Club at Coral Mountain – CEQA Compliance Memo for DEIR Alternative 2

1.0 Introduction

The Coral Mountain Resort project, processed by the City in 2021 and 2022, proposed the development of a boutique resort and master-planned community on 386 acres, consisting of 600 dwelling units, a surf basin facility on 16.62 acres, 150 hotel rooms and 57,000 square feet of private resort-serving commercial uses, up to 60,000 square feet of retail commercial uses available to the general public, and open space recreational uses at the southwest corner of the project property. To allow these uses, the project proposed an amendment to the Andalusia at Coral Mountain Specific Plan 03-067 to remove the 386-acre site from the existing Specific Plan; a new specific plan (Coral Mountain Resort Specific Plan) to establish a new master plan and development standards for the master planned community; a General Plan Amendment to amend the Low Density Residential, General Commercial, and Open Space Recreation land use designations to Neighborhood Commercial, Low Density Residential, Tourist Commercial, and Open Space Recreation; and a Zone Change from Neighborhood Commercial, Low Density Residential, and Golf Course to Neighborhood Commercial, Low Density Residential, Parks and Recreation, and Tourist Commercial. Additional entitlements included a Tentative Tract Map, Site Development Permit, and Development Agreement (see pages 3-9 through 3-12 of the DEIR for the project description). A Draft Environmental Impact Report (DEIR) was prepared concurrently to analyze the project under CEQA. The project as proposed at that time, and as analyzed in the DEIR is referred to as the "Preferred Alternative" within this CEQA Compliance Memo.

The DEIR also analyzed a reasonable range of alternatives to the Preferred Alternative, including Alternative 2, the No Project/Existing Entitlement Alternative, which analyzed development of the same project site according to the existing zoning and General Plan land use designations and approved Andalusia Specific Plan (SP 03-067). Alternative 2 would develop the project site with up to 750 single family residential homes, a golf course, and an 8.4-acre commercial center. Table 1-1 shows the existing land use and zoning summary of the project site as analyzed under Alternative 2.

Table 1 Existing Land Use and Zoning Summary

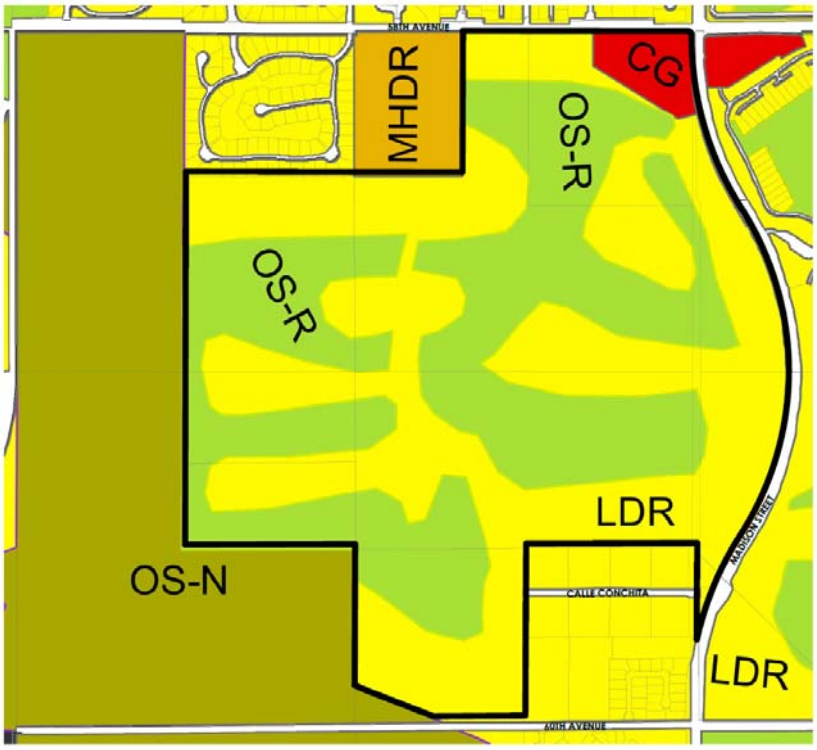
Existing Land Use	Existing Zoning	Acres	Square Feet	Max. Units
General Commercial	Neighborhood Commercial (CN)	8.4	60,000	--
Low Density Residential	Low Density Residential (RL)	204.2	--	750
Open Space (Recreation)	Golf Course (GC)	171.9	--	--
Total		**384.5**	**60,000**	**750**

On September 21, 2022 the La Quinta City Council denied the project, and determined that the project was statutorily exempt from CEQA because the project was disapproved, consistent with Public Resources Code Section 21080(b)(5). As a result, the DEIR was not certified by the City Council. Following the City Council hearing, the project applicant redesigned the proposed project to align with the existing entitlements for the site, including the Andalusia at Coral Mountain Specific Plan 03-067 and the existing zoning and General Plan land use designations, as analyzed in Alternative 2 in the DEIR.

The Club at Coral Mountain project addressed in this CEQA Compliance Memo (referred to as "Revised Project" herein) proposes a commercial corner on 7.7 acres allowing up to 60,000 square feet of retail, an 18-hole golf course on 187.5 acres, and up to 750 residential units on 191.8 acres. The Revised Project is consistent with the existing Low Density Residential, General Commercial, and Open Space (Recreation) land use designations that currently exist on the project site. See Section 1.1, below for a full description of the Revised Project. While the Revised Project requires technical amendments to the General Plan land use map and zoning map to modify the layout of the golf course and low density residential acreages, the Revised Project contains the same allowed uses on the same property as Alternative 2 and the existing General Plan land use and zoning map with substantially the same permitted development. Please see Exhibit 1 for the existing and proposal distribution of land use and zoning designations.

This Memo identifies and describes the Revised Project and analyzes how it compares to Alternative 2 in the DEIR, and also compares the Revised Project with the previously proposed Preferred Alternative studied in the DEIR. This Memo augments the analysis and comparison of the original Coral Mountain project and the alternatives analysis provided in **Chapter 7.0, *Alternatives,*** of the DEIR.

Exhibit 1 General Plan Map Amendment



EXISTING GENERAL PLAN LAND USE		
	OS-R	OPEN SPACE RECREATION
	CG	GENERAL COMMERCIAL
	LDR	LOW DENSITY RESIDENTIAL

PROPOSED GENERAL PLAN LAND USE		
	OS-R	OPEN SPACE RECREATