6	0.0	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	36.7	17.7	16.2	65.8	9.8	5.6	34.6	25.5	26.7	35.0	0.0	30.0
LnGrp LOS	D	B	B	E	A	A	C	C	C	C		C
Approach Vol, veh/h	987			1346			69			91		
Approach Delay, s/veh	17.6			15.2			31.7			31.9		
Approach LOS	B			B			C			C		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.5	34.6	7.1	8.8	5.5	38.6	6.7	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	5.0	16.0	5.0	16.0	5.0	16.0	5.0	16.0				
Max Q Clear Time (g_c+I1), s	6.3	13.3	3.5	4.0	2.5	15.4	3.2	2.9				
Green Ext Time (p_c), s	0.0	1.4	0.0	0.1	0.0	0.4	0.0	0.0				
Intersection Summary												
HCM 7th Control Delay, s/veh	17.2											
HCM 7th LOS	B											

603: Launch/Parcel 11/City-1 Access & Barranca Pkwy.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	448	482	132	1624	4	85	1	11	10	6	77
Future Volume (vph)	15	448	482	132	1624	4	85	1	11	10	6	77
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300		95	240		300	290		50	200		200
Storage Lanes	1		1	1		1	2		1	1		1
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			30			30	
Link Distance (ft)		570			921			403			367	
Travel Time (s)		7.1			11.4			9.2			8.3	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	20.5	20.5	9.5	20.5	20.5	9.5	20.5	20.5	9.5	20.5	20.5
Total Split (s)	10.0	65.7	65.7	22.0	77.7	77.7	11.3	22.8	22.8	9.5	21.0	21.0
Total Split (%)	8.3%	54.8%	54.8%	18.3%	64.8%	64.8%	9.4%	19.0%	19.0%	7.9%	17.5%	17.5%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	Max	Max	None	None	None

Intersection Summary

Area Type: Other

Cycle Length: 120

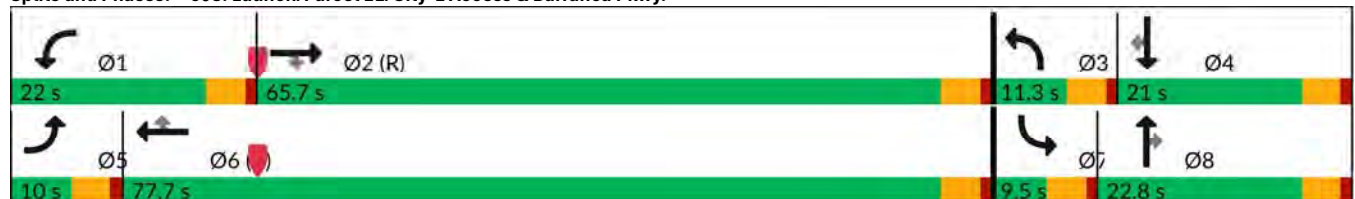
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Splits and Phases: 603: Launch/Parcel 11/City-1 Access & Barranca Pkwy.

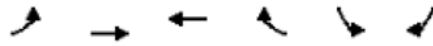


												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	448	482	132	1624	4	85	1	11	10	6	77
Future Volume (veh/h)	15	448	482	132	1624	4	85	1	11	10	6	77
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	15	448	482	132	1624	4	85	1	11	10	6	77
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	29	2122	947	158	2378	1061	136	285	242	21	234	198
Arrive On Green	0.03	1.00	1.00	0.18	1.00	1.00	0.04	0.15	0.15	0.01	0.13	0.13
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	3456	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	15	448	482	132	1624	4	85	1	11	10	6	77
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1728	1870	1585	1781	1870	1585
Q Serve(g_s), s	1.0	0.0	0.2	8.6	0.0	0.0	2.9	0.1	0.7	0.7	0.3	5.4
Cycle Q Clear(g_c), s	1.0	0.0	0.2	8.6	0.0	0.0	2.9	0.1	0.7	0.7	0.3	5.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	29	2122	947	158	2378	1061	136	285	242	21	234	198
V/C Ratio(X)	0.51	0.21	0.51	0.84	0.68	0.00	0.63	0.00	0.05	0.48	0.03	0.39
Avail Cap(c_a), veh/h	82	2122	947	260	2378	1061	196	285	242	74	257	218
HCM Platoon Ratio	1.67	1.67	1.67	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.32	0.32	0.32	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	57.9	0.1	0.1	48.6	0.0	0.0	56.8	43.1	43.4	58.9	46.1	48.3
Incr Delay (d2), s/veh	13.3	0.2	2.0	4.1	0.5	0.0	4.7	0.0	0.4	15.7	0.0	1.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.1	0.5	3.5	0.2	0.0	1.4	0.0	0.3	0.4	0.2	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	71.1	0.3	2.0	52.6	0.5	0.0	61.5	43.1	43.8	74.6	46.1	49.5
LnGrp LOS	E	A	A	D	A	A	E	D	D	E	D	D
Approach Vol, veh/h	945			1760			97			93		
Approach Delay, s/veh	2.3			4.4			59.3			52.0		
Approach LOS	A			A			E			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.1	76.2	9.2	19.5	6.5	84.8	5.9	22.8				
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	17.5	61.2	6.8	16.5	5.5	73.2	5.0	18.3				
Max Q Clear Time (g_c+I1), s	10.6	2.2	4.9	7.4	3.0	2.0	2.7	2.7				
Green Ext Time (p_c), s	0.2	4.7	0.0	0.1	0.0	17.6	0.0	0.0				
Intersection Summary												
HCM 7th Control Delay, s/veh	7.1											
HCM 7th LOS	A											

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			 			 
Traffic Volume (vph)	0	34	2041	44	20	1003
Future Volume (vph)	0	34	2041	44	20	1003
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		0	150	
Storage Lanes	0	1		0	1	
Taper Length (ft)	90				90	
Link Speed (mph)	30		45			45
Link Distance (ft)	247		523			808
Travel Time (s)	5.6		7.9			12.2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection						
Int Delay, s/veh	0.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	34	2041	44	20	1003
Future Vol, veh/h	0	34	2041	44	20	1003
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	150	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	34	2041	44	20	1003
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	-	1043	0	0	2085	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	4.14	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	0	226	-	-	262	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	226	-	-	262	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	WB	NB		SB		
HCM Ctrl Dly, s/v	23.71	0		0.39		
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBR WBLn1	SBL	SBT		
Capacity (veh/h)	-	-	226	262	-	
HCM Lane V/C Ratio	-	-	0.15	0.076	-	
HCM Ctrl Dly (s/v)	-	-	23.7	19.9	-	
HCM Lane LOS	-	-	C	C	-	
HCM 95th %tile Q(veh)	-	-	0.5	0.2	-	

479: Barranca Pkwy/Barranca Pkwy. & Parcel 10 E. Access



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑			↑
Traffic Volume (vph)	0	1160	917	7	0	8
Future Volume (vph)	0	1160	917	7	0	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)		55	55		30	
Link Distance (ft)		376	202		261	
Travel Time (s)		4.7	2.5		5.9	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑			↑
Traffic Vol, veh/h	0	1160	917	7	0	8
Future Vol, veh/h	0	1160	917	7	0	8
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	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1160	917	7	0	8
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	-	0	-	0	-	462
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	-	0	547
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	547
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB		WB		SB	
HCM Ctrl Dly, s/v	0		0		11.68	
HCM LOS					B	
Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1		
Capacity (veh/h)	-	-	-	547		
HCM Lane V/C Ratio	-	-	-	0.015		
HCM Ctrl Dly (s/v)	-	-	-	11.7		
HCM Lane LOS	-	-	-	B		
HCM 95th %tile Q(veh)	-	-	-	0		

496: Parcel 13 W. Access & Marine Wy.

						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	642	2	0	1091	0	16
Future Volume (vph)	642	2	0	1091	0	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	45			45	30	
Link Distance (ft)	184			539	282	
Travel Time (s)	2.8			8.2	6.4	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection						
Int Delay, s/veh	0.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↱			↑↑↱		↱
Traffic Vol, veh/h	642	2	0	1091	0	16
Future Vol, veh/h	642	2	0	1091	0	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	642	2	0	1091	0	16
Major/Minor	Major1	Major2		Minor1		
Conflicting Flow All	0	0	-	-	-	322
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	-	-	0	-	0	674
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	-	674
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	WB		NB		
HCM Ctrl Dly, s/v	0	0		10.47		
HCM LOS	B					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT		
Capacity (veh/h)	674	-	-	-		
HCM Lane V/C Ratio	0.024	-	-	-		
HCM Ctrl Dly (s/v)	10.5	-	-	-		
HCM Lane LOS	B	-	-	-		
HCM 95th %tile Q(veh)	0.1	-	-	-		

498: MP Mod (BA 619) Access & Harrier

						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	65	3	12	173	2	6
Future Volume (vph)	65	3	12	173	2	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	45			45	30	
Link Distance (ft)	317			208	248	
Travel Time (s)	4.8			3.2	5.6	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection						
Int Delay, s/veh	0.6					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	65	3	12	173	2	6
Future Vol, veh/h	65	3	12	173	2	6
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	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	65	3	12	173	2	6
Major/Minor	Major1	Major2		Minor1		
Conflicting Flow All	0	0	68	0	264	67
Stage 1	-	-	-	-	67	-
Stage 2	-	-	-	-	197	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1533	-	726	997
Stage 1	-	-	-	-	956	-
Stage 2	-	-	-	-	836	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1533	-	719	997
Mov Cap-2 Maneuver	-	-	-	-	719	-
Stage 1	-	-	-	-	956	-
Stage 2	-	-	-	-	829	-
Approach	EB	WB		NB		
HCM Ctrl Dly, s/v	0	0.48		8.99		
HCM LOS	A					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	909	-	-	117	-	
HCM Lane V/C Ratio	0.009	-	-	0.008	-	
HCM Ctrl Dly (s/v)	9	-	-	7.4	0	
HCM Lane LOS	A	-	-	A	A	
HCM 95th %tile Q(veh)	0	-	-	0	-	

499: Parcel 12 W. Access & Marine Wy.

						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1519	21	0	1230	0	27
Future Volume (vph)	1519	21	0	1230	0	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	45			45	30	
Link Distance (ft)	390			481	289	
Travel Time (s)	5.9			7.3	6.6	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection						
Int Delay, s/veh	0.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑		↑
Traffic Vol, veh/h	1519	21	0	1230	0	27
Future Vol, veh/h	1519	21	0	1230	0	27
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	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1519	21	0	1230	0	27
Major/Minor	Major1	Major2		Minor1		
Conflicting Flow All	0	0	-	-	-	770
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	-	-	0	-	0	343
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	-	343
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	WB		NB		
HCM Ctrl Dly, s/v	0	0		16.38		
HCM LOS	C					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT		
Capacity (veh/h)	343	-	-	-		
HCM Lane V/C Ratio	0.079	-	-	-		
HCM Ctrl Dly (s/v)	16.4	-	-	-		
HCM Lane LOS	C	-	-	-		
HCM 95th %tile Q(veh)	0.3	-	-	-		

503: Parcel 2 E. Access/Parcel 3 S. Access & Marine Wy.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	47	1337	31	77	1164	71	25	2	36	139	5	78
Future Volume (vph)	47	1337	31	77	1164	71	25	2	36	139	5	78
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		150	430		50	200		0	250		0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		796			617			297			340	
Travel Time (s)		12.1			9.3			6.8			7.7	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases			2			6	8			4		
Detector Phase	5	2	2	1	6	6	8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Minimum Split (s)	11.0	22.5	22.5	9.5	24.0	24.0	20.5	20.5		22.0	22.0	
Total Split (s)	14.0	73.0	73.0	18.0	77.0	77.0	29.0	29.0		29.0	29.0	
Total Split (%)	11.7%	60.8%	60.8%	15.0%	64.2%	64.2%	24.2%	24.2%		24.2%	24.2%	
Yellow Time (s)	4.0	4.0	4.0	3.5	4.0	4.0	3.5	3.5		4.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	1.0	2.0	2.0	1.0	1.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0	6.0	4.5	6.0	6.0	4.5	4.5		6.0	6.0	
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None		None	None	

Intersection Summary

Area Type: Other

Cycle Length: 120

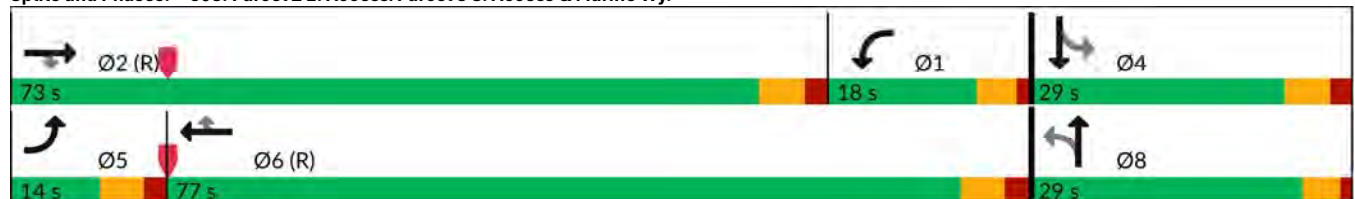
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green

Natural Cycle: 65

Control Type: Actuated-Coordinated

Splits and Phases: 503: Parcel 2 E. Access/Parcel 3 S. Access & Marine Wy.



503: Parcel 2 E. Access/Parcel 3 S. Access & Marine Wy.

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	47	1337	31	77	1164	71	25	2	36	139	5	78
Future Volume (veh/h)	47	1337	31	77	1164	71	25	2	36	139	5	78
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	47	1337	31	77	1164	71	25	2	36	139	5	78
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	61	1984	885	269	2400	1070	183	12	213	224	14	212
Arrive On Green	0.03	0.56	0.56	0.15	0.68	0.68	0.14	0.14	0.14	0.14	0.14	0.14
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1315	84	1514	1370	96	1503
Grp Volume(v), veh/h	47	1337	31	77	1164	71	25	0	38	139	0	83
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1315	0	1598	1370	0	1600
Q Serve(g_s), s	3.1	32.0	1.1	4.6	19.0	1.8	2.1	0.0	2.5	11.9	0.0	5.6
Cycle Q Clear(g_c), s	3.1	32.0	1.1	4.6	19.0	1.8	7.8	0.0	2.5	14.4	0.0	5.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.95	1.00		0.94
Lane Grp Cap(c), veh/h	61	1984	885	269	2400	1070	183	0	225	224	0	225
V/C Ratio(X)	0.78	0.67	0.04	0.29	0.49	0.07	0.14	0.00	0.17	0.62	0.00	0.37
Avail Cap(c_a), veh/h	119	1984	885	269	2400	1070	267	0	326	294	0	307
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	57.5	18.8	11.9	45.2	9.4	6.6	50.2	0.0	45.4	51.7	0.0	46.7
Incr Delay (d2), s/veh	18.8	1.9	0.1	0.6	0.7	0.1	0.3	0.0	0.4	2.8	0.0	1.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	12.5	0.4	2.0	6.5	0.6	0.7	0.0	1.0	4.3	0.0	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	76.3	20.6	12.0	45.8	10.1	6.7	50.6	0.0	45.7	54.5	0.0	47.7
LnGrp LOS	E	C	B	D	B	A	D		D	D		D
Approach Vol, veh/h	1415			1312			63			222		
Approach Delay, s/veh	22.3			12.0			47.7			52.0		
Approach LOS	C			B			D			D		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	24.1	73.0		22.9	10.1	87.0		22.9				
Change Period (Y+Rc), s	6.0	* 6		6.0	6.0	6.0		* 6				
Max Green Setting (Gmax), s	13.5	* 67		23.0	8.0	71.0		* 25				
Max Q Clear Time (g_c+I1), s	6.6	34.0		16.4	5.1	21.0		9.8				
Green Ext Time (p_c), s	0.1	7.1		0.4	0.0	6.0		0.2				
Intersection Summary												
HCM 7th Control Delay, s/veh	20.5											
HCM 7th LOS	C											

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

504: Parcel 7 W. Access/City-2 W. Access & Marine Wy.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	44	1411	80	40	1217	14	50	1	19	10	1	14
Future Volume (vph)	44	1411	80	40	1217	14	50	1	19	10	1	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		50	210		50	260		0	150		0
Storage Lanes	1		0	1		1	1		0	1		0
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		799			581			431			414	
Travel Time (s)		12.1			8.8			9.8			9.4	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases			2			6	8			4		
Detector Phase	5	2	2	1	6	6	8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Minimum Split (s)	22.0	22.0	22.0	9.5	22.0	22.0	20.5	20.5		22.0	22.0	
Total Split (s)	24.0	83.0	83.0	14.0	73.0	73.0	23.0	23.0		23.0	23.0	
Total Split (%)	20.0%	69.2%	69.2%	11.7%	60.8%	60.8%	19.2%	19.2%		19.2%	19.2%	
Yellow Time (s)	4.0	4.0	4.0	3.5	4.0	4.0	3.5	3.5		4.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	1.0	2.0	2.0	1.0	1.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0	6.0	4.5	6.0	6.0	4.5	4.5		6.0	6.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None		Max	Max	

Intersection Summary

Area Type: Other

Cycle Length: 120

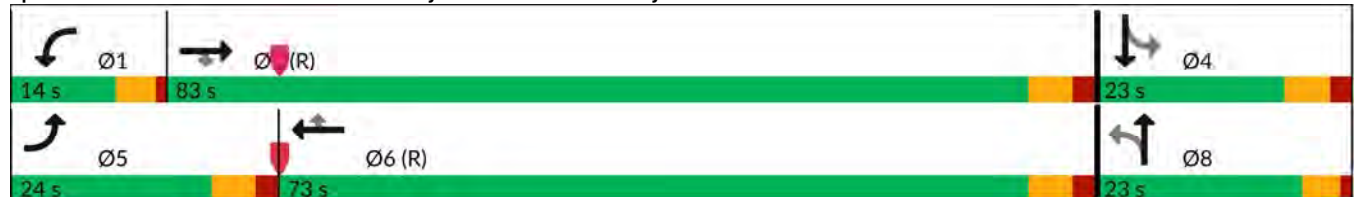
Actuated Cycle Length: 120

Offset: 50 (42%), Referenced to phase 2:EBT and 6:WBT, Start of Green

Natural Cycle: 75

Control Type: Actuated-Coordinated

Splits and Phases: 504: Parcel 7 W. Access/City-2 W. Access & Marine Wy.



												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	44	1411	80	40	1217	14	50	1	19	10	1	14
Future Volume (veh/h)	44	1411	80	40	1217	14	50	1	19	10	1	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	44	1411	80	40	1217	14	50	1	19	10	1	14
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	74	2453	1094	55	2369	1057	247	11	215	242	15	212
Arrive On Green	0.04	0.69	0.69	0.03	0.67	0.67	0.14	0.14	0.14	0.14	0.14	0.14
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1398	80	1517	1392	107	1495
Grp Volume(v), veh/h	44	1411	80	40	1217	14	50	0	20	10	0	15
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1398	0	1597	1392	0	1601
Q Serve(g_s), s	2.9	24.5	2.0	2.7	20.8	0.4	3.9	0.0	1.3	0.8	0.0	1.0
Cycle Q Clear(g_c), s	2.9	24.5	2.0	2.7	20.8	0.4	4.8	0.0	1.3	2.1	0.0	1.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.95	1.00		0.93
Lane Grp Cap(c), veh/h	74	2453	1094	55	2369	1057	247	0	226	242	0	227
V/C Ratio(X)	0.59	0.58	0.07	0.73	0.51	0.01	0.20	0.00	0.09	0.04	0.00	0.07
Avail Cap(c_a), veh/h	267	2453	1094	141	2369	1057	264	0	246	242	0	227
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)	0.81	0.81	0.81	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	56.5	9.6	6.1	57.7	10.1	6.7	46.7	0.0	44.8	45.7	0.0	44.6
Incr Delay (d2), s/veh	6.0	0.8	0.1	17.0	0.8	0.0	0.4	0.0	0.2	0.3	0.0	0.6
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	8.2	0.6	1.4	7.2	0.1	1.4	0.0	0.5	0.3	0.0	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	62.5	10.4	6.2	74.7	10.9	6.7	47.1	0.0	44.9	46.0	0.0	45.2
LnGrp LOS	E	B	A	E	B	A	D		D	D		D
Approach Vol, veh/h	1535			1271			70			25		
Approach Delay, s/veh	11.6			12.9			46.5			45.5		
Approach LOS	B			B			D			D		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.2	88.8		23.0	11.0	86.0		23.0				
Change Period (Y+Rc), s	4.5	6.0		6.0	6.0	6.0		* 6				
Max Green Setting (Gmax), s	9.5	77.0		17.0	18.0	67.0		* 19				
Max Q Clear Time (g_c+I1), s	4.7	26.5		4.1	4.9	22.8		6.8				
Green Ext Time (p_c), s	0.0	8.2		0.0	0.0	6.3		0.1				
Intersection Summary												
HCM 7th Control Delay, s/veh	13.3											
HCM 7th LOS	B											
Notes												
* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.												

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1420	20	0	1263	4	0	0	5	0	0	8
Future Volume (vph)	0	1420	20	0	1263	4	0	0	5	0	0	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		581			520			365			249	
Travel Time (s)		8.8			7.9			8.3			5.7	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Shared Lane Traffic (%)												
Sign Control		Free			Free			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection												
Int Delay, s/veh	0.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑			↑↑				↑			↑
Traffic Vol, veh/h	0	1420	20	0	1263	4	0	0	5	0	0	8
Future Vol, veh/h	0	1420	20	0	1263	4	0	0	5	0	0	8
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	-	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	1420	20	0	1263	4	0	0	5	0	0	8
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	-	-	0	-	-	720	-	-	634
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	-	-	6.94	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	-	-	3.32	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	0	-	-	0	0	370	0	0	422
Stage 1	0	-	-	0	-	-	0	0	-	0	0	-
Stage 2	0	-	-	0	-	-	0	0	-	0	0	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	-	-	-	-	-	-	-	-	370	-	-	422
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Ctrl Dly, s/v	0			0			14.85			13.69		
HCM LOS							B			B		
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT	WBR	SBLn1						
Capacity (veh/h)	370	-	-	-	-	422						
HCM Lane V/C Ratio	0.014	-	-	-	-	0.019						
HCM Ctrl Dly (s/v)	14.9	-	-	-	-	13.7						
HCM Lane LOS	B	-	-	-	-	B						
HCM 95th %tile Q(veh)	0	-	-	-	-	0.1						

513: Parcel 2 W. Access & Marine Wy.

						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1406	20	0	1267	0	9
Future Volume (vph)	1406	20	0	1267	0	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	45			45	30	
Link Distance (ft)	520			796	427	
Travel Time (s)	7.9			12.1	9.7	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection						
Int Delay, s/veh	0					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑		↑
Traffic Vol, veh/h	1406	20	0	1267	0	9
Future Vol, veh/h	1406	20	0	1267	0	9
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	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1406	20	0	1267	0	9
Major/Minor	Major1	Major2		Minor1		
Conflicting Flow All	0	0	-	-	-	713
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	-	-	0	-	0	374
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	-	374
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	WB		NB		
HCM Ctrl Dly, s/v	0	0		14.85		
HCM LOS	B					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT		
Capacity (veh/h)	374	-	-	-		
HCM Lane V/C Ratio	0.024	-	-	-		
HCM Ctrl Dly (s/v)	14.9	-	-	-		
HCM Lane LOS	B	-	-	-		
HCM 95th %tile Q(veh)	0.1	-	-	-		

519: TAZ 721 Access Roadway & Parcel 12 S. Access

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	7	64	66	772	867	25
Future Volume (vph)	7	64	66	772	867	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	90			0
Storage Lanes	1	0	1			0
Taper Length (ft)	90		90			
Link Speed (mph)	30			45	45	
Link Distance (ft)	255			404	617	
Travel Time (s)	5.8			6.1	9.3	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

519: TAZ 721 Access Roadway & Parcel 12 S. Access

Intersection						
Int Delay, s/veh	1.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	7	64	66	772	867	25
Future Vol, veh/h	7	64	66	772	867	25
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	90	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	7	64	66	772	867	25
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1784	880	892	0	-	0
Stage 1	880	-	-	-	-	-
Stage 2	904	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	90	346	760	-	-	-
Stage 1	406	-	-	-	-	-
Stage 2	395	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	82	346	760	-	-	-
Mov Cap-2 Maneuver	82	-	-	-	-	-
Stage 1	371	-	-	-	-	-
Stage 2	395	-	-	-	-	-
Approach	EB	NB		SB		
HCM Ctrl Dly, s/v	23.68	0.8		0		
HCM LOS	C					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	760	-	263	-	-	
HCM Lane V/C Ratio	0.087	-	0.27	-	-	
HCM Ctrl Dly (s/v)	10.2	-	23.7	-	-	
HCM Lane LOS	B	-	C	-	-	
HCM 95th %tile Q(veh)	0.3	-	1.1	-	-	

568: TAZ 721 Access Roadway & Marine Wy.

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↓	↑↑	↓	↑
Traffic Volume (vph)	887	657	236	676	554	224
Future Volume (vph)	887	657	236	676	554	224
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		150	200		0	200
Storage Lanes		1	1		1	1
Taper Length (ft)			90		90	
Right Turn on Red		Yes				Yes
Link Speed (mph)	45			45	45	
Link Distance (ft)	481			428	617	
Travel Time (s)	7.3			6.5	9.3	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Shared Lane Traffic (%)						
Turn Type	NA	Perm	Prot	NA	Prot	Perm
Protected Phases	2		1	6	8	
Permitted Phases		2				8
Detector Phase	2	2	1	6	8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	20.5	20.5	9.5	20.5	20.5	20.5
Total Split (s)	46.0	46.0	25.0	71.0	49.0	49.0
Total Split (%)	38.3%	38.3%	20.8%	59.2%	40.8%	40.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	C-Max	C-Max	None	C-Max	Max	Max

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green

Natural Cycle: 75

Control Type: Actuated-Coordinated

Splits and Phases: 568: TAZ 721 Access Roadway & Marine Wy.



						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↓	↑↑	↓	↑
Traffic Volume (veh/h)	887	657	236	676	554	224
Future Volume (veh/h)	887	657	236	676	554	224
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	887	657	236	676	554	224
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1309	584	264	1969	661	588
Arrive On Green	0.37	0.37	0.15	0.55	0.37	0.37
Sat Flow, veh/h	3647	1585	1781	3647	1781	1585
Grp Volume(v), veh/h	887	657	236	676	554	224
Grp Sat Flow(s),veh/h/ln	1777	1585	1781	1777	1781	1585
Q Serve(g_s), s	25.2	44.2	15.6	12.6	34.1	12.4
Cycle Q Clear(g_c), s	25.2	44.2	15.6	12.6	34.1	12.4
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1309	584	264	1969	661	588
V/C Ratio(X)	0.68	1.12	0.89	0.34	0.84	0.38
Avail Cap(c_a), veh/h	1309	584	304	1969	661	588
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.9	37.9	50.2	14.7	34.5	27.7
Incr Delay (d2), s/veh	2.8	76.6	24.6	0.5	12.1	1.9
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.9	28.6	8.6	4.8	16.2	4.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	34.7	114.5	74.8	15.2	46.6	29.5
LnGrp LOS	C	F	E	B	D	C
Approach Vol, veh/h	1544			912	778	
Approach Delay, s/veh	68.7			30.6	41.7	
Approach LOS	E			C	D	
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	22.3	48.7			71.0	49.0
Change Period (Y+Rc), s	4.5	4.5			4.5	4.5
Max Green Setting (Gmax), s	20.5	41.5			66.5	44.5
Max Q Clear Time (g_c+I1), s	17.6	46.2			14.6	36.1
Green Ext Time (p_c), s	0.2	0.0			4.8	1.8
Intersection Summary						
HCM 7th Control Delay, s/veh			51.4			
HCM 7th LOS			D			

582: Parcel 13 E. Access/Lynx & Marine Wy.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	129	462	67	476	920	678	51	63	173	388	80	120
Future Volume (vph)	129	462	67	476	920	678	51	63	173	388	80	120
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300		50	200		325	90		90	350		350
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			30			45	
Link Distance (ft)		539			808			400			749	
Travel Time (s)		8.2			12.2			9.1			11.3	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	
Protected Phases	5	2		1	6	7	3	8		7	4	
Permitted Phases			2			6			8			
Detector Phase	5	2	2	1	6	7	3	8	8	7	4	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	9.5	20.5	20.5	9.5	20.5	9.5	9.5	20.5	20.5	9.5	20.5	
Total Split (s)	20.6	27.5	27.5	46.0	52.9	26.0	13.5	20.5	20.5	26.0	33.0	
Total Split (%)	17.2%	22.9%	22.9%	38.3%	44.1%	21.7%	11.3%	17.1%	17.1%	21.7%	27.5%	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	C-Max	C-Max	None	C-Max	None	None	Max	Max	None	Max	

Intersection Summary

Area Type: Other

Cycle Length: 120

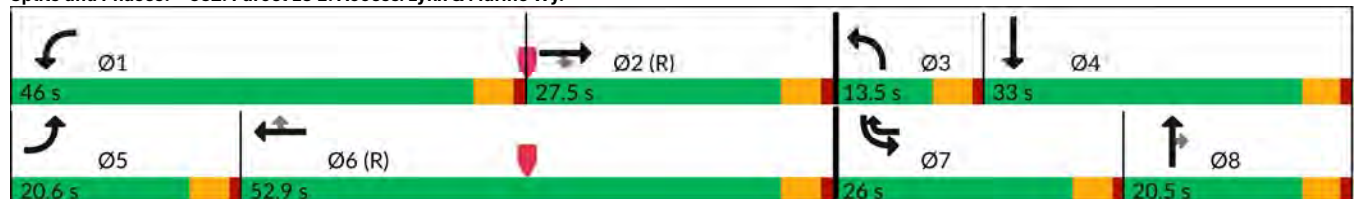
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Splits and Phases: 582: Parcel 13 E. Access/Lynx & Marine Wy.



												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	129	462	67	476	920	678	51	63	173	388	80	120
Future Volume (veh/h)	129	462	67	476	920	678	51	63	173	388	80	120
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	129	462	67	476	920	678	51	63	173	388	80	120
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	157	1030	460	509	1732	983	66	265	225	458	160	241
Arrive On Green	0.06	0.19	0.19	0.29	0.49	0.49	0.04	0.14	0.14	0.13	0.24	0.24
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1781	1870	1585	3456	675	1013
Grp Volume(v), veh/h	129	462	67	476	920	678	51	63	173	388	0	200
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1781	1870	1585	1728	0	1688
Q Serve(g_s), s	8.6	13.8	4.2	31.3	21.5	34.1	3.4	3.6	12.6	13.2	0.0	12.3
Cycle Q Clear(g_c), s	8.6	13.8	4.2	31.3	21.5	34.1	3.4	3.6	12.6	13.2	0.0	12.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.60
Lane Grp Cap(c), veh/h	157	1030	460	509	1732	983	66	265	225	458	0	401
V/C Ratio(X)	0.82	0.45	0.15	0.94	0.53	0.69	0.77	0.24	0.77	0.85	0.00	0.50
Avail Cap(c_a), veh/h	239	1030	460	616	1732	983	134	265	225	619	0	401
HCM Platoon Ratio	0.67	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	55.5	39.9	36.0	41.8	21.3	15.1	57.3	45.7	49.6	50.9	0.0	39.6
Incr Delay (d2), s/veh	12.7	1.4	0.7	19.7	1.2	4.0	17.3	2.1	22.0	8.1	0.0	4.4
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	4.4	6.4	1.7	16.0	8.7	12.7	1.9	1.8	6.4	6.0	0.0	5.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	68.2	41.3	36.7	61.5	22.4	19.1	74.6	47.8	71.6	58.9	0.0	44.0
LnGrp LOS	E	D	D	E	C	B	E	D	E	E		D
Approach Vol, veh/h	658			2074			287			588		
Approach Delay, s/veh	46.1			30.3			66.9			53.8		
Approach LOS	D			C			E			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	38.8	39.3	8.9	33.0	15.1	63.0	20.4	21.5				
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	41.5	23.0	9.0	28.5	16.1	48.4	21.5	16.0				
Max Q Clear Time (g_c+I1), s	33.3	15.8	5.4	14.3	10.6	36.1	15.2	14.6				
Green Ext Time (p_c), s	1.0	1.7	0.0	0.8	0.1	6.8	0.7	0.1				
Intersection Summary												
HCM 7th Control Delay, s/veh	39.9											
HCM 7th LOS	D											

602: Vertical/Parcel 10 W. Access & Barranca Pkwy.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	49	1027	94	53	851	21	175	4	116	17	2	17
Future Volume (vph)	49	1027	94	53	851	21	175	4	116	17	2	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	230		300	355		180	300		300	200		0
Storage Lanes	1		1	0		1	1		1	1		0
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			30			30	
Link Distance (ft)		945			376			379			381	
Travel Time (s)		11.7			4.7			8.6			8.7	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6			8			
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	9.5	20.5	20.5	9.5	20.5	20.5	9.5	20.5	20.5	9.5	20.5	
Total Split (s)	9.5	20.5	20.5	9.5	20.5	20.5	9.5	20.5	20.5	9.5	20.5	
Total Split (%)	15.8%	34.2%	34.2%	15.8%	34.2%	34.2%	15.8%	34.2%	34.2%	15.8%	34.2%	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None	None	None	None	

Intersection Summary

Area Type: Other

Cycle Length: 60

Actuated Cycle Length: 60

Offset: 20.5 (34%), Referenced to phase 2:EBT and 6:WBT, Start of Green

Natural Cycle: 75

Control Type: Actuated-Coordinated

Splits and Phases: 602: Vertical/Parcel 10 W. Access & Barranca Pkwy.



												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	49	1027	94	53	851	21	175	4	116	17	2	17
Future Volume (veh/h)	49	1027	94	53	851	21	175	4	116	17	2	17
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	49	1027	94	53	851	21	175	4	116	17	2	17
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	83	1744	778	87	1752	781	148	262	222	37	13	111
Arrive On Green	0.09	0.98	0.98	0.05	0.49	0.49	0.08	0.14	0.14	0.02	0.08	0.08
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1781	1870	1585	1781	170	1441
Grp Volume(v), veh/h	49	1027	94	53	851	21	175	4	116	17	0	19
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1781	1870	1585	1781	0	1611
Q Serve(g_s), s	1.6	0.8	0.1	1.8	9.6	0.4	5.0	0.1	4.1	0.6	0.0	0.7
Cycle Q Clear(g_c), s	1.6	0.8	0.1	1.8	9.6	0.4	5.0	0.1	4.1	0.6	0.0	0.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.89
Lane Grp Cap(c), veh/h	83	1744	778	87	1752	781	148	262	222	37	0	124
V/C Ratio(X)	0.59	0.59	0.12	0.61	0.49	0.03	1.18	0.02	0.52	0.46	0.00	0.15
Avail Cap(c_a), veh/h	148	1744	778	148	1752	781	148	499	423	148	0	430
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.86	0.86	0.86	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	26.7	0.3	0.3	28.0	10.1	7.8	27.5	22.2	23.9	29.1	0.0	25.9
Incr Delay (d2), s/veh	5.7	1.3	0.3	6.7	1.0	0.1	130.0	0.0	1.9	8.9	0.0	0.6
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.4	0.1	0.8	2.7	0.1	7.4	0.0	1.5	0.3	0.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	32.3	1.6	0.6	34.7	11.1	7.9	157.5	22.3	25.9	37.9	0.0	26.4
LnGrp LOS	C	A	A	C	B	A	F	C	C	D		C
Approach Vol, veh/h	1170			925			295			36		
Approach Delay, s/veh	2.8			12.4			103.9			31.9		
Approach LOS	A			B			F			C		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.4	33.9	9.5	9.1	7.3	34.1	5.7	12.9				
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	5.0	16.0	5.0	16.0	5.0	16.0	5.0	16.0				
Max Q Clear Time (g_c+I1), s	3.8	2.8	7.0	2.7	3.6	11.6	2.6	6.1				
Green Ext Time (p_c), s	0.0	5.5	0.0	0.0	0.0	2.0	0.0	0.2				
Intersection Summary												
HCM 7th Control Delay, s/veh	19.2											
HCM 7th LOS	B											

603: Launch/Parcel 11/City-1 Access & Barranca Pkwy.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	56	1338	192	40	757	12	287	3	102	10	1	27
Future Volume (vph)	56	1338	192	40	757	12	287	3	102	10	1	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300		95	240		300	290		50	200		200
Storage Lanes	1		1	1		1	2		1	1		1
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			30			30	
Link Distance (ft)		570			921			403			367	
Travel Time (s)		7.1			11.4			9.2			8.3	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	20.5	20.5	9.5	20.5	20.5	9.5	20.5	20.5	9.5	20.5	20.5
Total Split (s)	14.0	66.5	66.5	12.0	64.5	64.5	21.0	32.0	32.0	9.5	20.5	20.5
Total Split (%)	11.7%	55.4%	55.4%	10.0%	53.8%	53.8%	17.5%	26.7%	26.7%	7.9%	17.1%	17.1%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	Max	Max	None	None	None

Intersection Summary

Area Type: Other

Cycle Length: 120

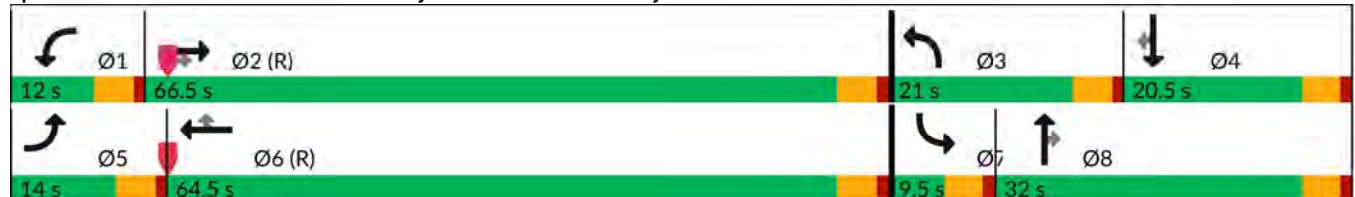
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green

Natural Cycle: 80

Control Type: Actuated-Coordinated

Splits and Phases: 603: Launch/Parcel 11/City-1 Access & Barranca Pkwy.



												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	56	1338	192	40	757	12	287	3	102	10	1	27
Future Volume (veh/h)	56	1338	192	40	757	12	287	3	102	10	1	27
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	56	1338	192	40	757	12	287	3	102	10	1	27
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	72	2055	917	55	2021	901	351	429	363	21	261	221
Arrive On Green	0.08	1.00	1.00	0.02	0.38	0.38	0.10	0.23	0.23	0.01	0.14	0.14
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	3456	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	56	1338	192	40	757	12	287	3	102	10	1	27
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1728	1870	1585	1781	1870	1585
Q Serve(g_s), s	3.7	0.0	0.0	2.7	18.5	0.6	9.8	0.1	6.4	0.7	0.1	1.8
Cycle Q Clear(g_c), s	3.7	0.0	0.0	2.7	18.5	0.6	9.8	0.1	6.4	0.7	0.1	1.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	72	2055	917	55	2021	901	351	429	363	21	261	221
V/C Ratio(X)	0.78	0.65	0.21	0.73	0.37	0.01	0.82	0.01	0.28	0.48	0.00	0.12
Avail Cap(c_a), veh/h	141	2055	917	111	2021	901	475	429	363	74	261	221
HCM Platoon Ratio	2.00	2.00	2.00	0.67	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.88	0.88	0.88	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.6	0.0	0.0	58.3	21.7	16.2	52.8	35.7	38.1	58.9	44.5	45.2
Incr Delay (d2), s/veh	16.4	1.6	0.5	15.2	0.5	0.0	7.9	0.0	1.9	15.7	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	1.9	0.5	0.1	1.4	8.1	0.2	4.6	0.1	2.7	0.4	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	71.1	1.6	0.5	73.5	22.2	16.2	60.7	35.7	40.0	74.6	44.5	45.5
LnGrp LOS	E	A	A	E	C	B	E	D	D	E	D	D
Approach Vol, veh/h	1586			809			392			38		
Approach Delay, s/veh	3.9			24.6			55.2			53.1		
Approach LOS	A			C			E			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.2	73.9	16.7	21.2	9.3	72.7	5.9	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	7.5	62.0	16.5	16.0	9.5	60.0	5.0	27.5				
Max Q Clear Time (g_c+I1), s	4.7	2.0	11.8	3.8	5.7	20.5	2.7	8.4				
Green Ext Time (p_c), s	0.0	13.2	0.4	0.0	0.0	5.0	0.0	0.3				
Intersection Summary												
HCM 7th Control Delay, s/veh	17.6											
HCM 7th LOS	B											

568 - Ada @ Marine Wy. Buildout Approved-ITAM TC V1.8						
		IRVINE				
	Ln	Cap	AM Peak Hour		PM Peak Hour	
			Vol	V/C	Vol	V/C
NBL	1	1700	665	0.39*	552	0.32*
NBT	0		0		0	
NBR	1	1700	302	0.18	224	0.13
SBL	0		0		0	
SBT	0		0	*	0	*
SBR	0		0		0	
EBL	1	1700	0	*	0	
EBT	2	3400	708	0.32	887	0.45*
EBR	0		382		657	
WBL	0		266		236	*
WBT	2	3400	1003	0.37*	676	0.27
WBR	1	1700	0		0	
Adjustment Overlaps					Clearance	0.05
Total ICU				0.81		0.82

582 - Lynx @ Marine Wy. Buildout Approved-ITAM TC V1.8						
		IRVINE				
	Ln	Cap	AM Peak Hour		PM Peak Hour	
			Vol	V/C	Vol	V/C
NBL	1	1700	78	0.05	51	0.03
NBT	1	1700	63	0.04*	63	0.04*
NBR	1	1700	661	0.39	173	0.10
SBL	2	3400	831	0.24*	388	0.11*
SBT	1	1700	48	0.10	80	0.12
SBR	0		116		120	
EBL	1	1700	75	0.04	129	0.08
EBT	2	3400	1106	0.33*	462	0.14*
EBR	0	1700	38	0.02	67	0.04
WBL	1	1700	118	0.07*	476	0.28*
WBT	2	3400	184	0.05	920	0.27
WBR	1	1700	333	0.20	678	0.40
Adjustment Overlaps			NBR	0.30		
			W		Clearance	0.05
Total ICU				1.03		0.62

602 - Vertical @ Barranca Pkwy. Buildout Approved-ITAM TC V1.8						
		IRVINE				
	Ln	Cap	AM Peak Hour		PM Peak Hour	
			Vol	V/C	Vol	V/C
NBL	1	1700	44	0.03*	175	0.10*
NBT	1	1700	1	0.01	4	0.07
NBR	0		24		116	
SBL	1	1700	35	0.02	17	0.01
SBT	1	1700	7	0.03*	2	0.01*
SBR	0		49		17	
EBL	1	1700	14	0.01*	49	0.03
EBT	2	3400	747	0.22	1027	0.30*
EBR	1	1700	226	0.13	94	0.06
WBL	1	1700	129	0.08	53	0.03*
WBT	2	3400	1211	0.36*	851	0.25
WBR	1	1700	6	0.00	21	0.01
Adjustment Overlaps					Clearance	0.05
Total ICU				0.48		0.49

603 - Launch @ Barranca Pkwy. Buildout Approved-ITAM TC V1.8						
		IRVINE				
	Ln	Cap	AM Peak Hour		PM Peak Hour	
			Vol	V/C	Vol	V/C
NBL	1	1700	85	0.05*	287	0.17*
NBT	1	1700	1	0.01	3	0.06
NBR	0		11		102	
SBL	1	1700	10	0.01	10	0.01
SBT	1	1700	6	0.05*	1	0.02*
SBR	0		77		27	
EBL	1	1700	15	0.01*	56	0.03
EBT	2	3400	448	0.13	1338	0.39*
EBR	1	1700	482	0.28	192	0.11
WBL	1	1700	132	0.08	40	0.02*
WBT	2	3400	1624	0.48*	757	0.22
WBR	1	1700	4	0.00	12	0.01
Adjustment Overlaps					Clearance	0.05
Total ICU				0.64		0.65

606 - Marine Wy. @ 202S Access Buildout Approved-ITAM TC V1.8						
		IRVINE				
	Ln	Cap	AM Peak Hour		PM Peak Hour	
			Vol	V/C	Vol	V/C
NBL	1	1700	146	0.09*	50	0.03*
NBT	1	1700	0	0.02	1	0.01
NBR	0		27		19	
SBL	1	1700	17	0.01	10	0.01
SBT	1	1700	0	0.03*	1	0.01*
SBR	0		45		14	
EBL	1	1700	13	0.01*	44	0.03
EBT	2	3400	1197	0.35	1411	0.42*
EBR	1	1700	22	0.01	80	0.05
WBL	1	1700	10	0.01	40	0.02*
WBT	2	3400	1485	0.44*	1217	0.36
WBR	0	1700	2	0.00	14	0.01
Adjustment Overlaps					Clearance	0.05
Total ICU				0.62		0.53

607 - Marine Wy. @ 203S Access Buildout Approved-ITAM TC V1.8						
		IRVINE				
	Ln	Cap	AM Peak Hour		PM Peak Hour	
			Vol	V/C	Vol	V/C
NBL	1	1700	69	0.04	25	0.01
NBT	1	1700	9	0.05*	2	0.02*
NBR	0		79		36	
SBL	1	1700	41	0.02*	139	0.08*
SBT	1	1700	1	0.02	5	0.05
SBR	0		30		78	
EBL	1	1700	94	0.06*	47	0.03
EBT	2	3400	1152	0.34	1337	0.39*
EBR	1	1700	10	0.01	31	0.02
WBL	1	1700	23	0.01	77	0.05*
WBT	2	3400	1380	0.41*	1164	0.34
WBR	0	1700	171	0.10	71	0.04
Adjustment Overlaps					Clearance	0.05
Total ICU				0.59		0.59

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APPENDIX 5.3:

STIY AND BOA SIGNAL WARRANT WORKSHEETS FOR WITH PROJECT

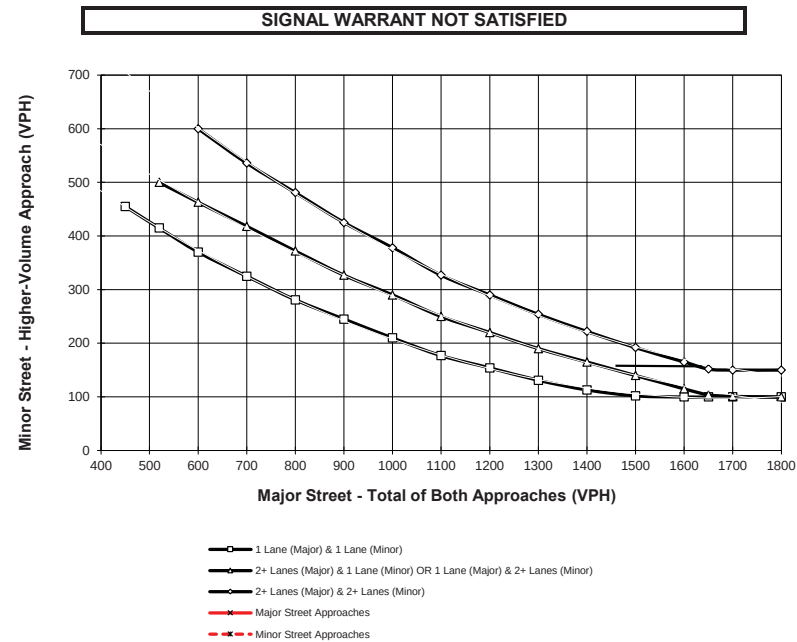
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Figure 4C-3. Warrant 3, Peak Hour

Traffic Conditions = STIY (FINAL) AM Peak Hour Warrants

Major Street Name = Harrier St. Total of Both Approaches (VPH) = 309
Number of Approach Lanes on Major Street = 1

Minor Street Name = MP Mod (BA 619) Access High Volume Approach (VPH) = 20
Number of Approach Lanes On Minor Street = 1



*Note: 150 vph applies as the lower threshold for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold for a minor-street approach with one lane

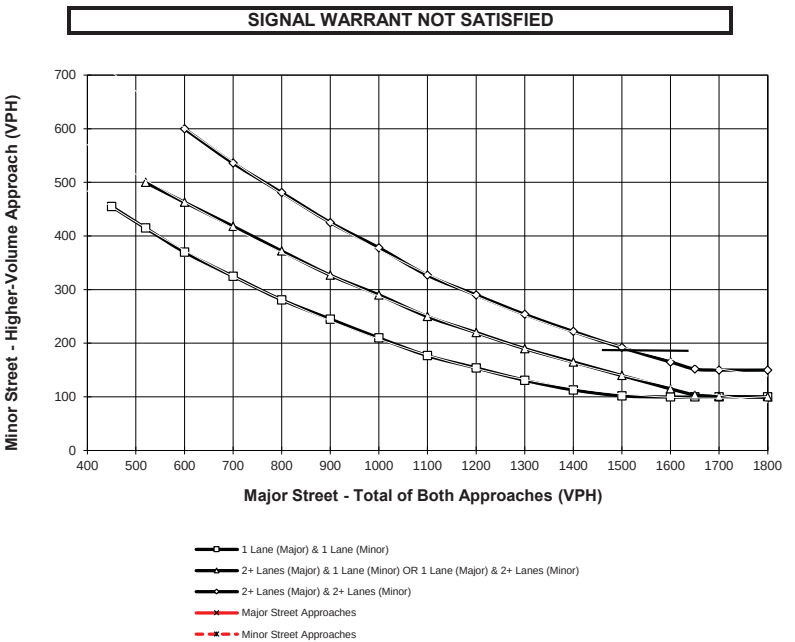
Intersection ID: #498

Figure 4C-3. Warrant 3, Peak Hour

Traffic Conditions = STIY (FINAL) PM Peak Hour Warrants

Major Street Name = Harrier St. Total of Both Approaches (VPH) = 347
Number of Approach Lanes on Major Street = 1

Minor Street Name = MP Mod (BA 619) Access High Volume Approach (VPH) = 8
Number of Approach Lanes On Minor Street = 1



*Note: 150 vph applies as the lower threshold for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #498

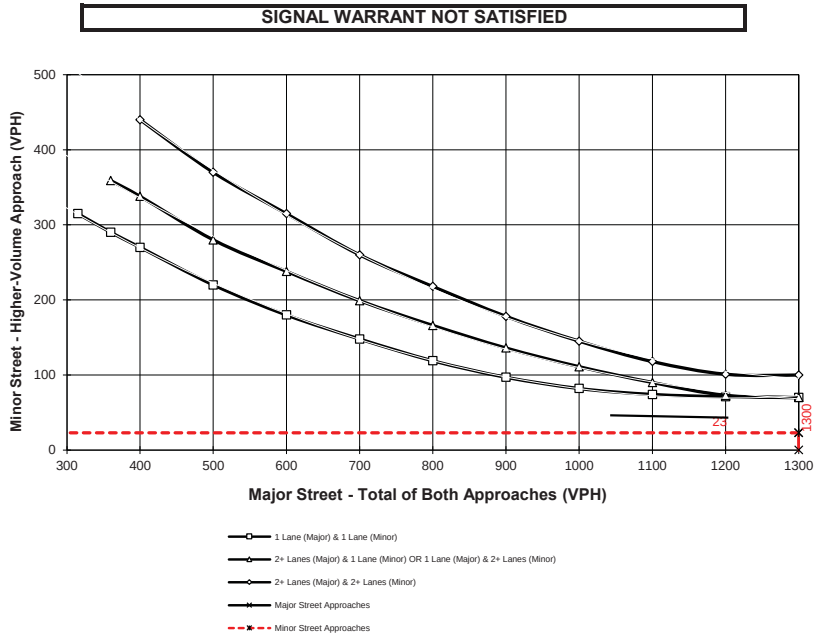
Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = STIY (FINAL) Full Access @ Int. 500 AM Peak Hour Warrants

Major Street Name = Barranca Pkwy Total of Both Approaches (VPH) = 2,628
Number of Approach Lanes Major Street = 2

Minor Street Name = Irvine Station E. Access High Volume Approach (VPH) = 23
Number of Approach Lanes Minor Street = 1



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #500

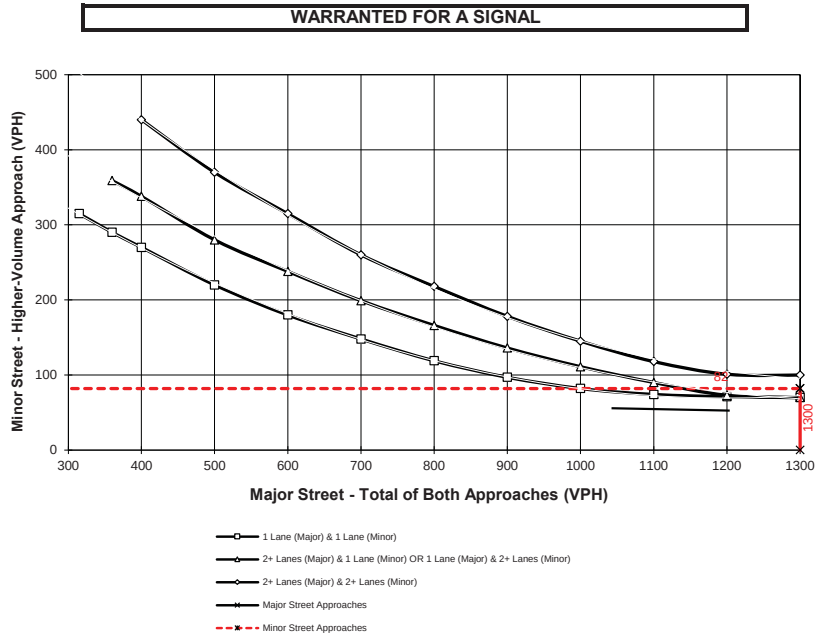
Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = STIY (FINAL) Full Access @ Int. 500 PM Peak Hour Warrants

Major Street Name = Barranca Pkwy Total of Both Approaches (VPH) = 2,619
Number of Approach Lanes Major Street = 2

Minor Street Name = Irvine Station E. Access High Volume Approach (VPH) = 82
Number of Approach Lanes Minor Street = 1



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #500

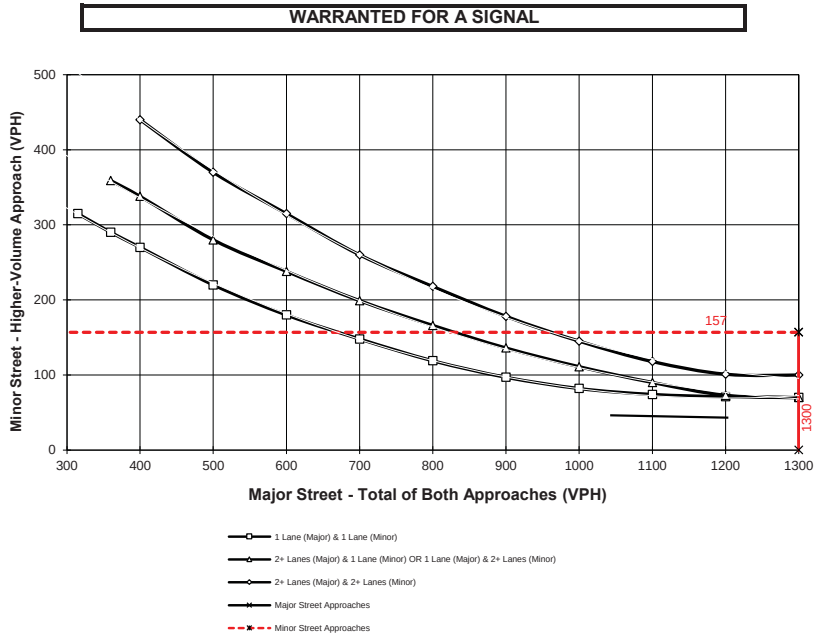
Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = STIY (FINAL) AM Peak Hour Warrants

Major Street Name = Marine Wy. Total of Both Approaches (VPH) = 2,391
Number of Approach Lanes Major Street = 2

Minor Street Name = Parcel 2 E. Access - Parcel 3 S. Access Volume Approach (VPH) = 157
Number of Approach Lanes Minor Street = 1



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #503

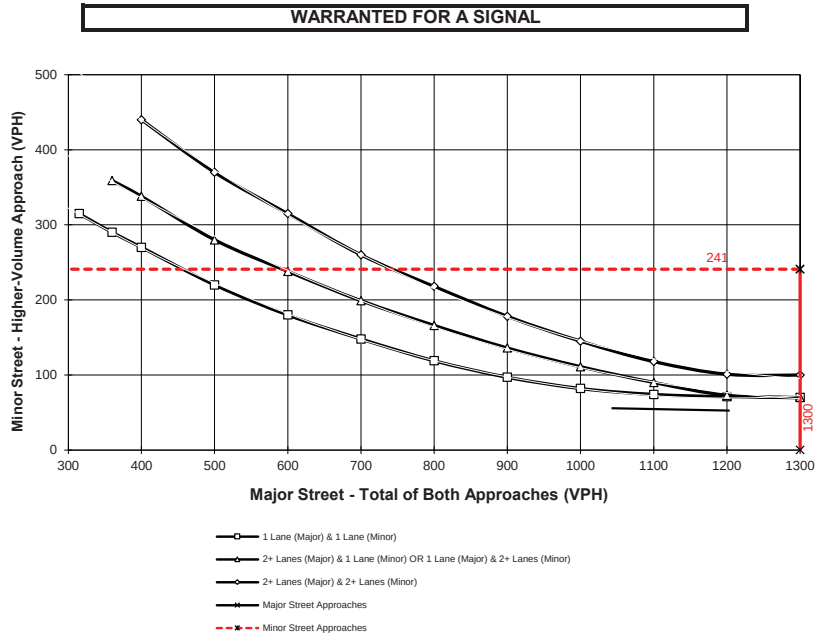
Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = STIY (FINAL) PM Peak Hour Warrants

Major Street Name = Marine Wy. Total of Both Approaches (VPH) = 2,120
Number of Approach Lanes Major Street = 2

Minor Street Name = Parcel 2 E. Access - Parcel 3 S. Access Volume Approach (VPH) = 241
Number of Approach Lanes Minor Street = 1



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #503

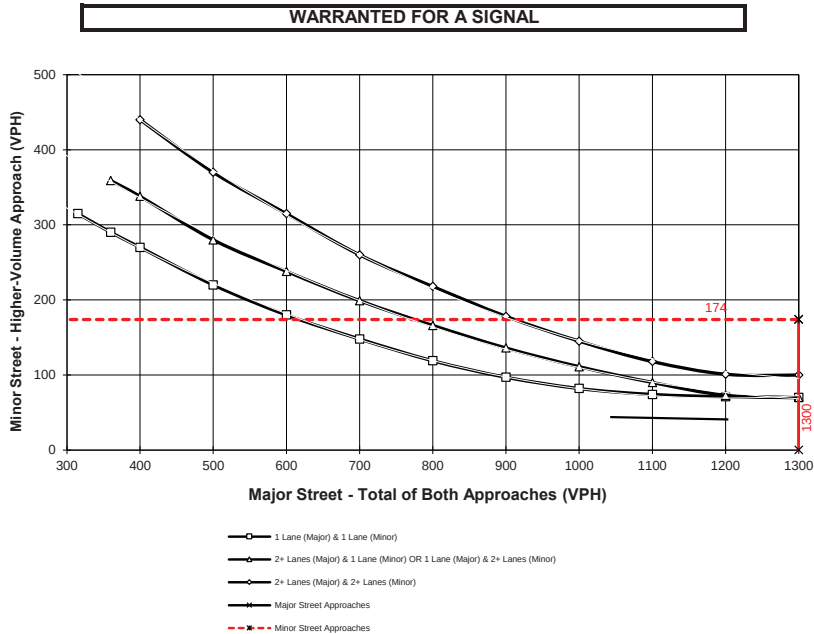
Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = STIY (FINAL) AM Peak Hour Warrants

Major Street Name = Marine Wy. Total of Both Approaches (VPH) = 2,268
Number of Approach Lanes Major Street = 2

Minor Street Name = Parcel 7 - City 2 W. Access High Volume Approach (VPH) = 174
Number of Approach Lanes Minor Street = 1



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #504

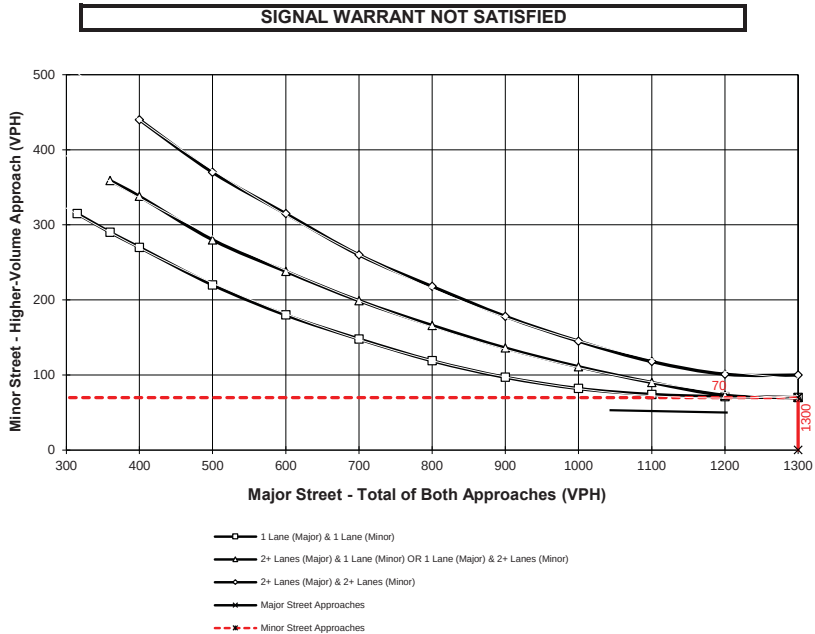
Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = STIY (FINAL) PM Peak Hour Warrants

Major Street Name = Marine Wy. Total of Both Approaches (VPH) = 2,300
Number of Approach Lanes Major Street = 2

Minor Street Name = Parcel 7 - City 2 W. Access High Volume Approach (VPH) = 70
Number of Approach Lanes Minor Street = 1



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #504

Figure 4C-3. Warrant 3, Peak Hour

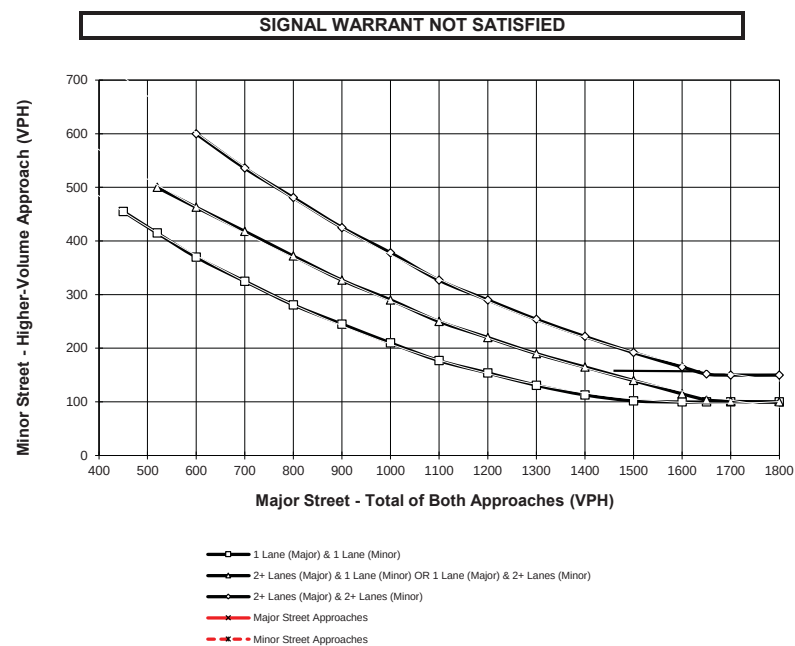
Traffic Conditions = **STIY (FINAL) AM Peak Hour Warrants**

Major Street Name = **Ada**

Total of Both Approaches (VPH) = **56**
Number of Approach Lanes on Major Street = **1**

Minor Street Name = **Parcel 12 S. Access**

High Volume Approach (VPH) = **28**
Number of Approach Lanes On Minor Street = **1**



*Note: 150 vph applies as the lower threshold for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #519

Figure 4C-3. Warrant 3, Peak Hour

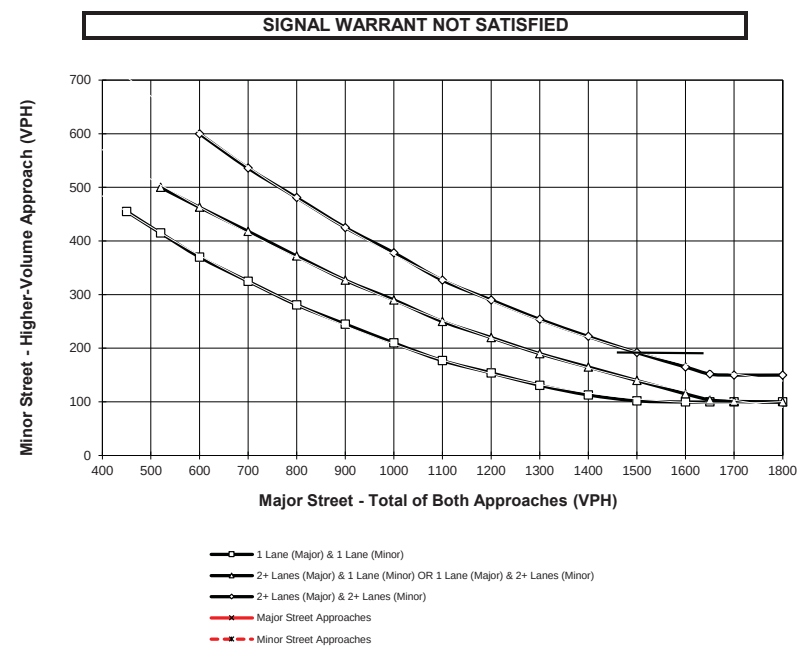
Traffic Conditions = **STIY (FINAL) PM Peak Hour Warrants**

Major Street Name = **Ada**

Total of Both Approaches (VPH) = **94**
Number of Approach Lanes on Major Street = **1**

Minor Street Name = **Parcel 12 S. Access**

High Volume Approach (VPH) = **72**
Number of Approach Lanes On Minor Street = **1**



*Note: 150 vph applies as the lower threshold for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #519

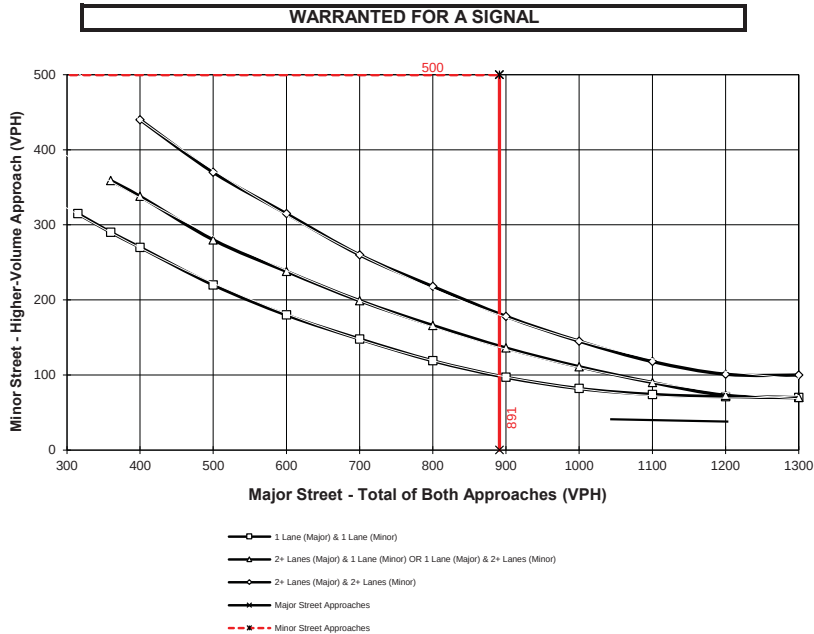
Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = STIY (FINAL) AM Peak Hour Warrants

Major Street Name = Marine Wy. Total of Both Approaches (VPH) = 891
Number of Approach Lanes Major Street = 2

Minor Street Name = Treble High Volume Approach (VPH) = 872
Number of Approach Lanes Minor Street = 1



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #565

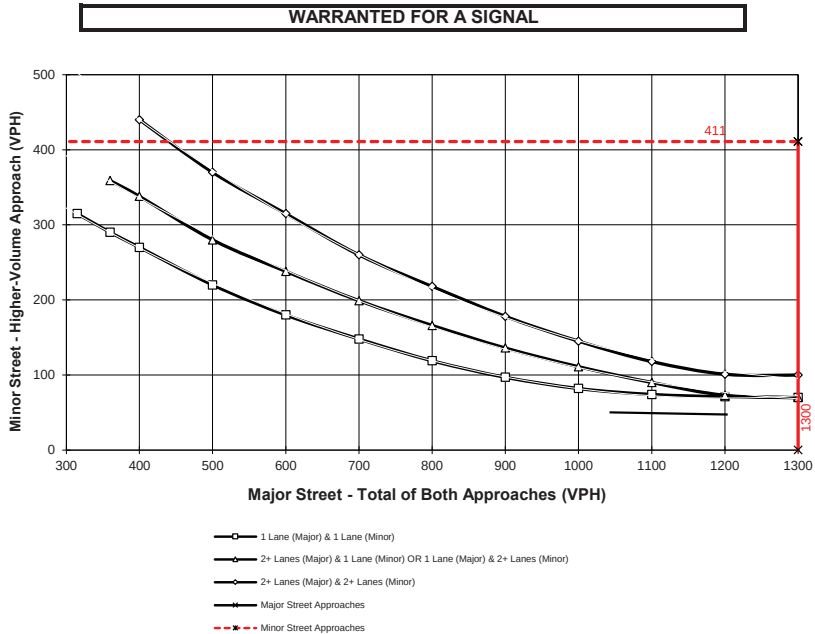
Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = STIY (FINAL) PM Peak Hour Warrants

Major Street Name = Marine Wy. Total of Both Approaches (VPH) = 1,442
Number of Approach Lanes Major Street = 2

Minor Street Name = Treble High Volume Approach (VPH) = 411
Number of Approach Lanes Minor Street = 1



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #565

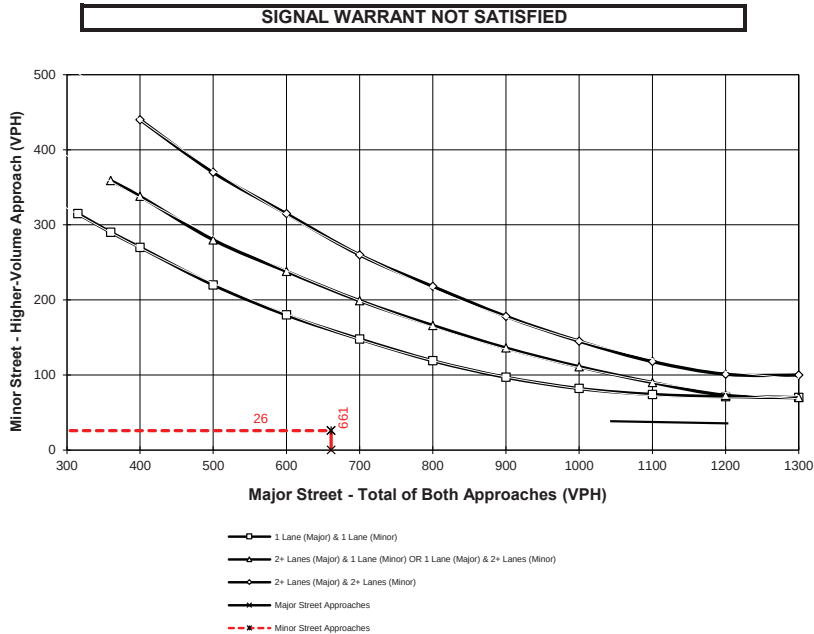
Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = STIY (FINAL) AM Peak Hour Warrants

Major Street Name = Marine Wy. Total of Both Approaches (VPH) = 661
Number of Approach Lanes Major Street = 2

Minor Street Name = Ada High Volume Approach (VPH) = 26
Number of Approach Lanes Minor Street = 1



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #568

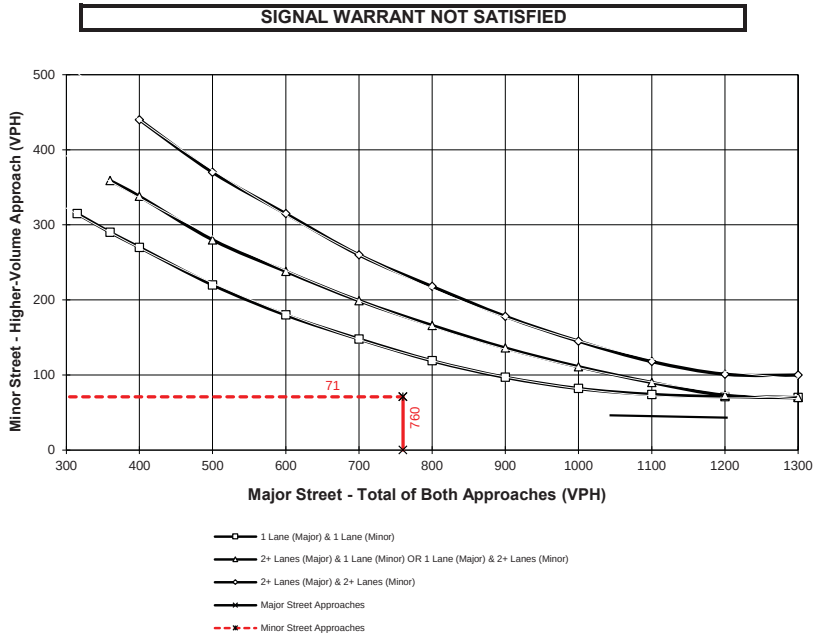
Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = STIY (FINAL) PM Peak Hour Warrants

Major Street Name = Marine Wy. Total of Both Approaches (VPH) = 760
Number of Approach Lanes Major Street = 2

Minor Street Name = Ada High Volume Approach (VPH) = 71
Number of Approach Lanes Minor Street = 1



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #568

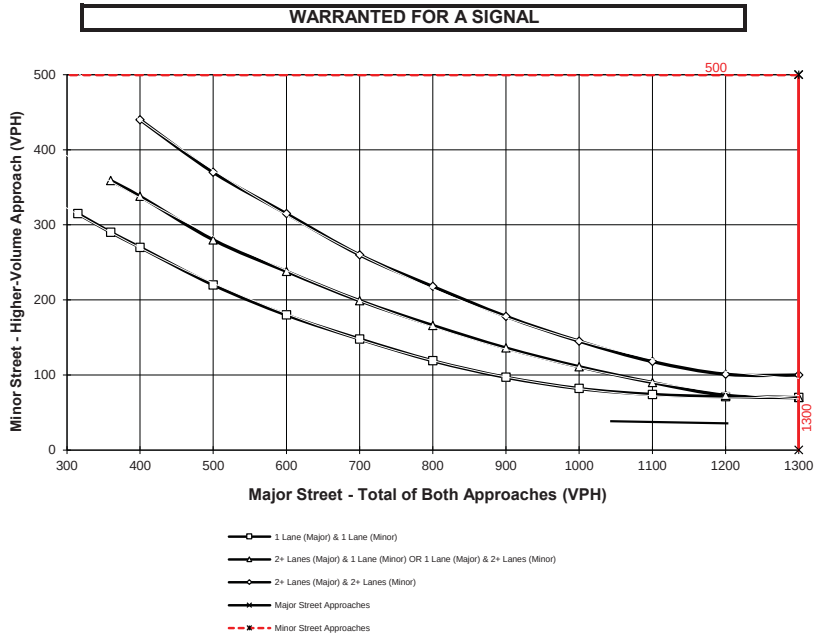
Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = STIY (FINAL) AM Peak Hour Warrants

Major Street Name = Marine Wy. Total of Both Approaches (VPH) = 2,076
Number of Approach Lanes Major Street = 2

Minor Street Name = Lynx High Volume Approach (VPH) = 1,056
Number of Approach Lanes Minor Street = 1



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #582

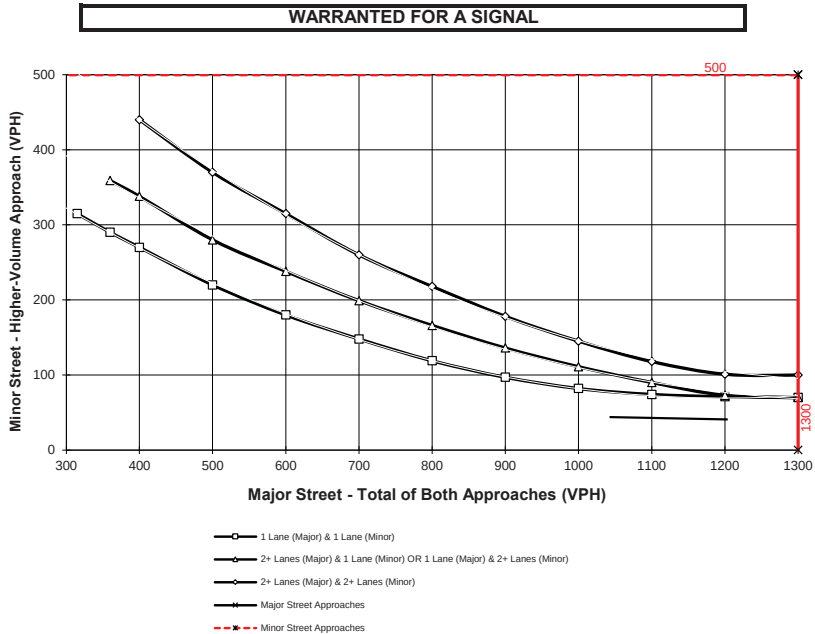
Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = STIY (FINAL) PM Peak Hour Warrants

Major Street Name = Marine Wy. Total of Both Approaches (VPH) = 2,743
Number of Approach Lanes Major Street = 2

Minor Street Name = Lynx High Volume Approach (VPH) = 707
Number of Approach Lanes Minor Street = 1



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #582

Figure 4C-3. Warrant 3, Peak Hour

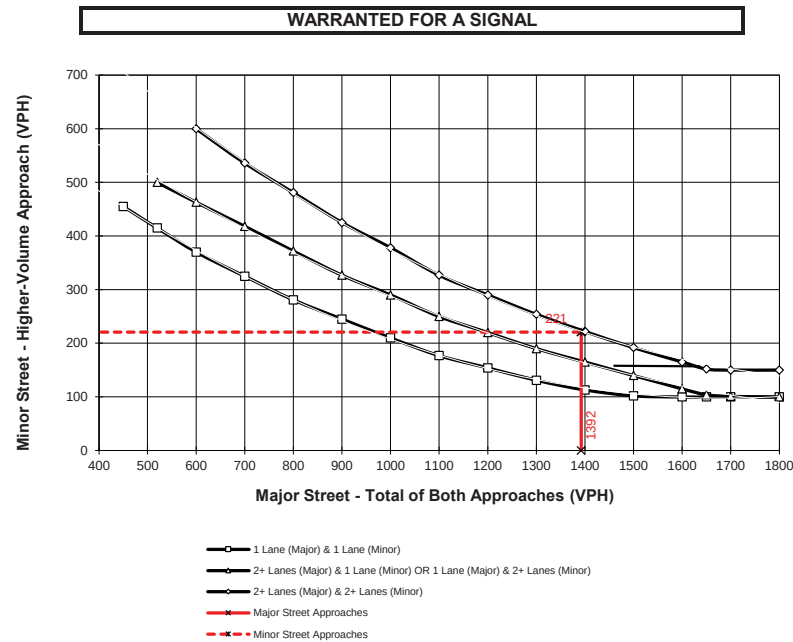
Traffic Conditions = **STIY (FINAL) AM Peak Hour Warrants**

Major Street Name = **Lynx**

Total of Both Approaches (VPH) = **1,392**
Number of Approach Lanes on Major Street = **1**

Minor Street Name = **Harrier St.**

High Volume Approach (VPH) = **221**
Number of Approach Lanes On Minor Street = **1**



*Note: 150 vph applies as the lower threshold for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #834

Figure 4C-3. Warrant 3, Peak Hour

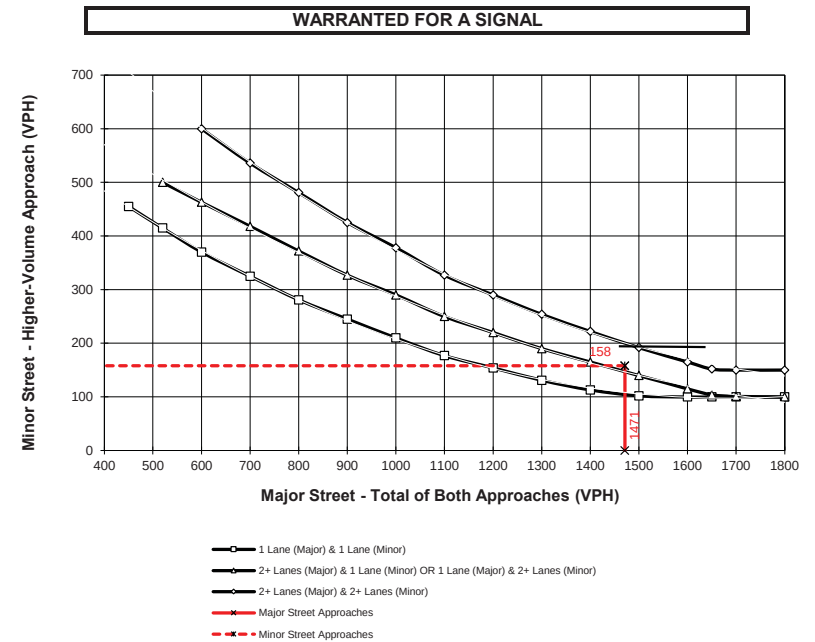
Traffic Conditions = **STIY (FINAL) PM Peak Hour Warrants**

Major Street Name = **Lynx**

Total of Both Approaches (VPH) = **1,471**
Number of Approach Lanes on Major Street = **1**

Minor Street Name = **Harrier St.**

High Volume Approach (VPH) = **158**
Number of Approach Lanes On Minor Street = **1**



*Note: 150 vph applies as the lower threshold for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold for a minor-street approach with one lane

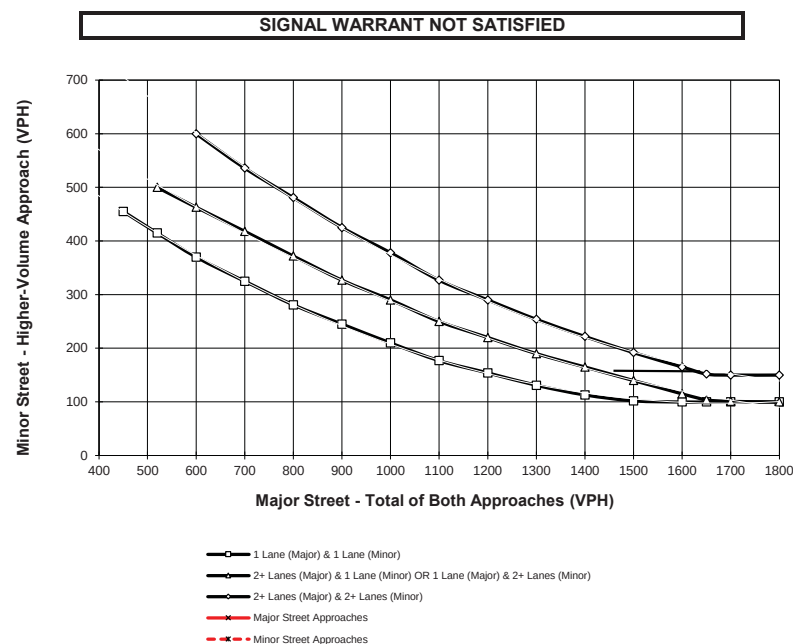
Intersection ID: #834

Figure 4C-3. Warrant 3, Peak Hour

Traffic Conditions = **BOA (FINAL) AM Peak Hour Warrants**

Major Street Name = **Harrier St.** Total of Both Approaches (VPH) = **229**
Number of Approach Lanes on Major Street = **1**

Minor Street Name = **MP Mod (BA 619) Access** High Volume Approach (VPH) = **20**
Number of Approach Lanes On Minor Street = **1**



*Note: 150 vph applies as the lower threshold for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold for a minor-street approach with one lane

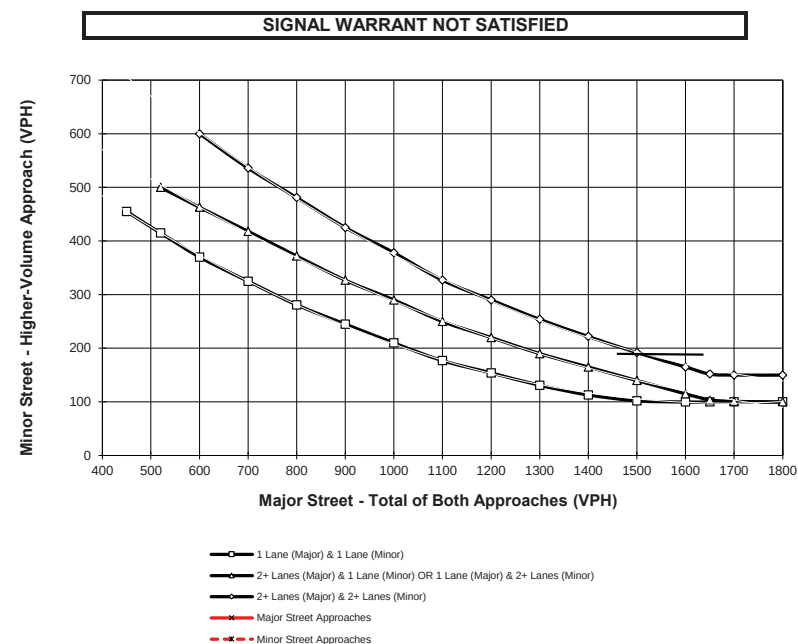
Intersection ID: #498

Figure 4C-3. Warrant 3, Peak Hour

Traffic Conditions = **BOA (FINAL) PM Peak Hour Warrants**

Major Street Name = **Harrier St.** Total of Both Approaches (VPH) = **253**
Number of Approach Lanes on Major Street = **1**

Minor Street Name = **MP Mod (BA 619) Access** High Volume Approach (VPH) = **8**
Number of Approach Lanes On Minor Street = **1**



*Note: 150 vph applies as the lower threshold for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #498

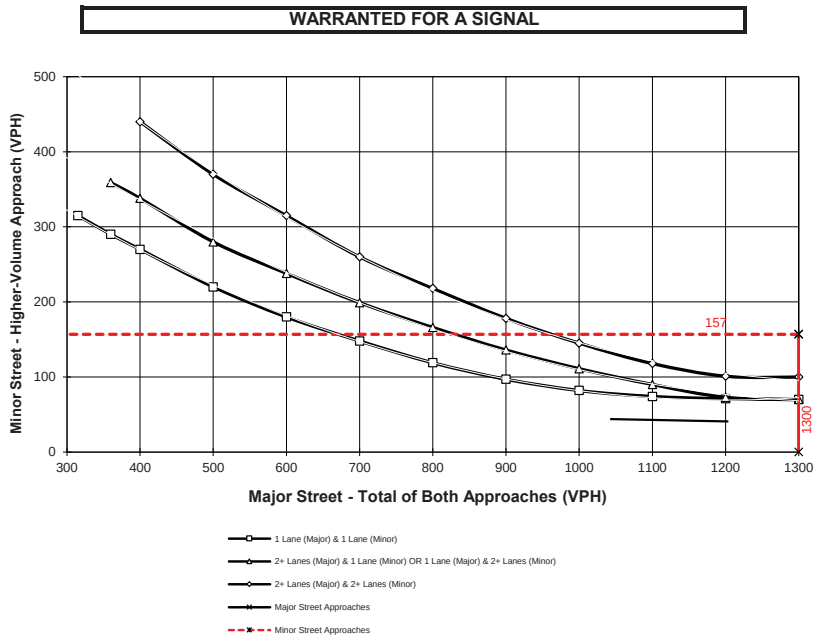
Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = BOA (FINAL) AM Peak Hour Warrants

Major Street Name = Marine Wy. Total of Both Approaches (VPH) = 2,830
Number of Approach Lanes Major Street = 2

Minor Street Name = Parcel 2 E. Access - Parcel 3 S. Access Volume Approach (VPH) = 157
Number of Approach Lanes Minor Street = 1



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #503

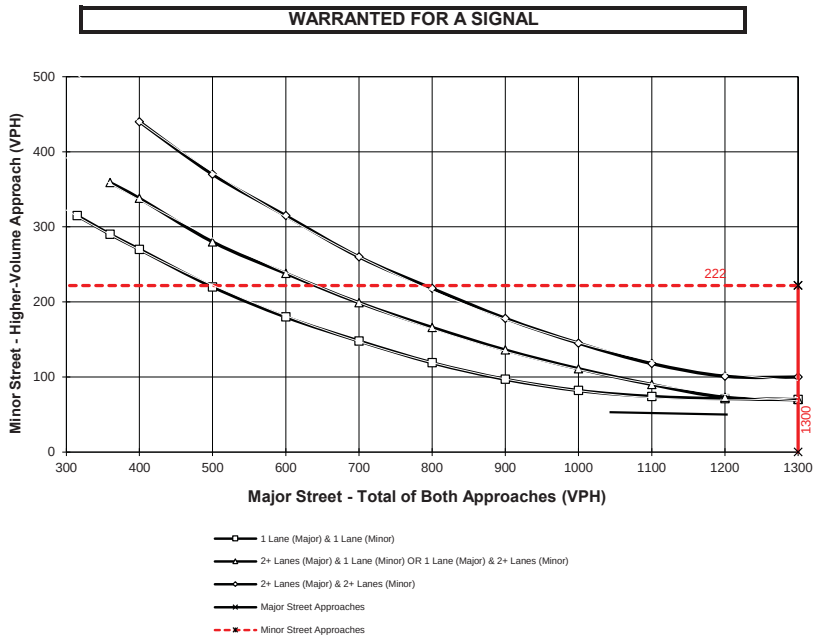
Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = BOA (FINAL) PM Peak Hour Warrants

Major Street Name = Marine Wy. Total of Both Approaches (VPH) = 2,727
Number of Approach Lanes Major Street = 2

Minor Street Name = Parcel 2 E. Access - Parcel 3 S. Access Volume Approach (VPH) = 222
Number of Approach Lanes Minor Street = 1



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #503

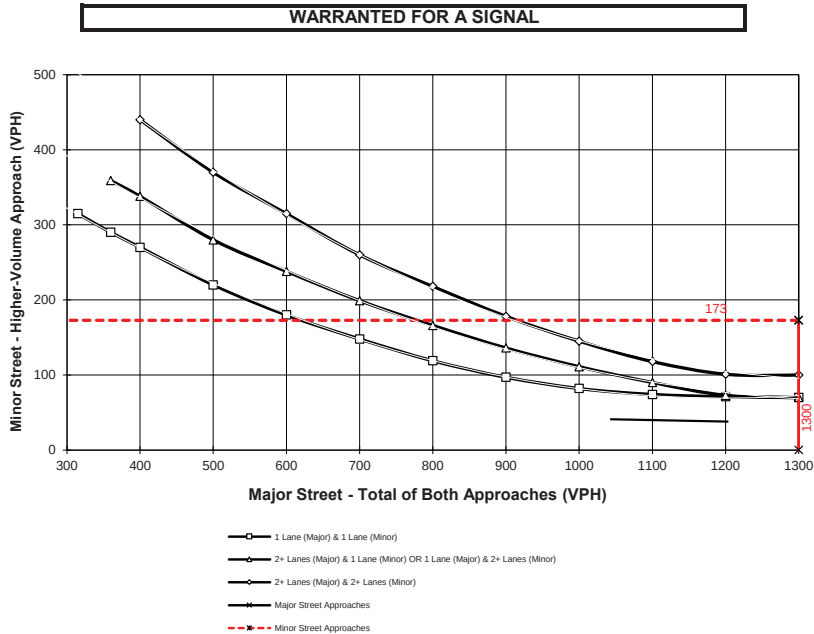
Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = BOA (FINAL) AM Peak Hour Warrants

Major Street Name = Marine Wy. Total of Both Approaches (VPH) = 2,729
Number of Approach Lanes Major Street = 2

Minor Street Name = Parcel 7 - City 2 W. Access High Volume Approach (VPH) = 173
Number of Approach Lanes Minor Street = 1



Intersection ID: #504

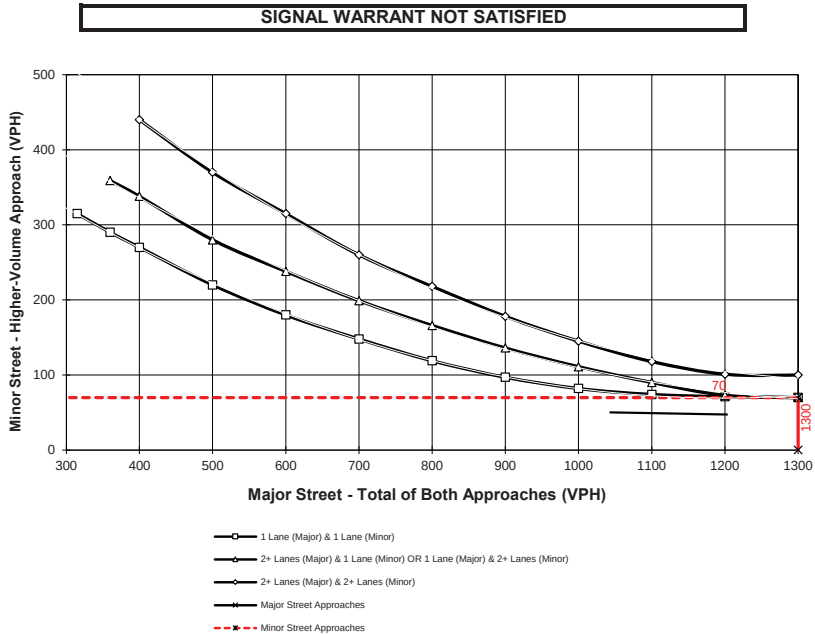
Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = BOA (FINAL) PM Peak Hour Warrants

Major Street Name = Marine Wy. Total of Both Approaches (VPH) = 2,806
Number of Approach Lanes Major Street = 2

Minor Street Name = Parcel 7 - City 2 W. Access High Volume Approach (VPH) = 70
Number of Approach Lanes Minor Street = 1



Intersection ID: #504

Figure 4C-3. Warrant 3, Peak Hour

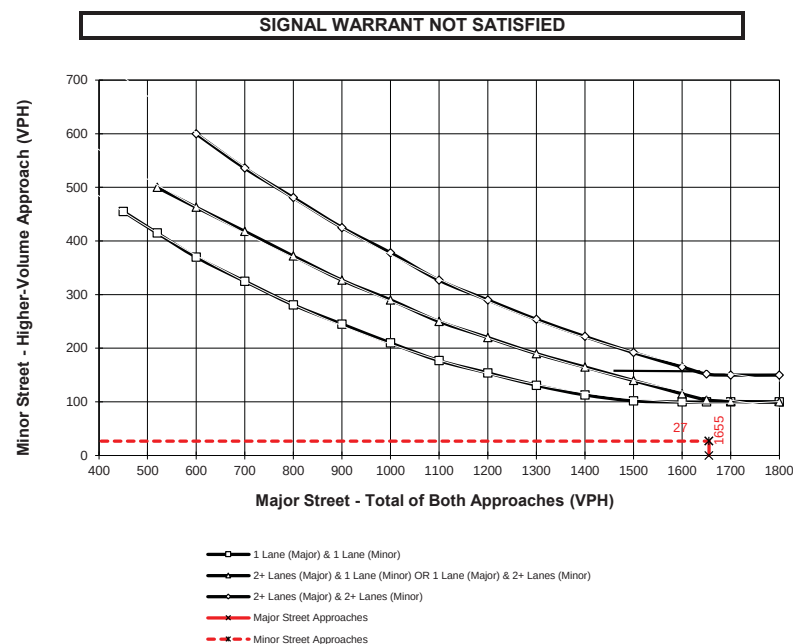
Traffic Conditions = **BOA (FINAL) AM Peak Hour Warrants**

Major Street Name = **Ada**

Total of Both Approaches (VPH) = **1,655**
Number of Approach Lanes on Major Street = **1**

Minor Street Name = **Parcel 12 S. Access**

High Volume Approach (VPH) = **27**
Number of Approach Lanes On Minor Street = **1**



*Note: 150 vph applies as the lower threshold for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #519

Figure 4C-3. Warrant 3, Peak Hour

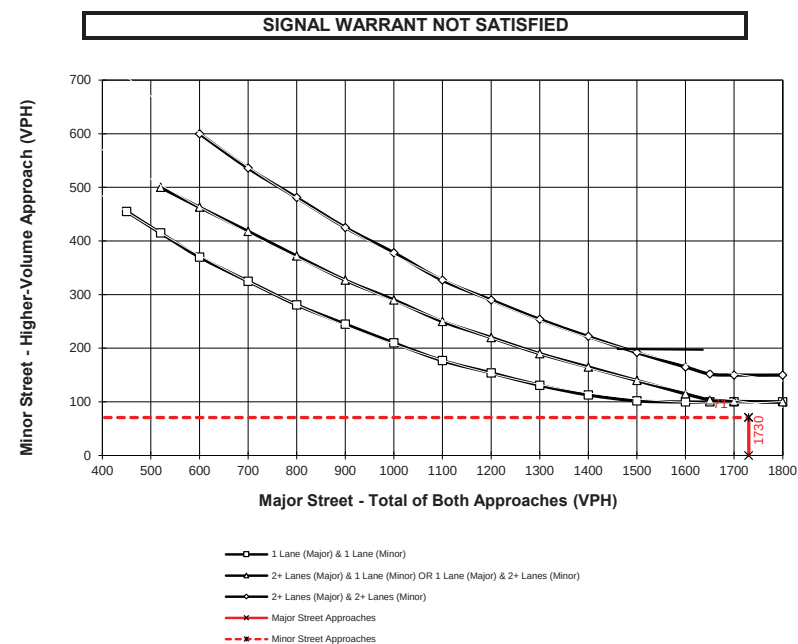
Traffic Conditions = **BOA (FINAL) PM Peak Hour Warrants**

Major Street Name = **Ada**

Total of Both Approaches (VPH) = **1,730**
Number of Approach Lanes on Major Street = **1**

Minor Street Name = **Parcel 12 S. Access**

High Volume Approach (VPH) = **71**
Number of Approach Lanes On Minor Street = **1**



*Note: 150 vph applies as the lower threshold for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #519

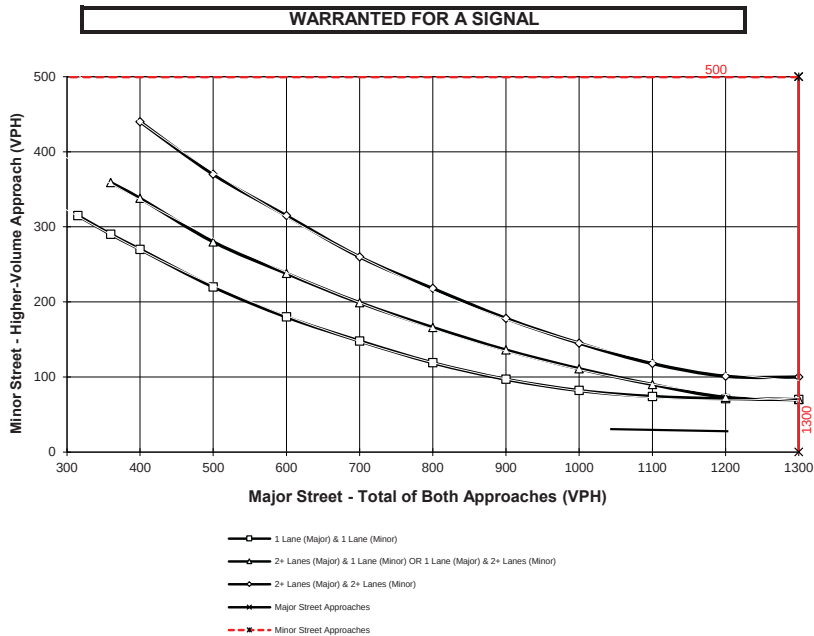
Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = BOA (FINAL) AM Peak Hour Warrants

Major Street Name = Marine Wy. Total of Both Approaches (VPH) = 2,359
Number of Approach Lanes Major Street = 2

Minor Street Name = Ada High Volume Approach (VPH) = 967
Number of Approach Lanes Minor Street = 1



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #568

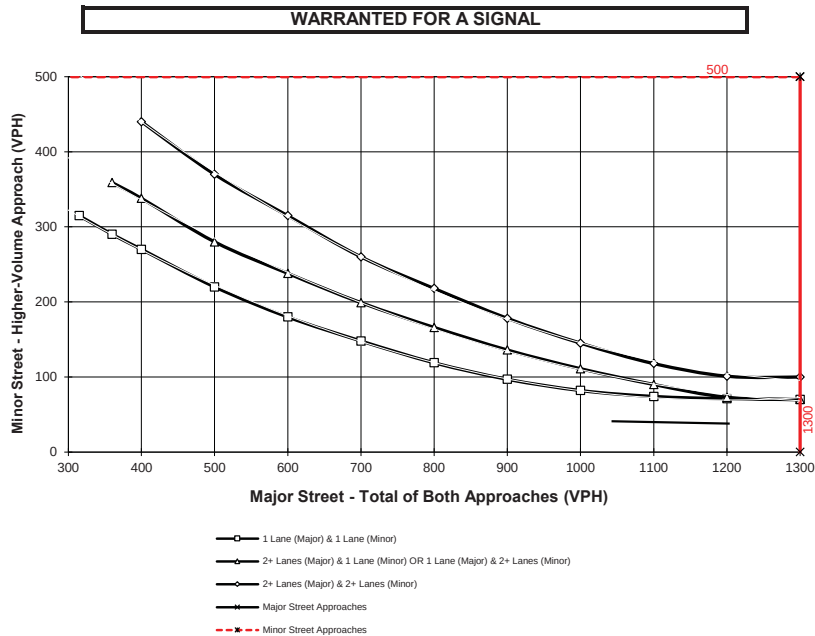
Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = BOA (FINAL) PM Peak Hour Warrants

Major Street Name = Marine Wy. Total of Both Approaches (VPH) = 2,456
Number of Approach Lanes Major Street = 2

Minor Street Name = Ada High Volume Approach (VPH) = 778
Number of Approach Lanes Minor Street = 1



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #568

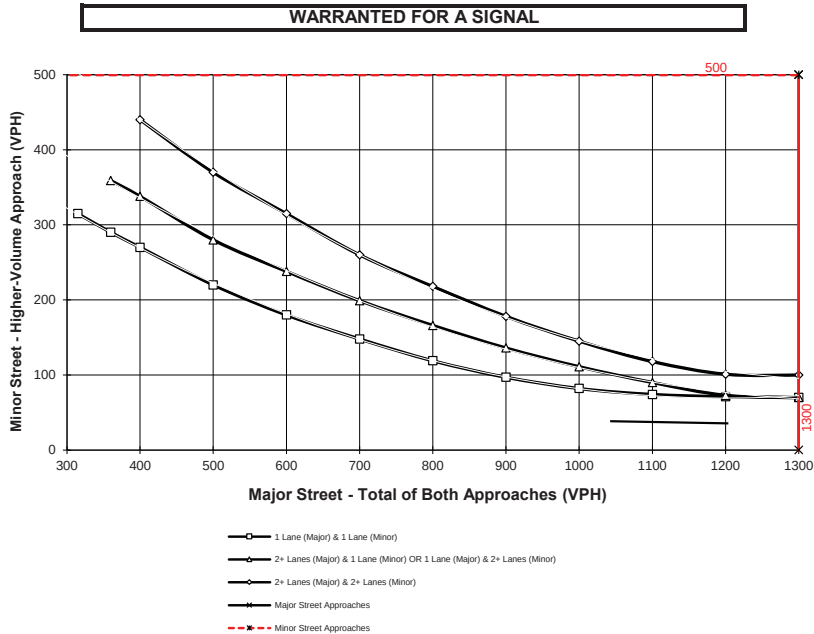
Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = BOA (FINAL) AM Peak Hour Warrants

Major Street Name = Marine Wy. Total of Both Approaches (VPH) = 1,854
Number of Approach Lanes Major Street = 2

Minor Street Name = Lynx High Volume Approach (VPH) = 995
Number of Approach Lanes Minor Street = 1



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #582

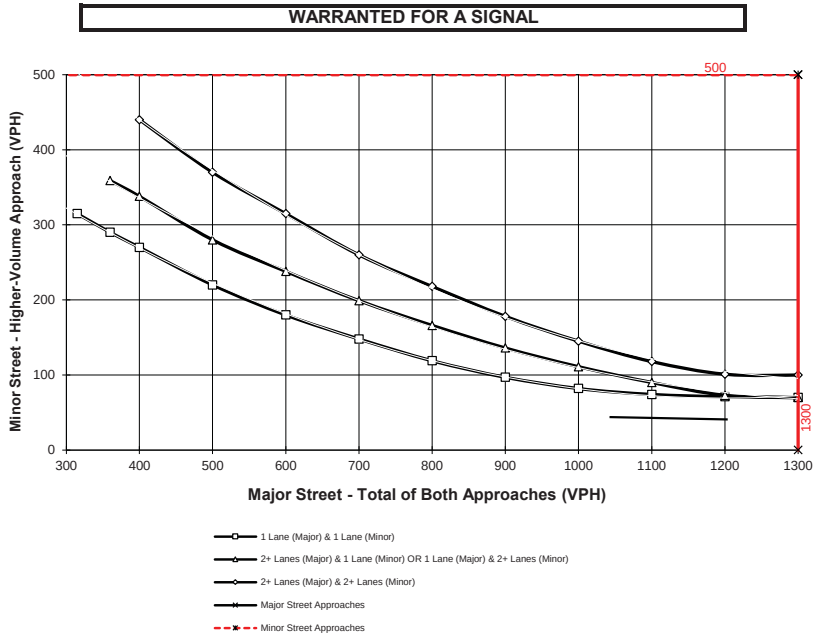
Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = BOA (FINAL) PM Peak Hour Warrants

Major Street Name = Marine Wy. Total of Both Approaches (VPH) = 2,732
Number of Approach Lanes Major Street = 2

Minor Street Name = Lynx High Volume Approach (VPH) = 588
Number of Approach Lanes Minor Street = 1



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #582

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APPENDIX 5.4:

CONGESTION MANAGEMENT PROGRAM (CMP) CHECKLIST

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APPENDIX 5.4

Congestion Management Program (CMP) Checklist

The Congestion Management Program (CMP) legislation requires that the CMP Agency monitor the implementation of the Orange County CMP, including CMP land use coordination component requirements, under a short-term context (in this case, STIY conditions). The following is a CMP Monitoring Checklist for the Land Use Coordination Component, which has been developed to monitor impacts on CMP Highway System (CMPHS) intersections.

1. Project Applicant: Heritage Fields El Toro, LLC
2. Project Name: GPN VTTMs 19402, 19403, 19404, 19405, 19406 and Master Plan Mod BA 619

Project Description (describe proposed land uses, square footage, number of dwelling units, size of parcel, etc.):

VTTM 19402 replaces 645,700 SF of office use 310 multi-family dwelling units (MFDU).
VTTM 19403 replaces 400,000 SF of office and 267,000 SF of warehouse with 329 MFDU and
on the City-2 parcel 145 MFDU. VTTM 19404 replaces 402,000 SF of medical office and
106,000 SF of office with 305 MFDU and on the City-1 parcel 49 MFDU. VTTM 19405 replaces
451 MFDU and 25,000 square feet of retail with 441 MFDU. VTTM 19406 replaces
198,000 square feet of office use with 219 MFDU. Master Plan Mod BA 619 replaces
69 senior affordable dwelling units with 36 MFDU.

4. Previous Approvals: Project 2012
5. Address/Location: along Marine Way from west of Treble to Bake Parkway
6. Case Numbers: _____
7. Date of Case Submittal: 2025
8. Total Average Daily Trips: Reduction from 33,923 to 14,033
9. Level of Service at CMP Intersections: outside study area

Development Project Submittal:

10. Does the proposed development project generate more than 2,400 Average Daily Trips?
 Yes X No
11. Does the proposed development project generate more than 1,600 Average Daily Trips with direct access to, or in close proximity to, a CMP Highway System?
 Yes X No

CMP Traffic Impact Analysis:

12. Did the Traffic Study identify any CMP Highway System intersection to exceed their established Level of Service Standard due to the project?
 Yes X No

APPENDIX 5.4

13. If so, please identify which MCPHS intersections below and proposed mitigation.

Not Applicable (NA)

14. Which, if any, of these impacted MCPHS intersections are located outside the boundaries of the City of Irvine?

NA

15. Did the City of Irvine participate in interjurisdictional discussions with the affected jurisdictions to develop a mitigation strategy for each impacted intersection?

NA	Yes	NA	No
----	-----	----	----

Projects Exempt from CMP Requirements:

16. Is the proposed development project exempt from CMP requirements?

X _____ Yes _____ No, the project generates the minimal amount of
ADT trips

17. If so, identify why the project was exempt from CMP requirements.

Less than 1,200 Daily Trips

Checklist Reviewed By:

Director of Public Works

Date _____

APPENDIX 5.5:

LAND USE CONVERSION TRIP GENERATION LETTER

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DATE: August 21, 2025
TO: Sun-Sun Murillo, City of Irvine
FROM: John Kain, AICP and Marlie Whiteman, P.E.,
 Urban Crossroads, Inc.
JOB NO: 16538-02 TG Memo

SUBJECT: 2025 RESIDENTIAL ENTITLEMENTS TRIP GENERATION ASSESSMENT

Urban Crossroads, Inc. has prepared the following Trip Comparison Report for the Heritage Fields 2025 Residential Entitlements (Project), which is in Planning Area 51 (PA 51) in the City of Irvine. This letter documents the trip generation change involved with the 1,123 residential units created through the conversion of non-residential land.

Heritage Fields non-residential land uses were evaluated in the Heritage Fields Project 2012 General Plan Amendment and Zone Change Traffic Impact Analysis prepared by Urban Crossroads ("Project 2012 Traffic Study", October 9, 2012) as part of the Second Supplemental Environmental Impact Report ("SSEIR"). Non-Residential entitlements within PA 51 have occurred between 2012 and 2024.

The 2025 Zone Change to Planning Area 51 ("2025 Zone Change") involves conversion of non-residential land uses to up to 1,300 residential units. The maximum allowable conversion was evaluated in the 2025 Zone Change Trip Generation / Unit Comparison prepared by Urban Crossroads ("2025 Zone Change Trip Comparison", May 6, 2025).

This trip generation assessment includes the current and remaining non-residential entitlements for PA51 and the 2025 Residential Entitlements.

TABLE 1: PA 51 REMAINING NON-RESIDENTIAL LAND USE CONVERSION SCENARIOS

Description	Units	Project 2012	With 2025 Residential Entitlements
Research and Development	TSF	3,364.00	660.893
Office (GP)	TSF	1,318.200	2,742.425
Retail (GP)	TSF	220.000	87.538
Fast Food	TSF		3.70
Warehouse/Industrial (GP)	TSF		758.32
Non-Residential Total		4,902.20	4,252.876
Multi-Family Conversion Units	DU	0	1,123

As shown on Table 1, if the 2025 Residential Entitlements are converted from non-residential entitlement, 649,324 SF of non-residential land uses will be converted to residential .

ITAM TRIP RATES

Trip generation rates derived from ITAM socio-economic conversion factors, production attraction rates, and time of day trip table factors are shown in Table 2. ITAM converts production-attraction trip tables to directional origin-destination tables by time period, using Vehicle Trips in Motion factors. The Table 2 trip rates are responsive to this flow of data processing in ITAM, and they directly account for the resulting travel patterns which are analyzed in relevant traffic studies.

TABLE 2: ITAM TC TRIP GENERATION RATES

Description	Units	Daily	AM Peak Hour	PM Peak Hour
Research and Development	TSF	10.42	0.92	1.01
Warehouse/Industrial (GP)	TSF	6.29	0.62	0.61
Office (GP)	TSF	12.55	1.13	1.21
Fast Food	TSF	346.23	25.10	28.34
Multi-Family	DU	7.15	0.68	0.66
Retail (GP)	TSF	54.72	3.39	5.23

Z:\Shared\UcJobs\16100-16500\16500\16538\02_LOS\Excel\[Land Use TG.xlsx]1-Rates

TRIP GENERATION COMPARISON

The 2025 Zone Change Trip Generation / Unit Comparison compared the trip generation of the PA 51 non-residential entitlements assumed in the Project 2012 Traffic Study, which was used to evaluation the SSEIR, with the PA 51 non-residential trip generation, including changes in PA 51 non-residential types and quantities which occurred between 2012 and 2024, with the maximum residential conversion allowed per the 2025 Zone Change.

As shown in Table 3, nonresidential land uses evaluated for Project 2012 generated 5,331 morning peak hour trips, 6,144 evening peak hour trips, and 63,634 daily vehicle trips.

TABLE 3: PROJECT 2012 NONRESIDENTIAL TRIP GENERATION

Description	Units	Quantity	Daily	AM Peak Hour	PM Peak Hour
Research and Development	TSF	3,364.00	35,053	3,095	3,398
Office (GP)	TSF	1,318.20	16,543	1,490	1,595
Retail (GP)	TSF	220.00	12,038	746	1,151
Total			63,634	5,331	6,144

As shown in Table 4, non-residential land uses evaluated with maximum non-residential conversion generate 5,331 morning peak hour trips, 5,742 evening peak hour trips, and 60,107 daily vehicle trips.

**TABLE 4: PA 51 NONRESIDENTIAL TRIP GENERATION WITH MAXIMUM RESIDENTIAL CONVERSION
PER THE 2025 ZONE CHANGE**

Description	Units	Quantity	Daily	AM Peak Hour	PM Peak Hour
Research and Development	TSF	660.893	6,887	608	668
Warehouse/Industrial (GP)	TSF	758.32	4,770	470	463
Office (GP)	TSF	2,636.200	33,084	2,979	3,190
Fast Food	TSF	3.70	1,281	93	105
Multi-Family (GP)	DU	1,300	9,295	884	858
Retail (GP)	TSF	87.538	4,790	297	458
Total			60,107	5,331	5,742
Difference			-3,527	0	-402

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As shown in Table 5, the PA 51 non-residential land uses evaluated with the 2025 Residential Entitlements generate 5,331 morning peak hour trips, 5,753 evening peak hour trips, and 60,174 daily vehicle trips.

**TABLE 5: PA 51 NON-RESIDENTIAL TRIP GENERATION WITH
2025 TENTATIVE MAPS & MASTER PLANS**

Description	Units	Quantity	Daily	AM Peak Hour	PM Peak Hour
Research and Development	TSF	660.893	6,887	608	668
Warehouse/Industrial (GP)	TSF	758.32	4,770	470	463
Office (GP)	TSF	2,742.425	34,417	3,099	3,318
Fast Food	TSF	3.70	1,281	93	105
Multi-Family (GP)	DU	1,123	8,029	764	741
Retail (GP)	TSF	87.538	4,790	297	458
Total			60,174	5,331	5,753

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Table 6 provides a summary comparison of the PA 51 non-residential trip generation scenarios.

TABLE 6: PA 51 TRIP GENERATION COMPARISON

Scenario	Daily	AM Peak Hour	PM Peak Hour
Project 2012	63,634	5,331	6,144
PA 51 Non-Residential Trip Generation with Maximum Residential Conversion per 2025 Zone Change	60,107	5,331	5,742
PA 51 Non-Residential Trip Generation with 2025 Tentative Maps & Master Plans	60,174	5,331	5,753

The location of the 2025 Tentative Maps and Master Plans is provided in Exhibit 1. When compared to the Project 2012 Traffic Study scenario, the current Project scenario results in a difference of 0 AM peak hour trips and a net decrease of 391 PM peak hour trips and 3,460 daily trips.

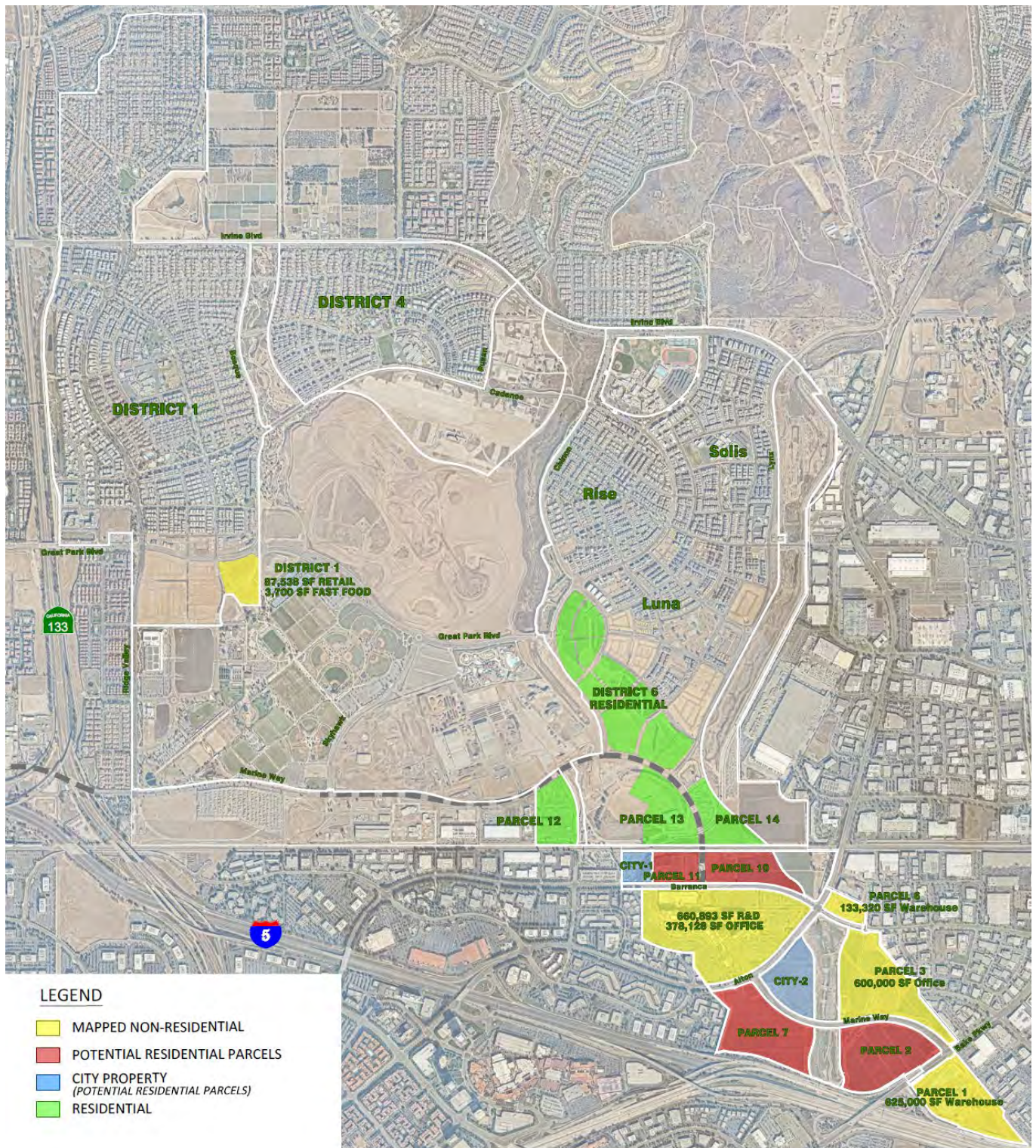
FINDINGS

Project 2012 included 4,902,200 square feet of nonresidential land uses in Planning Area 51. The 2025 Tentative Maps and Master Plans would involve the conversion of 649,324 SF of non-residential to 1,123 condominium units, resulting in 4,252,876 square feet of non-residential land uses in PA 51.

Evaluation of the trip generation for the 2025 Residential Entitlements and conversion of 649,324 SF of non-residential to 1,123 condo units results in a decrease from Project 2012 conditions, indicating that the Project is encompassed within the Heritage Fields Project 2012 General Plan Amendment and Zone Change Traffic Impact Analysis.

If you have any questions, please contact us directly at jkain@urbanxroads.com for John or mwhiteman@urbanxroads.com for Marlie.

EXHIBIT 1: PRELIMINARY LAND USE PLAN



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APPENDIX 5.6:

DEVIATION REQUEST LETTER

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TECHNICAL MEMORANDUM

DATE: September 16, 2025
TO: Ms. Sun-Sun Murillo, City of Irvine
FROM: John Kain and Bill Lawson, Urban Crossroads, Inc.
JOB NO: 16539-03 DeviationReq.docx

SUBJECT: GREAT PARK NEIGHBORHOODS VTTMS 19402, 19403, 19404, 19405, 19406 AND MASTER PLAN MODIFICATION BA 619 DEVIATION REQUEST

Urban Crossroads, Inc. has prepared the following Deviation Request for the proposed Great Park Neighborhoods VTTMS 19402, 19403, 19404, 19405, 19406 and Master Plan Modification BA 619 development (Project).

VTTM 19402 involves replacing 645,700 square feet of office use entitled per VTPM 2021-203 with 310 multi-family dwelling units on Parcel 2.

VTTM 19403 involves replacing 400,000 square feet of office use and 267,000 square feet of warehouse use entitled per VTPM 2021-202 with 329 multi-family dwelling units south of Marine Way on Parcel 7 and on the City-2 parcel north of Marine Way, the assumed transportation center parking is replaced with 145 multi-family dwelling units.

VTTM 19404 involves replacing 402,000 square feet of medical office use and 106,000 square feet of office use entitled per VTPM 2024-110 with 188 multi-family units on Parcel 10, 117 multi-family units on Parcel 11 and on the City-1 parcel, assumed transportation center parking is replaced by 49 multi-family dwelling units.

For the purposes of this analysis, VTTM 19405 involves replacing 451 multi-family dwelling units and 25,000 square feet of retail entitled per VTTM 19284 with 274 multi-family dwelling units west of Marine Way on Parcel 13 and 147 multi-family dwelling units east of Marine Way on Parcel 14.

VTTM 19406 involves replacing 198,000 square feet of office use entitled per VTTM 19284 with 219 multi-family dwelling units on Parcel 12. It is anticipated that an application for an alternative land use in the same geographical as VTTM 19406 will be submitted prior to approval of the VTTM. This alternative use is anticipated to be a continuing care retirement community ("CCRC") on the above referenced property with approximately 975 congregate care units plus 198 beds for assisted living facilities.

Master Plan Mod BA 619 involves a modification to the District 6 Master Plan by replacing 69 senior affordable dwelling units with 36 multi-family dwelling units.

APPROVED 9/22/25

Sun-Sun Tvedten Murillo

DEVIATION REQUEST FOR TG-1

Turn lane pocket lengths are addressed in TG-1. The purpose of TG-1, minimum turn pocket length, is to allow the turning vehicle to exit the through movement and decelerate into the turn pocket without impacting the through traffic movement. The recommended guideline is to provide for a storage length to accommodate all turn arrivals during the peak hour 95 percent of the time. Consistent with the methodology utilized in previous NITM program traffic studies, the recommended turn pocket length is based on one foot per peak hour turn volume (highest of AM and PM and rounded up into increments of 10), where pocket lengths exceed the standard 150 feet for public arterials or 90 feet for commuter, local streets and driveways.

The estimated turn lane storage length requirements for the analyzed intersections with VTTMs 19402-19406 and Master Plan Modification BA619, along with surrounding area land uses are summarized for STIY and BOA conditions in Tables 5-4 and 5-5 of the Traffic Evaluation (replicated in this letter).

REASONS FOR REQUESTING DEVIATION FROM TG-1

At twenty of the evaluated turn lanes, the recommended storage lengths are not consistent with the 1 foot per peak hour criteria, as follows:

- NBL for Lynx to Harrier Street - the maximum estimated volume is 182 for STIY conditions with 150' of storage and the turn pocket length recommended by TG-1 is 190'.
- SBL for Treble to Marine Way - the maximum estimated volume is 862 over 2 lanes (431 per lane) for STIY conditions with 300' of storage and the turn pocket length recommended by TG-1 is 440'.
- WBR for Marine Way to Treble - the maximum estimated volume is 723 for STIY conditions with 300' of storage and the turn pocket length recommended by TG-1 is 730'.
- SBR for Marine Way to Barranca Parkway - the maximum estimated volume is 938 for STIY conditions with 420' of storage and the turn pocket length recommended by TG-1 is 940'.
- EBL for Barranca Parkway to Marine Way - the maximum estimated volume is 951 over 2 lanes (476 per lane) for STIY conditions with 305' of storage and the turn pocket length recommended by TG-1 is 480' per lane.
- WBR for Barranca Parkway to Marine Way - the maximum estimated volume is 622 for STIY conditions with 345' of storage and the turn pocket length recommended by TG-1 is 630'.
- NBL for Marine Way to Alton Parkway - the maximum estimated volume is 735 over 2 lanes (368 per lane) for STIY conditions with 330' of storage per lane and the turn pocket length recommended by TG-1 is 370' per lane.
- NBR for Marine Way to Alton Parkway - the maximum estimated volume is 676 for STIY conditions with 492' of storage and the turn pocket length recommended by TG-1 is 680'.
- WBL for Alton Parkway to Marine Way - the maximum estimated volume is 489 over 2 lanes (245 per lane) for STIY conditions with 150' of storage and the turn pocket length recommended by TG-1 is 250' per lane.

- NBL for Bake Parkway to Marine Way - the maximum estimated volume is 937 over 2 lanes (469 per lane) for STIY conditions with 400' of storage and the turn pocket length recommended by TG-1 is 470' per lane.
- EBR for Marine Way to Bake Parkway - the maximum estimated volume is 802 over 2 lanes (401 per lane) for STIY conditions with 400' of storage and the turn pocket length recommended by TG-1 is 410' per lane.
- NBL for Ada to Marine Way - the maximum estimated volume is 665 for BOA conditions with 300' of storage and the turn pocket length recommended by TG-1 is 670' per lane.
- NBR for Ada to Marine Way - the maximum estimated volume is 302 for BOA conditions with 300' of storage and the turn pocket length recommended by TG-1 is 310' per lane.
- EBR for Marine Way to Ada - the maximum estimated volume is 657 for BOA conditions with 180' of storage and the turn pocket length recommended by TG-1 is 660' per lane.
- NBR for Lynx-Parcel 13 E. Access to Marine Way - the maximum estimated volume is 106 (not including future long range volumes associated with TAZ 722 development) for BOA conditions with 90' of storage and the turn pocket length recommended by TG-1 is 110' per lane.
- SBL for Lynx to Marine Way - the maximum estimated volume is 994 over 2 lanes (497 per lane) for STIY conditions with 350' of storage and the turn pocket length recommended by TG-1 is 500' per lane.
- WBL for Marine Way to Lynx - the maximum estimated volume is 476 for BOA conditions with 200' of storage and the turn pocket length recommended by TG-1 is 480'.
- WBR for Marine Way to Lynx - the maximum estimated volume is 828 for STIY conditions with 325' of storage and the turn pocket length recommended by TG-1 is 830'.
- SBR from Parcel 11/City-1 Access to Barranca Parkway - the maximum estimated volume is 81 for STIY conditions with 60' of storage and the turn pocket length recommended by TG-1 is 90'.
- EBR from Barranca Parkway to Launch - the maximum estimated volume is 153 for STIY conditions with 95' of storage and the turn pocket length recommended by TG-1 is 160'.

JUSTIFICATION FOR REQUESTING THE PROPOSED DESIGN FEATURES

For the northbound left turn from Lynx to Harrier Street, the northbound left turn lane length provides maximum storage available without affecting the Marine Way intersection.

For the southbound left turn from Treble to Marine Way, the southbound left turn lane lengths provides maximum storage available without affecting the adjacent driveway.

For the westbound right turn from Marine Way to Treble, the westbound right turn lane length provides maximum storage available without affecting the Gadwall intersection.

For the southbound right turn from Marine Way to Barranca Parkway, the southbound right turn lane maximizes storage available without additional widening at the railroad tracks.

For the eastbound left turn from Barranca Parkway to Marine Way, the two eastbound left turn lanes provide maximum storage available without affecting the westbound left turn lane from Barranca Parkway to Launch.

For the westbound right turn from Barranca Parkway to Marine Way, the westbound right turn lane maximizes storage available without affecting the development located on the northeast corner of Marine Way at Barranca Parkway.

For the northbound left turn from Marine Way to westbound Alton Parkway, two northbound left turn lanes are provided with 330' of storage length per lane without affecting the adjacent driveway.

For the northbound right turn from Marine Way to eastbound Alton Parkway, a northbound right turn lane is provided with 492' of storage length without affecting the adjacent driveway.

For the westbound left turn from Alton Parkway to southbound Marine Way, two westbound left turn lanes are provided with 150' of storage length each, the maximum space without affecting the transition lane and eastbound left turn from Alton Parkway to Solar.

For the northbound left turn lane from Bake Parkway to Marine Way, the northbound left turn lane length provides maximum storage available between the intersection and the upstream intersection I-5 northbound ramps.

For the eastbound right turn from Marine Way to southbound Bake Parkway, two eastbound right turn lanes design maximized these turn lanes without negatively impacting right-of-way on Marine Way west of Bake Pkwy.

For the northbound left turn from Ada to westbound Marine Way, the northbound left turn lane maximizes storage available within the City's standard 300' turn lane length.

For the northbound right turn from Ada to eastbound Marine Way, the northbound right turn lane maximizes storage available and the excess queue can be accommodated in the transition.

For the eastbound right turn from Marine Way to southbound Ada, the eastbound left turn lane maximizes storage available.

For the northbound right turn from Lynx-Parcel 13 E. Access to eastbound Marine Way, the northbound right turn lane maximizes storage available and the excess queue can be accommodated in the transition.

For the southbound left turn from Lynx to Marine Way, the southbound left turn lane maximizes storage available without affecting northbound volumes on Lynx approaching Harrier Street.

For the westbound left turn from Marine Way to southbound Lynx, the westbound left turn lane is existing.

For the westbound right turn from Marine Way to northbound Lynx, the westbound right turn lane maximizes storage available without negatively affecting right-of-way.

For the southbound right turn from Parcel 11/City-1 Access to Barranca Parkway, the southbound right turn lane provides maximum storage without affecting site design.

For the eastbound right turn from Barranca Parkway to Launch, the eastbound right turn lane currently exists and provides storage length as designed in the GPNVTM 2014-122 in Development District 3 Traffic Impact Analysis (Urban Crossroads, June 19, 2014).

EXPLANATION OF HOW INTENT IS MET OR DOES NOT CREATE TRAFFIC OPERATIONS OR SAFETY ISSUES

Signal progression analysis materials are included as Attachment A and have been provided to City of Irvine Staff, including supporting electronic files, with the simulations and timing considerations. Tables 1 and 2 summarize the findings of the queuing analysis in Attachment A. The lane geometries and volumes can be found in Section 5 of *Great Park Neighborhoods VTTMs 19402, 19403, 19404, 19405, 19406 and Master Plan Modification BA 619 Traffic Evaluation*, dated August 27, 2025.

Review of the Synchro SimTraffic peak hour simulation results indicate that the turn lane queues at these locations are anticipated to clear efficiently and that the recommended turn bay pocket lengths provide adequate storage. In addition, the operational characteristics of queuing at each intersection were observed in SimTraffic in order to determine if any spillovers from the turn lane queues actually impact intersection performance. Extended turn pocket lengths have been recommended if impacts to signal operations are likely to occur based upon the traffic simulations. However, in each case, review of the simulation flows generally demonstrate that the lane queue is anticipated to clear in a timely manner. In addition, it should be noted that queues may increase when signal operations are modified due to various factors such as traffic flow pattern changes that result in nearby signal operations adjustments.

Northbound Left turn lane from Lynx to Harrier Street

For the northbound left turn from Lynx to Harrier Street for STIY conditions, the 95th percentile queue is 54' (see Table 1), in comparison to the provided 150'. Review of the SimTraffic simulation results indicate that the turn lane queue is anticipated to clear in a timely manner.

Southbound Left turn lane from Treble to Marine Way

For the southbound left turn from Marine Way to Treble for STIY conditions, the 95th percentile queue is 221' (see Table 1), in comparison to the provided 300'. Review of the SimTraffic simulation results indicate that the turn lane queue is anticipated to clear in a timely manner.

Westbound right turn lane from Marine Way to Treble

For the westbound right turn from Marine Way to Treble for STIY conditions, the 95th percentile queue is 159' (see Table 1), in comparison to the provided 300'. Review of the SimTraffic simulation results indicate that the turn lane queue is anticipated to clear in a timely manner.

Southbound right turn lane from Marine Way to Barranca Parkway

For the southbound right turn from Marine Way to Barranca Parkway for STIY conditions, the 95th percentile queue is 396' (see Table 1), in comparison to the provided 420'. Review of the SimTraffic simulation results indicate that the turn lane queue is anticipated to clear in a timely manner.

Eastbound left turn lanes from Barranca Parkway to Marine Way

For the eastbound dual left turn lanes from Barranca Parkway to Marine Way for STIY conditions, the 95th percentile queue is 313' (see Table 1), in comparison to the provided 305'. The simulation flows generally demonstrate that the lane queue is anticipated to clear in a timely manner.

Westbound right turn lane from Barranca Parkway to Marine Way

For the westbound right turn from Barranca Parkway to Marine Way for STIY conditions, the 95th percentile queue is 356' (see Table 1), in comparison to the provided 345'. Review of the SimTraffic simulation results indicate that the turn lane queue is anticipated to clear in a timely manner and that the pocket length is adequate to accommodate the 95th percentile queue.

Northbound left turn lane from Marine Way to Alton Parkway

For the northbound left turn from Marine Way to eastbound Alton Parkway for STIY conditions, the 95th percentile queue is 321' (see Table 1), in comparison to the provided 330' per lane. Review of the SimTraffic simulation results indicate that the turn lane queue is anticipated to clear in a timely manner.

Northbound right turn lane from Marine Way to Alton Parkway

For the northbound right turn from Marine Way to eastbound Alton Parkway for STIY conditions, the 95th percentile queue is 406' (see Table 1), in comparison to the provided 492'. Review of the SimTraffic simulation results indicate that the turn lane queue is anticipated to clear in a timely manner.

Westbound left turn lanes from Alton Parkway to Marine Way

For the westbound left turn from Alton Parkway to southbound Marine Way for STIY conditions, the 95th percentile queue is 176' per lane (see Table 1), in comparison to the provided dual 150'. Review of the SimTraffic simulation results indicate that the turn lane queue is anticipated to clear in a timely manner.

Northbound left turn lanes from Bake Parkway to Marine Way

For the northbound dual left turn lanes from Bake Parkway to Marine Way for STIY conditions, the 95th percentile queue is 388' (see Table 1), in comparison to the provided 400'. The simulation flows generally demonstrate that the lane queue is anticipated to clear in a timely manner.

Eastbound right turn lanes from Marine Way to Bake Parkway

For the eastbound right turn from Marine Way to southbound Bake Parkway for STIY conditions, the 95th percentile queue is 277' (see Table 1), in comparison to the provided 400' per lane. Review of the SimTraffic simulation results indicate that the turn lane queue is anticipated to clear in a timely manner.

Northbound left turn lane from Ada to Marine Way

For the northbound left turn from Ada to Marine Way for BOA conditions, the 95th percentile queue is 273' (see Table 2), in comparison to the provided 300'. Review of the SimTraffic simulation results indicate that the turn lane queue is anticipated to clear in a timely manner.

Northbound right turn lane from Ada to Marine Way

For the northbound right turn from Ada to Marine Way for BOA conditions, the 95th percentile queue is 170' (see Table 2), in comparison to the provided 300'. Review of the SimTraffic simulation results indicate that the turn lane queue is anticipated to clear in a timely manner.

Eastbound right turn lane from Marine Way to Ada

For the eastbound right turn from Marine Way to Ada for BOA conditions, the 95th percentile queue is 198' (see Table 2), in comparison to the provided 180'. The simulation flows generally demonstrate that the lane queue is anticipated to clear in a timely manner. However, in instances when excessive queuing may occur, this expected queuing is not anticipated to significantly and adversely affect adjacent roadways and circulation patterns.

Northbound right turn lane from Lynx-Parcel 13 E. Access to Marine Way

For the northbound right turn from Lynx-Parcel 13 E. Access to Marine Way for BOA conditions, the 95th percentile queue is 186' (see Table 2), in comparison to the provided 90'. The simulation flows generally demonstrate that the lane queue is anticipated to clear in a timely manner. However, in instances when excessive queuing may occur, this expected queuing is not anticipated to significantly and adversely affect adjacent roadways and circulation patterns.

Southbound left turn lane from Lynx to Marine Way

For the southbound left turn from Lynx to eastbound Marine Way for STIY conditions, the 95th percentile queue is 357' (see Table 1), in comparison to the provided 350' but the excess queue is accommodated in the outside turn lane which is a trap lane. For the southbound left turn from Lynx to Marine Way for BOA conditions, the 95th percentile queue is 340' (see Table 2), in comparison to the provided 350'. Review of the SimTraffic simulation results indicate that the turn lane queue is anticipated to clear in a timely manner.

Westbound left turn lane from Marine Way to Lynx

For the westbound left turn from Marine Way to southbound Lynx for STIY conditions, the 95th percentile queue is 80' (see Table 1), in comparison to the provided 200'. For the westbound left turn lane from Marine Way to Lynx for BOA conditions, the 95th percentile queue is 194' (see Table 2), in comparison to the provided 200'. For buildout conditions, increases in the northbound right and westbound left AM peak hour turning movement volumes result in LOS F intersection operations at the Lynx / Marine Way intersection. These morning peak hour volume increases are directly tied to a significant increase in residential development assumed to occur in ITAM TAZ 722, and are not related to the proposed Project. This LOS issue occurs for BOA conditions due to the ITAM TAZ 722 residential uses taking access to adjacent streets, which include a connection through Parcel 13 to the south leg of the Lynx / Marine Way intersection. Therefore, this LOS deficiency will need to be further evaluated at the time that the residential development included in TAZ 722 is processed for development.

Westbound right turn lane from Marine Way to Lynx

For the westbound right turn from Marine Way to northbound Lynx for STIY conditions, the 95th percentile queue is 89' (see Table 1), in comparison to the provided 325'. For the westbound right turn lane from Marine Way to Lynx for BOA conditions, the 95th percentile queue is 82' (see Table 2), in comparison to the provided 325'. Review of the SimTraffic simulation results indicate that the turn lane queue is anticipated to clear in a timely manner.

Southbound right turn lane from Parcel 11/City-1 Access to Barranca Parkway

For the southbound right turn from Parcel 11/City-1 Access to westbound Barranca Parkway for STIY conditions, the 95th percentile queue is 100' (see Table 1), in comparison to the provided 60'. For the

southbound right turn lane from Parcel 11/City-1 Access to westbound Barranca Parkway for BOA conditions, the 95th percentile queue is 44' (see Table 2), in comparison to the provided 60'. Review of the SimTraffic simulation results indicate that the turn lane queue is anticipated to clear in a timely manner and that the pocket length is adequate to accommodate the 95th percentile queue.

Eastbound right turn lane from Barranca Parkway to Launch

For the eastbound right turn from Barranca Parkway to southbound Launch for STIY conditions, the 95th percentile queue is 61' (see Table 1), in comparison to the provided 95'. For the eastbound right turn lane from Barranca Parkway to southbound Launch for BOA conditions, the 95th percentile queue is 63' (see Table 2), in comparison to the provided 95'. Review of the SimTraffic simulation results indicate that the turn lane queue is anticipated to clear in a timely manner and that the pocket length is adequate to accommodate the 95th percentile queue.

DEVIATION REQUEST FOR TG-7

The transportation guideline that addresses distances between signalized intersections is TG-7. The purpose of this guideline is to optimize through traffic movement and allow for signal progression while providing access to abutting properties. Per the TG, the recommended signal spacing on a Primary Highway is 2,640', while the minimum is 1,320'. For a Commuter, the recommended signal spacing is 660', while the minimum is 300'.

The distance along Marine Way between Parcel 2 E. Access and Bake Parkway is 1,150', which is less than the minimum signal spacing on a Primary, according to TG-7 and a deviation is requested. The distance along Marine Way between Parcel 7 W. Access and Alton Parkway is 680', which is less than the minimum signal spacing on a Primary, according to TG-7 and a deviation is requested. The distance along Marine Way between Ada and Treble is 740', which is less than the minimum signal spacing on a Primary, according to TG-7 and a deviation is requested.

REASONS FOR REQUESTING DEVIATION FROM TG-7

Exhibits 5-7 and 5-8 of the *Great Park Neighborhoods VTTMs 19402, 19403, 19404, 19405, 19406 and Master Plan Modification BA 619 Traffic Evaluation* (replicated in this letter) shows the results of the intersection and driveway spacing evaluation.

A proposed traffic signal is located at Parcel 2 E. Access & Marine Way. The distance along Marine Way between Parcel 2 E. Access and Bake Parkway is 1,150', which is less than the minimum signal spacing on a Primary and a deviation is requested.

A proposed traffic signal is located at Parcel 7 W. Access & Marine Way. The distance along Marine Way between Parcel 7 W. Access and Alton Parkway is 680', which is less than the minimum signal spacing on a Primary and a deviation is requested.

A proposed traffic signal is located at Ada & Marine Way. The distance along Marine Way between Ada and Treble is 740', which is less than the minimum signal spacing on a Primary and a deviation is requested.

As indicated in the guideline, the recommended distance is based primarily on cycle length and prevailing speeds. The guideline also indicates that there may be extenuating circumstances, such as a large shopping center or office development on a Major or Primary highway, where distances less than the minimums could be supported.

JUSTIFICATION FOR REQUESTING THE PROPOSED DESIGN FEATURES FOR TG-7

VTTMs 19403 and 19402 are connected via multiple driveways to Marine Way, one of which is proposed to have traffic signal control.

Consistent with the *Great Park Neighborhoods VTTMs 19402, 19403, 19404, 19405, 19406 and Master Plan Modification BA 619 Traffic Evaluation*, the driveways are spaced to distribute access to various portions of the VTTMs. Eliminating this signalized access for Parcel 7 W. Access & Marine Way or Parcel 2 E. Access & Marine Way would increase the volumes at the other (right in/out) driveways at Marine Way.

For the intersection of Ada & Marine Way, the distance along Marine Way between Ada and Treble provides maximum spacing without impacting the site design of VTTM 19406.

EXPLANATION OF HOW INTENT IS MET OR DOES NOT CREATE TRAFFIC

OPERATIONS / SAFETY ISSUES FOR TG-7

Although the recommended signal spacing of 1,320 feet between signalized intersections is not met, the proposed potential signals are appropriately spaced to provide VTTM access while maintaining flow along Marine Way.

SUPPORTING DOCUMENTATION JUSTIFYING RATIONALE FOR REQUEST FOR TG-7

As stated above, the purpose of TG-7 is to optimize through traffic movement and allow for signal progression while providing access to abutting properties. The driveways in question take access via potential signalized intersections and will likely not affect operation of the overall circulation system. The Project driveway locations have been planned to provide ingress / egress options while minimizing the effect of Project traffic on General Plan level roads. Acceptable LOS is anticipated to occur at the proposed traffic signal locations mentioned in this deviation request, and queues are anticipated to clear in a timely manner. Therefore, a deviation from TG-7 is reasonable.

DEVIATION REQUEST FOR TG-10

Whether or not to allow left turn in/out access at driveways is evaluated based on the TG-10 guideline. Pursuant to the guideline, left turn access is acceptable when the left turn volume and the sum of the conflicting volumes lie below the guideline. TG-10 applies to each driveway along a Major, Primary, Secondary, or Commuter Street.

REASONS FOR REQUESTING DEVIATION FROM TG-10

For Parcel 14 Access at Marine Way, the STIY with Project VTTMs and Modified Master Plan and BOA with Project VTTMs and Modified Master Plan PM peak hour sum of conflicting volumes do not meet the TG-10 criteria for inbound left turn access. At this location, a median configuration is proposed on Marine Way which would allow inbound left turns but not outbound left turns to occur.

For Ada at Parcel 12 South Access, the BOA AM and PM peak hours sum of conflicting volumes do not meet the TG-10 criteria for outbound left turn access.

At the Irvine Station East Access / Barranca Parkway intersection, left turn in/out access to and from the Irvine Station is currently allowed. Peak hour left turn maneuvers are projected to become more

difficult at this location, with or without the Project. The City can consider additional analysis outside of this Traffic Evaluation to determine how to best mitigate this left-turn in/out not meeting TG-10.

JUSTIFICATION FOR REQUESTING THE PROPOSED DESIGN FEATURES FOR TG-10

At the Parcel 14 Access / Marine Way intersection, the maximum projected left turn inbound volume is 20 vehicles in the PM peak hour for BOA conditions, which is equivalent to one vehicle every 3 minutes. There is no alternative driveway location which would otherwise accommodate inbound traffic to Parcel 14 for vehicles traveling eastbound on Marine Way. If inbound left turn access is restricted at this location, the out-of-way travel becomes excessive for the peak hour vehicles involved in this turning activity.

At the Ada / Parcel 12 South Access intersection, the maximum projected left turn outbound volume is 3 vehicles in the AM peak hour for BOA conditions, which is equivalent to one vehicle every 20 minutes. For BOA PM peak hour conditions, the maximum projected left turn inbound volume is 7 vehicles, which is equivalent to one vehicle every 9 minutes. There is no alternative driveway location which would otherwise accommodate outbound traffic from Parcel 12 for vehicles traveling northbound on Ada. If outbound left turn access is restricted at this location, the out-of-way travel becomes excessive for the peak hour vehicles involved in this turning activity.

At the Irvine Station East Access / Barranca Parkway intersection, the maximum projected inbound left turn volume is 7 vehicles in the AM peak hour and the maximum projected outbound left turn volume is 77 vehicles in the PM peak hour. For Irvine Station East Access at Barranca Parkway, left turn in/out access is currently allowed. As the volumes of traffic are projected to increase along Barranca Parkway (with or without the Project) at this location, peak hour queues at these left turn maneuvers become excessive and the peak hour level of service becomes unacceptable. The City can consider additional analysis outside of this Traffic Evaluation to determine how to best mitigate this left-turn in/out not meeting TG-10.

EXPLANATION OF HOW INTENT IS MET OR DOES NOT CREATE TRAFFIC

OPERATIONS / SAFETY ISSUES FOR TG-10

For Parcel 14 Access at Marine Way, left turn in access for the average of one vehicle every three minutes is reasonable. A turn lane is provided for vehicles waiting to turn left into the driveway.

For Ada at Parcel 12 South Access, left turn out access for the average of one vehicle every 20 minutes in the AM peak hour and one vehicle every 9 minutes in the PM peak hour is reasonable.

For Irvine Station East Access at Barranca Parkway, vehicles attempting to complete outbound left turns during the morning peak hour will be delayed. The resulting outbound left turn queue length will affect driveway operations, but are not anticipated to cause issues for Barranca Parkway travelers. Although the resulting AM peak hour LOS is deficient, Barranca Parkway traffic is not impeded due to the cross-street stop control configuration.

DEVIATION REQUEST FOR TG-13

Whether or not to provide traffic signal control at intersections where volumes satisfy traffic signal warrants is evaluated based on the TG-13 guideline. Pursuant to the guideline, a traffic signal is warranted if the peak hour approach volumes exceed the Caltrans Peak Hour Volume Warrants for Urban Areas.

REASONS FOR REQUESTING DEVIATION FROM TG-13

For Lynx at Harrier, the STIY AM and PM peak hour volumes exceed the TG-13 traffic signal warrant guideline. However, a traffic signal is not recommended at this location.

JUSTIFICATION FOR REQUESTING THE PROPOSED DESIGN FEATURES FOR TG-13

It is important to note that a signal warrant defines the minimum condition under which the installation of a traffic signal might be warranted. Meeting this threshold condition does not require that a traffic control signal be installed at a particular location, but rather, that other traffic factors and conditions be evaluated in order to determine whether the signal is truly justified. It should also be noted that signal warrants do not necessarily correlate with LOS.

EXPLANATION OF HOW INTENT IS MET OR DOES NOT CREATE TRAFFIC

OPERATIONS / SAFETY ISSUES FOR TG-13

For Lynx at Harrier, bicycle and pedestrian activity is anticipated to be minimal. Local cut-through traffic is not anticipated and alternative routes are available for vehicles that might experience delays at the Lynx at Harrier intersection.

DEVIATION REQUEST FOR TG-15

Driveway lengths are evaluated for local street driveways based on the TG-15 guideline. The unsignalized driveway length is directly related to the volume entering or exiting the driveway (one foot per vehicle, with a minimum of 25 feet). Driveway lengths are illustrated on Exhibits 5-7 and 5-8 of the Traffic Evaluation.

REASONS FOR REQUESTING DEVIATION FROM TG-15

The recommended driveway length should be sufficient length to allow vehicles to enter the parking area without causing later vehicles to back out onto the public street. At the driveways listed in the table below, the first on-street parking space or individual condominium garage is within the minimum recommended driveway length. A deviation from TG-15 is requested for these driveways.

Driveway	Access To	Estimated Maximum In / Out Volume	Minimum Recommended Driveway Length (feet)	Driveway Length Provided (feet)
Parcel 12 S. Access	Ada	92	100	85
Parcel 14 Access	Marine Wy.	82	100	65
Parcel 13 Internal Driveways	Various local Roads	<10	25	10

For other study area locations, the driveway length satisfies TG-15.

JUSTIFICATION FOR REQUESTING THE PROPOSED DESIGN FEATURES FOR TG-15

Because of the physical constraints of the site combined with the quantities of land uses proposed, the driveway length cannot be extended without reconfiguring the proposed garage / condominium layout or parking area which would affect the entire site's parking supply.

EXPLANATION OF HOW INTENT IS MET OR DOES NOT CREATE TRAFFIC

OPERATIONS / SAFETY ISSUES FOR TG-15

In the case of each of the relevant driveways, the parking spaces / garages are not concentrated adjacent to the driveways and it is likely that the majority of the vehicles will continue straight past the first turnoff, which will result in additional storage without causing a delay to the remaining inbound vehicles.

If you have any questions, please contact us directly at jkain@urbanxroads.com for John or blawson@urbanxroads.com for Bill.

EXHIBIT 5-7: DISTANCES BETWEEN INTERSECTIONS AND DRIVEWAY LENGTHS
(VTTM 19404, VTTM 19405, VTTM 19406, AND MP MOD - BA 619)

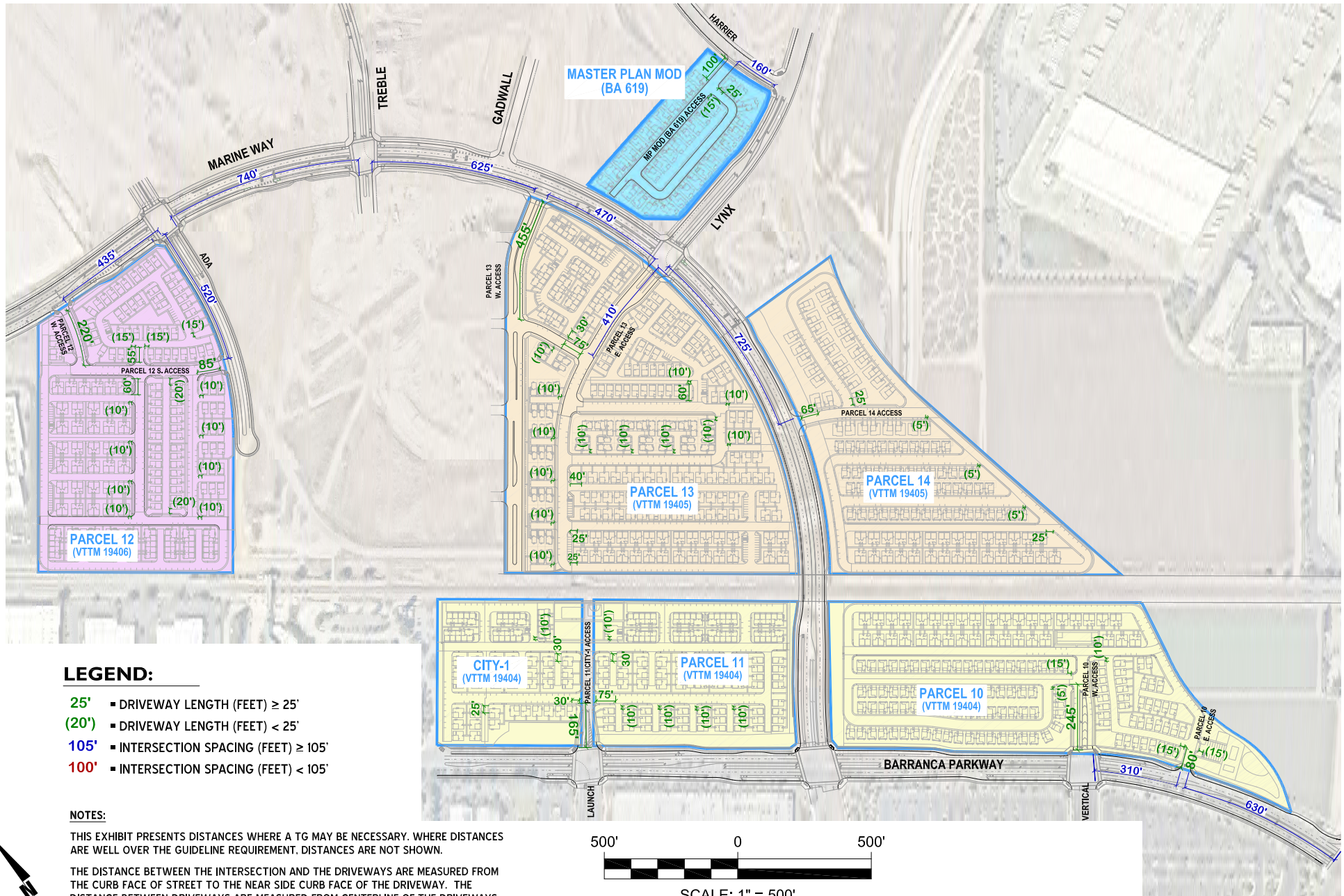
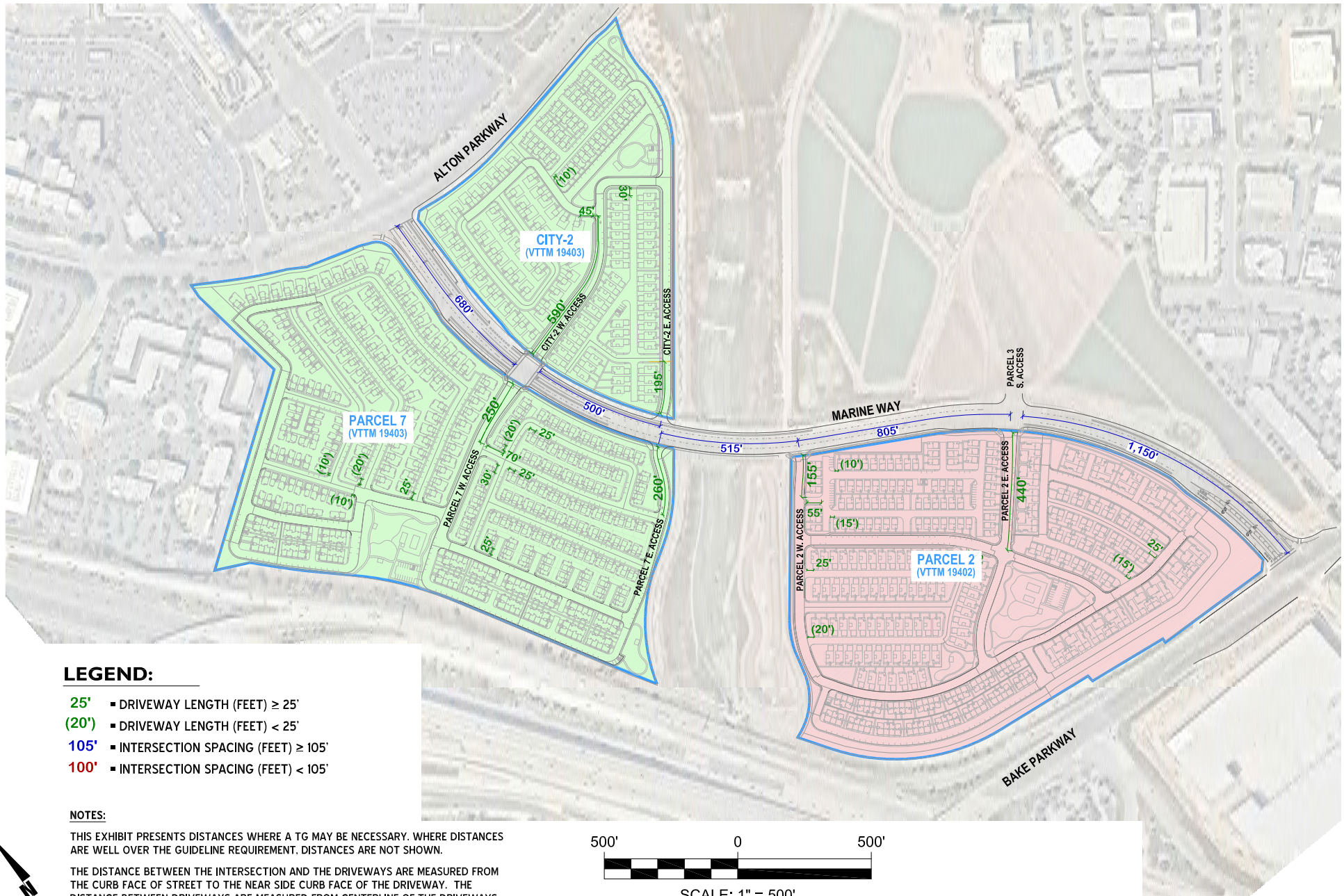


EXHIBIT 5-8: DISTANCES BETWEEN INTERSECTIONS AND DRIVEWAY LENGTHS (VTTM 19402 AND VTTM 19403)



**TABLE 5-4: SHORT-TERM INTERIM YEAR (STIY) TURN LANE STORAGE
WITH PROJECT VTTMS AND MASTER PLAN MODIFICATION**

ID	Intersection	Movement	STIY With Project ¹				Lanes	Volume / Lane	Recommended Length ² (ft.)	Existing/ Provided Length ⁵ (ft.)
			AM	PM	Peak Hour	Volume				
Harrier										
834	Lynx & Harrier	NBL	92	182	PM	182	1	182	190	150 ^{3,6}
Marine Way										
478	Marine Wy. & Parcel 14 Access	SBL	10	16	PM	16	1	16	150	150
		WBR	82	34	AM	82	1	82	90	150
496	Parcel 13 W. Access & Marine Wy.	NBR	47	16	AM	47	1	47	90	125
499	Parcel 12 W. Access & Marine Wy.									
		NBR	16	27	PM	27	1	27	90	150
503	Parcel 2 E. Access - Parcel 3 S. Access & Marine Wy.	NBL	71	30	AM	71	1	71	90	150
		SBL	39	129	PM	129	1	129	130	180
		EBL	72	70	AM	72	1	72	150	200
		WBL	26	55	PM	55	1	55	150	150
504	Parcel 7 - City 2 W. Access & Marine Wy.	NBL	153	56	AM	153	1	153	160	160
		SBL	13	8	AM	13	1	13	90	150
		EBL	12	51	PM	51	1	51	150	150
		WBL	11	24	PM	24	1	24	150	150
512	City-2 E. Access & Marine Wy.									
		NBR	9	5	AM	9	1	9	90	150
		SBR	19	8	AM	19	1	19	90	150
513	Parcel 2 W. Access & Marine Wy.									
		NBR	17	9	AM	17	1	17	90	150
565	Treble & Marine Wy.									
		SBL	862	340	AM	862	2	431	440	300 ⁶
		EBL	10	77	PM	77	1	77	150	300
		WBR	200	723	PM	723	1	723	730	300 ^{3,6}
566	Marine Wy. & Barranca Pkwy.	NBL	37	132	PM	132	2	66	150	240
		NBR	25	97	PM	97	1	97	150	150
		SBL	589	447	AM	589	2	295	300	325
		SBR	938	527	AM	938	1	938	940	420 ^{3,6}
		EBL	206	951	PM	951	2	476	480	305 ^{3,6}
		EBR	84	61	AM	84	1	84	150	225
		WBL	91	48	AM	91	2	46	150	165
		WBR	357	622	PM	622	1	622	630	345 ^{3,6}
567	Marine Wy. & Alton Pkwy.	NBL	735	454	AM	735	2	368	370	330 ^{3,6}
		NBR	676	436	AM	676	1	676	680	492 ^{3,6}
		SBL	11	81	PM	81	2	41	150	150
		SBR	12	89	PM	89	1	89	150	280
		EBL	169	116	AM	169	2	85	150	300
		EBR	506	756	PM	756	Free (1)	756	760	230
		WBL	280	489	PM	489	2	245	250	150 ^{3,6}
		WBR	88	61	AM	88	1	88	150	260
568	Ada & Marine Wy.	NBL	8	30	PM	30	1	30	90	300
		NBR	18	41	PM	41	1	41	90	300
		EBR	8	10	PM	10	1	10	150	180
		WBL	45	81	PM	81	1	81	150	300
569	Bake Pkwy. & Marine Wy.-Parcel 1 Access	NBL	937	555	AM	937	2	469	470	400 ^{3,6}
		NBR	175	73	AM	175	1	175	180	300
		SBL	119	41	AM	119	1	119	150	300
		SBR	636	286	AM	636	Free (1)	636	640	50
		EBL	288	483	PM	483	2	242	250	300
		EBR	536	802	PM	802	2	401	410	400 ^{3,6}
		WBL	37	148	PM	148	1	148	150	150

TABLE 5-4: SHORT-TERM INTERIM YEAR (STIY) TURN LANE STORAGE
WITH PROJECT VTTMS AND MASTER PLAN MODIFICATION

ID	Intersection	Movement	STIY With Project ¹				Lanes	Volume / Lane	Recommended Length ² (ft.)	Existing/ Provided Length ³ (ft.)
			AM	PM	Peak Hour	Volume				
582	Lynx - Parcel 13 E Access & Marine Wy.	NBL	7	NOM	AM	7	1	7	90	<u>90</u>
		NBR	106	42	AM	106	1	106	110	<u>90</u> ^{4,6}
		SBL	994	663	AM	994	2	497	500	<u>350</u> ^{6,7}
		EBL	27	63	PM	63	1	63	150	<u>310</u>
		WBL	28	116	PM	116	1	116	150	<u>200</u>
		WBR	498	828	PM	828	1	828	830	<u>325</u> ^{3,6}
Barranca Parkway										
326	Ada & Barranca Pkwy.	NBL	26	57	PM	57	1	57	150	115
		SBL	61	120	PM	120	2	60	150	190
		SBR	13	53	PM	53	1	53	150	190
		EBL	12	37	PM	37	1	37	150	200
		WBL	199	74	AM	199	1	199	200	200
		WBR	48	41	AM	48	1	48	190	190
341	Alton Pkwy. & Barranca Pkwy./Muirlands Bl.	NBL	9	7	AM	9	1	9	150	210
		NBR	230	347	PM	347	1	347	350	490
		SBL	176	121	AM	176	2	88	150	240
		SBR	1,030	569	AM	1,030	Free (1)	1,030	1,030	410
		EBL	493	708	PM	708	2	354	360	440
		WBL	181	122	AM	181	2	91	150	225
479	Parcel 10 E. Access & Barranca Pkwy.	SBR	15	8	AM	15	1	15	90	<u>80</u>
500	Irvine Station E. Access & Barranca Pkwy.	SBL	21	77	PM	77	1	77	90	195
		SBR	NOM	5	PM	5	1	5	90	230
		EBL	7	5	AM	7	1	7	150	195
602	Vertical - Parcel 10 W. Access & Barranca Pkwy.	NBL	17	76	PM	76	1	76	90	300
		NBR	8	39	PM	39	1	39	90	300
		SBL	32	14	AM	32	1	32	90	<u>225</u>
		EBL	15	56	PM	56	1	56	150	<u>230</u>
		EBR	73	37	AM	73	1	73	150	300
		WBL	36	15	AM	36	1	36	150	335
		WBR	5	16	PM	16	1	16	150	<u>180</u>
603	Launch - Parcel 11/City-1 Access & Barranca Pkwy.	NBL	25	102	PM	102	2	51	90	300
		SBL	10	12	PM	12	1	12	90	<u>140</u>
		SBR	81	26	AM	81	1	81	90	<u>60</u> ^{3,6}
		EBL	16	55	PM	55	1	55	150	300
		EBR	153	46	AM	153	1	153	160	95 ^{3,4,6}
		WBL	37	13	AM	37	1	37	150	240
		WBR	NOM	15	PM	15	1	15	150	300
Ada										
519	Ada & Parcel 12 S. Access	NBL	NOM	NOM	AM	NOM	1	NOM	90	<u>90</u>

¹ NOM = Nominal (less than 5 vehicles per hour)

² Consistent with the methodology utilized in previous NITM program traffic studies, the recommended turn pocket length is based on one foot per peak hour turn volume (highest of AM and PM and rounded into increments of 10), where pocket lengths exceed the standard 150 feet for Major, Primary, and Secondary highways, and 90 feet for Commuter, Local streets, and driveways.

³ The peak hour volume exceeds the available storage length based on the one foot per peak hour turn volume criteria. However, review of the SimTraffic simulation results indicate that the turn lane queue is anticipated to clear in a timely manner and that the provided pocket length is adequate to accommodate the peak hour volume. (See separate deviation request letter)

⁴ Excess in queue can be accommodated within the transition lane.

⁵ 100 = Existing storage length; **100** = Provided storage length

⁶ Deviation requested

⁷ SB left turn bay; 1st (inside) left turn lane 350', 2nd (outside) left turn lane is over 350' (trap lane)

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**TABLE 5-5: BUILDOUT APPROVED (BOA) TURN LANE STORAGE
WITH PROJECT VTTMS AND MASTER PLAN MODIFICATION**

ID	Intersection	Movement	BOA With Project ¹				Lanes	Volume / Lane	Recommended Length ² (ft.)	Existing/ Provided Length ⁵ (ft.)
			AM	PM	Peak Hour	Volume				
Marine Way										
478	Marine Wy. & Parcel 14 Access	SBL	11	20	PM	20	1	20	150	150
		WBR	82	34	AM	82	1	82	90	150
496	Parcel 13 W. Access & Marine Wy.	NBR	47	16	AM	47	1	47	90	125
499	Parcel 12 W. Access & Marine Wy.	NBR	16	27	PM	27	1	27	90	150
503	Parcel 2 E. Access - Parcel 3 S. Access & Marine Wy.	NBL	69	25	AM	69	1	69	90	150
		SBL	41	139	PM	139	1	139	140	180
		EBL	94	47	AM	94	1	94	150	200
		WBL	23	77	PM	77	1	77	150	150
504	Parcel 7 - City 2 W. Access & Marine Wy.	NBL	146	50	AM	146	1	146	150	160
		SBL	17	10	AM	17	1	17	90	150
		EBL	13	44	PM	44	1	44	150	150
		WBL	10	40	PM	40	1	40	150	150
512	City-2 E. Access & Marine Wy.	NBR	9	5	AM	9	1	9	90	150
		SBR	19	8	AM	19	1	19	90	150
513	Parcel 2 W. Access & Marine Wy.	NBR	17	9	AM	17	1	17	90	150
568	Ada & Marine Wy.	NBL	665	554	AM	665	1	665	670	300 ^{3,6}
		NBR	302	224	AM	302	1	302	310	300 ^{3,6}
		EBR	382	657	PM	657	1	657	660	180 ^{3,6}
		WBL	266	236	AM	266	1	266	270	300
582	Lynx - Parcel 13 E Access & Marine Wy.	NBL	78	51	AM	78	1	78	90	90
		NBR ⁸	106	42	AM	106	1	106	110 ⁸	90 ^{4,6}
		SBL	831	388	AM	831	2	416	420	350 ^{6,7}
		EBL	75	129	PM	129	1	129	150	310
		WBL	118	476	PM	476	1	476	480	200 ^{3,6}
		WBR	333	678	PM	678	1	678	680	325 ^{3,6}
Barranca Parkway										
479	Parcel 10 E. Access & Barranca Pkwy.	SBR	15	8	AM	15	1	15	90	80
602	Vertical - Parcel 10 W. Access & Barranca Pkwy.	NBL	44	175	PM	175	1	175	180	300
		NBR	24	116	PM	116	1	116	120	300
		SBL	35	17	AM	35	1	35	90	225
		EBL	14	49	PM	49	1	49	150	230
		EBR	226	94	AM	226	1	226	230	300
		WBL	129	53	AM	129	1	129	150	335
		WBR	6	21	PM	21	1	21	150	180
603	Launch - Parcel 11/City-1 Access & Barranca Pkwy.	NBL	85	287	PM	287	2	144	150	300
		SBL	10	10	AM	10	1	10	90	140
		SBR	77	27	AM	77	1	77	90	60 ^{3,6}
		EBL	15	56	PM	56	1	56	150	300
		EBR	482	192	AM	482	1	482	490	95 ^{3,4,6}
		WBL	132	40	AM	132	1	132	150	240
		WBR	NOM	12	PM	12	1	12	150	300
Ada										
519	Ada & Parcel 12 S. Access	NBL	44	66	PM	66	1	66	90	90

¹ NOM = Nominal (less than 5 vehicles per hour)

² Consistent with the methodology utilized in previous NITM program traffic studies, the recommended turn pocket length is based on one foot per peak hour turn volume (highest of AM and PM and rounded into increments of 10), where pocket lengths exceed the standard 150 feet for Major, Primary, and Secondary highways, and 90 feet for Commuter, Local streets, and driveways.

³ The peak hour volume exceeds the available storage length based on the one foot per peak hour turn volume criteria. However, review of the SimTraffic simulation results indicate that the turn lane queue is anticipated to clear in a timely manner and that the provided pocket length is adequate to accommodate the peak hour volume. (See separate deviation request letter)

⁴ Excess in queue can be accommodated within the transition lane.

⁵ 100 = Existing storage length; **100** = Provided storage length

⁶ Deviation requested

⁷ SB left turn bay; 1st (inside) left turn lane 350'; 2nd (outside) left turn lane is over 350' (trap lane)

⁸ Not including future long range volumes associated with TAZ 722 development

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TABLE 1: SHORT-TERM INTERIM YEAR (STIY)
WITH PROJECT VTTMs AND MASTER PLAN MODIFICATION QUEUING ANALYSIS SUMMARY

ID	Intersection	Movement	STIY With Project				Lanes	Volume / Lane	Existing/ Provided Length ² (ft.)	95th Percentile Queue Length Per Lane (feet) ¹	
			AM	PM	Peak Hour	Volume				AM	PM
Harrier											
834	Lynx & Harrier	NBL	92	182	PM	182	1	182	150	54	41
Marine Way											
565	Treble & Marine Wy.	SBL	862	340	AM	862	2	431	300	192	221
		EBL	10	77	PM	77	1	77	300	18	116
		WBR	200	723	PM	723	1	723	300	NOM	159
566	Marine Wy. & Barranca Pkwy.	NBL	37	132	PM	132	2	66	240	67	115
		NBR	25	97	PM	97	1	97	150	23	55
		SBL	589	447	AM	589	2	295	325	293	195
		SBR	938	527	AM	938	1	938	420	396	190
		EBL	206	951	PM	951	2	476	305	174	313 ⁴
		EBR	84	61	AM	84	1	84	225	42	5
		WBL	91	48	AM	91	2	46	165	46	51
		WBR	357	622	PM	622	1	622	345	356 ⁴	238
567	Marine Wy. & Alton Pkwy.	NBL	735	454	AM	735	2	368	330	321	131
		NBR	676	436	AM	676	1	676	492	406	76
		SBL	11	81	PM	81	2	41	150	41	52
		SBR	12	89	PM	89	1	89	280	43	NOM
		EBL	169	116	AM	169	2	85	300	139	46
		EBR	506	756	PM	756	Free (1)	756	230	NOM	22
		WBL	280	489	PM	489	2	245	150	161 ⁴	176 ⁴
		WBR	88	61	AM	88	1	88	260	NOM	7
569	Bake Pkwy. & Marine Wy.-Parcel 1 Access	NBL	937	555	AM	937	2	469	400	388	233
		NBR	175	73	AM	175	1	175	300	20	NOM
		SBL	119	41	AM	119	1	119	300	98	338 ⁴
		SBR	636	286	AM	636	Free (1)	636	50	140	146
		EBL	288	483	PM	483	2	242	300	142	232
		EBR	536	802	PM	802	2	401	400	254	277
		WBL	37	148	PM	148	1	148	150	39	209 ⁴
582	Lynx - Parcel 13 E Access & Marine Wy.	NBL	7	NOM	AM	7	1	7	90	NOM	NOM
		NBR	106	42	AM	106	1	106	90	121 ⁴	24
		SBL ³	994	663	AM	994	2	497	350	357 ^{3,4}	236
		EBL	27	63	PM	63	1	63	310	72	113
		WBL	28	116	PM	116	1	116	200	32	80
		WBR	498	828	PM	828	1	828	325	89	71
		Barranca Parkway									
603	Launch - Parcel 11/City-1 Access & Barranca Pkwy.	NBL	25	102	PM	102	2	51	300	47	111
		SBL	10	12	PM	12	1	12	140	NOM	58
		SBR	81	26	AM	81	1	81	60	100 ⁴	29
		EBL	16	55	PM	55	1	55	300	46	62
		EBR	153	46	AM	153	1	153	95	61	37
		WBL	37	13	AM	37	1	37	240	40	24
		WBR	NOM	15	PM	15	1	15	300	NOM	NOM

¹ Queue length calculated using Synchro 11 with SimTraffic.
 NOM = Nominal (less than 5 vehicles per hour)

² 100 = Existing storage length; 100 = Provided storage length

³ SB left turn bay; 1st (inside) left turn lane 350'; 2nd (outside) left turn lane is over 350' (trap lane)

⁴ Review of SimTraffic simulation results indicate that the turn lane queue is anticipated to clear in a timely manner and that the provided pocket length is adequate to accommodate the 95th percentile queue.

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TABLE 2: BUILDOUT APPROVED (BOA)
WITH PROJECT VTTMs AND MASTER PLAN MODIFICATION QUEUING ANALYSIS SUMMARY

ID	Intersection	Movement	BOA With Project				Lanes	Volume / Lane	Existing/ Provided Length ² (ft.)	95th Percentile Queue Length Per Lane (feet) ¹	
			AM	PM	Peak Hour	Volume				AM	PM
Marine Way											
568	Ada & Marine Wy.										
		NBL	665	554	AM	665	1	665	300	273 ³	258 ³
		NBR	302	224	AM	302	1	302	300	95	170
		EBR	382	657	PM	657	1	657	180	153	198 ³
		WBL	266	236	AM	266	1	266	300	171	95
582	Lynx - Parcel 13 E Access & Marine Wy.										
		NBL	78	51	AM	78	1	78	90	92 ³	45
		NBR ⁴	106	42	AM	106	1	106	90	186 ³	18
		SBL	831	388	AM	831	2	416	350	340	183
		EBL	75	129	PM	129	1	129	310	78	83
		WBL	118	476	PM	476	1	476	200	104	194
		WBR	333	678	PM	678	1	678	325	57	82
Barranca Parkway											
603	Launch - Parcel 11/City-1 Access & Barranca Pkwy.										
		NBL	85	287	PM	287	2	144	300	133	204
		SBL	10	10	AM	10	1	10	140	35	34
		SBR	77	27	AM	77	1	77	60	44	28
		EBL	15	56	PM	56	1	56	300	27	83
		EBR	482	192	AM	482	1	482	95	63	50
		WBL	132	40	AM	132	1	132	240	141	20
		WBR	NOM	12	PM	12	1	12	300	NOM	9

¹ Queue length calculated using Synchro 11 with SimTraffic.

NOM = Nominal (less than 5 vehicles per hour)

² 100 = Existing storage length; **100** = Provided storage length

³ Review of SimTraffic simulation results indicate that the turn lane queue is anticipated to clear in a timely manner and that the provided pocket length is adequate to accommodate the 95th percentile queue.

⁴ Not including future long range volumes associated with TAZ 722 development

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ATTACHMENT 1

Queuing and Blocking Report

STIY WP AM Peak Hour

Intersection: 565: Marine Wy. & Treble

Movement	EB	EB	EB	WB	WB	SB	SB	SB
Directions Served	L	T	T	T	T	L	L	R
Maximum Queue (ft)	16	81	82	51	64	206	222	14
Average Queue (ft)	3	70	68	29	46	133	152	7
95th Queue (ft)	18	129	122	71	89	192	188	25
Link Distance (ft)		326	326	371	371		703	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	150					220		220
Storage Blk Time (%)						1	5	
Queuing Penalty (veh)						6	21	

Queuing and Blocking Report

STIY WP AM Peak Hour

Intersection: 566: Marine Wy. & Barranca Pkwy.

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB
Directions Served	L	L	T	T	R	L	L	T	T	R	L	L
Maximum Queue (ft)	126	157	103	70	30	34	46	391	399	198	32	36
Average Queue (ft)	95	131	81	45	12	13	24	340	355	127	31	11
95th Queue (ft)	157	174	131	114	42	33	46	471	505	356	67	30
Link Distance (ft)			799	799				828	828			
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	305	305			225	165	165			345	240	240
Storage Blk Time (%)								46	19			
Queuing Penalty (veh)								42	67			

Intersection: 566: Marine Wy. & Barranca Pkwy.

Movement	NB	NB	NB	SB	SB	SB	SB	SB	B21
Directions Served	T	T	R	L	L	T	T	R	T
Maximum Queue (ft)	43	74	10	277	226	321	715	390	121
Average Queue (ft)	36	55	5	216	183	191	537	389	30
95th Queue (ft)	52	88	23	293	248	505	769	396	141
Link Distance (ft)	905	905				698	698		460
Upstream Blk Time (%)							12		
Queuing Penalty (veh)							146		
Storage Bay Dist (ft)			150	400	400			300	
Storage Blk Time (%)							0	54	
Queuing Penalty (veh)							0	218	

Queuing and Blocking Report

STIY WP AM Peak Hour

Intersection: 567: Marine Wy. & Alton Pkwy

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	WB	NB
Directions Served	L	L	T	T	T	L	L	T	T	T	R	L
Maximum Queue (ft)	91	110	123	83	92	109	107	13	15	5	2	261
Average Queue (ft)	50	85	100	61	59	76	90	7	8	2	1	216
95th Queue (ft)	113	139	158	129	152	161	161	36	27	9	3	293
Link Distance (ft)			985	985	985			664	664	664		
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	310	310				150	150				200	330
Storage Blk Time (%)					0	4	4					
Queuing Penalty (veh)					0	5	5					

Intersection: 567: Marine Wy. & Alton Pkwy

Movement	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	T	T	R	L	T	T	R
Maximum Queue (ft)	278	106	127	252	28	7	7	29
Average Queue (ft)	234	92	106	231	16	4	5	14
95th Queue (ft)	321	165	199	406	41	19	22	43
Link Distance (ft)		669	669		672	672		
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	330			490	150		280	
Storage Blk Time (%)	0							
Queuing Penalty (veh)	0							

Queuing and Blocking Report

STIY WP AM Peak Hour

Intersection: 569: Bake Pkwy. & Marine Wy./Marine Wy

Movement	EB	EB	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB
Directions Served	L	L	T	R	R	L	T	R	L	L	T	T
Maximum Queue (ft)	155	134	12	215	204	36	26	9	321	375	397	473
Average Queue (ft)	102	121	6	154	150	32	19	5	302	356	390	375
95th Queue (ft)	107	142	16	254	239	39	30	12	333	388	402	537
Link Distance (ft)			578	578			344				628	628
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	450	450			450	200		50	400	400		
Storage Blk Time (%)												1
Queuing Penalty (veh)												11

Intersection: 569: Bake Pkwy. & Marine Wy./Marine Wy

Movement	NB	NB	SB	SB	SB	SB	SB	SB
Directions Served	T	R	L	T	T	T	T	R
Maximum Queue (ft)	272	15	388	452	452	452	452	140
Average Queue (ft)	252	8	83	452	452	452	452	140
95th Queue (ft)	285	20	98	452	452	452	452	140
Link Distance (ft)	628			437	437	437	437	
Upstream Blk Time (%)				48	46	20	44	
Queuing Penalty (veh)				0	0	0	0	
Storage Bay Dist (ft)		300	300					50
Storage Blk Time (%)				55			52	
Queuing Penalty (veh)				66			328	

Queuing and Blocking Report

STIY WP AM Peak Hour

Intersection: 582: Parcel 13 E. Access/Lynx & Marine Wy.

Movement	EB	EB	EB	WB	WB	WB	WB	NB	SB	SB	SB
Directions Served	L	T	T	L	T	T	R	R	L	L	TR
Maximum Queue (ft)	55	369	381	17	49	74	72	95	315	348	17
Average Queue (ft)	36	332	344	12	43	50	64	82	270	270	11
95th Queue (ft)	72	433	424	32	70	84	89	121	331	357	32
Link Distance (ft)		472	472		732	732				668	
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	300			200			325	90	350		350
Storage Blk Time (%)		10	38					8	0	1	
Queuing Penalty (veh)		3	1					1	0	8	

Queuing and Blocking Report

STIY WP AM Peak Hour

Intersection: 603: Launch/Parcel 11/City-1 Access & Barranca Pkwy.

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	SB	SB	SB
Directions Served	L	T	T	R	L	T	T	L	L	L	T	R
Maximum Queue (ft)	26	106	75	44	22	142	160	20	24	9	8	77
Average Queue (ft)	13	82	55	27	14	137	148	10	20	0	4	46
95th Queue (ft)	46	134	119	61	40	159	192	33	47	0	19	100
Link Distance (ft)		483	483			799	799				304	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	300			95	240			290	290	200		200
Storage Blk Time (%)												
Queuing Penalty (veh)												

Queuing and Blocking Report

STIY WP AM Peak Hour

Intersection: 834: Lynx & Harrier

Movement	EB	NB
Directions Served	LR	L
Maximum Queue (ft)	122	40
Average Queue (ft)	97	24
95th Queue (ft)	177	54
Link Distance (ft)	141	
Upstream Blk Time (%)	15	
Queuing Penalty (veh)	33	
Storage Bay Dist (ft)		200
Storage Blk Time (%)		
Queuing Penalty (veh)		

Queuing and Blocking Report

STIY WP PM Peak Hour

Intersection: 565: Marine Wy. & Treble

Movement	EB	EB	EB	WB	WB	WB	SB	SB	SB
Directions Served	L	T	T	T	T	R	L	L	R
Maximum Queue (ft)	70	52	36	67	66	66	137	138	25
Average Queue (ft)	53	46	36	67	66	51	137	138	20
95th Queue (ft)	116	86	50	133	139	159	221	170	37
Link Distance (ft)		326	326	371	371			703	
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)	150					300	220		220
Storage Blk Time (%)							1		
Queuing Penalty (veh)							1		

Queuing and Blocking Report

STIY WP PM Peak Hour

Intersection: 566: Marine Wy. & Barranca Pkwy.

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB
Directions Served	L	L	T	T	R	L	L	T	T	R	L	L
Maximum Queue (ft)	311	338	250	74	3	24	35	76	78	198	31	89
Average Queue (ft)	204	258	109	56	1	24	23	53	57	169	31	55
95th Queue (ft)	257	313	197	92	5	51	49	76	85	238	79	115
Link Distance (ft)			799	799				828	828			
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	305	305			225	165	165			345	240	240
Storage Blk Time (%)		11										
Queuing Penalty (veh)		37										

Intersection: 566: Marine Wy. & Barranca Pkwy.

Movement	NB	NB	NB	SB	SB	SB	SB	SB
Directions Served	T	T	R	L	L	T	T	R
Maximum Queue (ft)	184	210	37	127	129	52	69	147
Average Queue (ft)	173	204	37	106	109	47	69	147
95th Queue (ft)	238	293	55	171	195	101	111	190
Link Distance (ft)	905	905				698	698	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)			150	400	400		300	
Storage Blk Time (%)		18						
Queuing Penalty (veh)		17						

Queuing and Blocking Report

STIY WP PM Peak Hour

Intersection: 567: Marine Wy. & Alton Pkwy

Movement	EB	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB
Directions Served	L	L	T	T	T	R	L	L	T	T	R	L
Maximum Queue (ft)	25	28	81	27	47	6	153	168	73	54	2	134
Average Queue (ft)	11	19	48	13	19	6	153	156	68	0	2	45
95th Queue (ft)	36	46	103	42	61	22	174	176	229	0	7	70
Link Distance (ft)			985	985	985				664	664		
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	310	310				200	150	150			200	330
Storage Blk Time (%)							26	27	1			
Queuing Penalty (veh)							30	32	4			

Intersection: 567: Marine Wy. & Alton Pkwy

Movement	NB	NB	NB	NB	SB	SB	SB	SB	SB
Directions Served	L	T	T	R	L	L	T	T	R
Maximum Queue (ft)	138	7	25	45	7	48	53	88	40
Average Queue (ft)	102	7	18	45	0	18	13	21	0
95th Queue (ft)	131	26	51	76	0	52	35	42	0
Link Distance (ft)		669	669				672	672	
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)	330			490	150	150		280	
Storage Blk Time (%)									
Queuing Penalty (veh)									

Queuing and Blocking Report

STIY WP PM Peak Hour

Intersection: 569: Bake Pkwy. & Marine Wy./Marine Wy

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB
Directions Served	L	L	T	R	R	L	T	T	R	L	L	T
Maximum Queue (ft)	141	160	10	168	191	130	5	5	38	193	216	225
Average Queue (ft)	141	160	10	160	191	112	5	5	29	174	197	146
95th Queue (ft)	207	232	42	218	277	209	22	22	65	233	233	308
Link Distance (ft)			578	578			344	344				628
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	450	450			450	200			50	400	400	
Storage Blk Time (%)									7			
Queuing Penalty (veh)									1			

Intersection: 569: Bake Pkwy. & Marine Wy./Marine Wy

Movement	NB	NB	SB	SB	SB	SB	SB	SB
Directions Served	T	T	L	T	T	T	T	R
Maximum Queue (ft)	227	193	99	455	456	355	226	94
Average Queue (ft)	146	125	99	455	425	336	193	66
95th Queue (ft)	275	248	338	470	527	443	280	146
Link Distance (ft)	628	628		437	437	437	437	
Upstream Blk Time (%)				27	9	2		
Queuing Penalty (veh)				0	0	0		
Storage Bay Dist (ft)			300				50	
Storage Blk Time (%)				45			38	8
Queuing Penalty (veh)				18			110	50

Queuing and Blocking Report

STIY WP PM Peak Hour

Intersection: 582: Parcel 13 E. Access/Lynx & Marine Wy.

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	SB
Directions Served	L	T	T	R	L	T	T	R	L	T	R	L
Maximum Queue (ft)	79	95	140	11	81	117	328	104	5	5	10	154
Average Queue (ft)	75	61	118	11	53	91	190	54	0	5	10	154
95th Queue (ft)	113	98	173	34	80	139	304	71	0	17	24	236
Link Distance (ft)		472	472			732	732			339		
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	300			50	200			325	90		90	350
Storage Blk Time (%)			53				4					
Queuing Penalty (veh)			2				31					

Intersection: 582: Parcel 13 E. Access/Lynx & Marine Wy.

Movement	SB	SB
Directions Served	L	TR
Maximum Queue (ft)	155	12
Average Queue (ft)	150	10
95th Queue (ft)	258	34
Link Distance (ft)	668	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	350	
Storage Blk Time (%)		
Queuing Penalty (veh)		

Queuing and Blocking Report

STIY WP PM Peak Hour

Intersection: 603: Launch/Parcel 11/City-1 Access & Barranca Pkwy.

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB
Directions Served	L	T	T	R	L	T	T	L	L	R	L	R
Maximum Queue (ft)	36	382	195	17	11	38	52	3	70	43	30	17
Average Queue (ft)	27	297	93	16	8	25	23	3	70	41	22	12
95th Queue (ft)	62	449	174	37	24	39	48	11	111	71	58	29
Link Distance (ft)		483	483			799	799					
Upstream Blk Time (%)		0										
Queuing Penalty (veh)		2										
Storage Bay Dist (ft)	300			95	240			290	290	50	200	200
Storage Blk Time (%)		11	9							9		
Queuing Penalty (veh)		6	4							9		

Queuing and Blocking Report

STIY WP PM Peak Hour

Intersection: 834: Lynx & Harrier

Movement	EB	NB
Directions Served	LR	L
Maximum Queue (ft)	37	38
Average Queue (ft)	27	22
95th Queue (ft)	44	41
Link Distance (ft)	141	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		200
Storage Blk Time (%)		
Queuing Penalty (veh)		

ATTACHMENT 2

Queuing and Blocking Report

BOA WP AM Peak Hour

Intersection: 568: TAZ 721 Access Roadway & Marine Wy.

Movement	EB	EB	EB	WB	WB	WB	NB	NB
Directions Served	T	T	R	L	T	T	L	R
Maximum Queue (ft)	187	137	93	124	120	112	237	142
Average Queue (ft)	176	124	92	120	119	112	189	72
95th Queue (ft)	261	200	153	171	200	139	273	95
Link Distance (ft)	422	422			360	360	523	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)			150	200				200
Storage Blk Time (%)		2	1		0		11	0
Queuing Penalty (veh)		7	4		0		34	2

Queuing and Blocking Report

BOA WP AM Peak Hour

Intersection: 582: Parcel 13 E. Access/Lynx & Marine Wy.

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	SB
Directions Served	L	T	T	R	L	T	T	R	L	T	R	L
Maximum Queue (ft)	52	304	331	62	76	38	52	37	60	354	180	287
Average Queue (ft)	38	256	287	62	54	15	16	32	60	331	179	272
95th Queue (ft)	78	368	382	169	104	46	43	57	92	380	186	339
Link Distance (ft)		472	472			732	732			339		
Upstream Blk Time (%)										20		
Queuing Penalty (veh)										0		
Storage Bay Dist (ft)	300			50	200			325	90		90	350
Storage Blk Time (%)		6	75	0					6		46	0
Queuing Penalty (veh)		5	29	2					40		65	1

Intersection: 582: Parcel 13 E. Access/Lynx & Marine Wy.

Movement	SB	SB
Directions Served	L	TR
Maximum Queue (ft)	298	65
Average Queue (ft)	278	65
95th Queue (ft)	340	140
Link Distance (ft)	668	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		350
Storage Blk Time (%)	0	
Queuing Penalty (veh)	0	

Queuing and Blocking Report

BOA WP AM Peak Hour

Intersection: 603: Launch/Parcel 11/City-1 Access & Barranca Pkwy.

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB
Directions Served	L	T	T	R	L	T	T	L	L	R	L	T
Maximum Queue (ft)	11	49	31	53	75	90	88	2	77	8	14	10
Average Queue (ft)	11	28	21	41	67	20	18	2	77	8	14	10
95th Queue (ft)	27	84	52	63	141	57	39	11	133	24	35	29
Link Distance (ft)		483	483			799	799					304
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	300			95	240			290	290	50	200	
Storage Blk Time (%)												
Queuing Penalty (veh)												

Intersection: 603: Launch/Parcel 11/City-1 Access & Barranca Pkwy.

Movement	SB
Directions Served	R
Maximum Queue (ft)	26
Average Queue (ft)	22
95th Queue (ft)	44
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	200
Storage Blk Time (%)	
Queuing Penalty (veh)	

Queuing and Blocking Report

BOA WP PM Peak Hour

Intersection: 568: TAZ 721 Access Roadway & Marine Wy.

Movement	EB	EB	EB	WB	WB	WB	NB	NB
Directions Served	T	T	R	L	T	T	L	R
Maximum Queue (ft)	252	270	203	86	60	66	184	99
Average Queue (ft)	199	144	127	73	44	52	184	99
95th Queue (ft)	282	228	198	95	72	101	258	170
Link Distance (ft)	422	422			360	360	523	
Upstream Blk Time (%)		1						
Queuing Penalty (veh)		6						
Storage Bay Dist (ft)			150	200				200
Storage Blk Time (%)		6	10				5	
Queuing Penalty (veh)		39	46				12	

Queuing and Blocking Report

BOA WP PM Peak Hour

Intersection: 582: Parcel 13 E. Access/Lynx & Marine Wy.

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	SB
Directions Served	L	T	T	R	L	T	T	R	L	TR	R	L
Maximum Queue (ft)	86	142	142	56	164	118	95	56	41	48	18	138
Average Queue (ft)	49	99	102	34	152	113	84	50	25	48	18	122
95th Queue (ft)	83	125	124	70	194	218	127	82	45	87	18	183
Link Distance (ft)		472	472			732	732			339		
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	300			50	200			325	90		90	350
Storage Blk Time (%)			43	1	4	0			6	1		
Queuing Penalty (veh)			29	2	16	2			13	1		

Intersection: 582: Parcel 13 E. Access/Lynx & Marine Wy.

Movement	SB	SB
Directions Served	L	TR
Maximum Queue (ft)	93	105
Average Queue (ft)	93	105
95th Queue (ft)	122	205
Link Distance (ft)	668	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	350	
Storage Blk Time (%)		
Queuing Penalty (veh)		

Queuing and Blocking Report

BOA WP PM Peak Hour

Intersection: 603: Launch/Parcel 11/City-1 Access & Barranca Pkwy.

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB
Directions Served	L	T	T	R	L	T	T	R	L	L	T	R
Maximum Queue (ft)	55	155	86	26	16	49	54	2	30	162	2	38
Average Queue (ft)	46	112	64	16	6	45	46	2	30	142	2	30
95th Queue (ft)	83	165	107	50	20	61	100	9	120	204	8	62
Link Distance (ft)		483	483			799	799				340	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	300			95	240			300	290	290		50
Storage Blk Time (%)			2									5
Queuing Penalty (veh)			5									16

Intersection: 603: Launch/Parcel 11/City-1 Access & Barranca Pkwy.

Movement	SB	SB	SB
Directions Served	L	T	R
Maximum Queue (ft)	11	2	12
Average Queue (ft)	11	2	12
95th Queue (ft)	34	9	28
Link Distance (ft)		304	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	200		200
Storage Blk Time (%)			
Queuing Penalty (veh)			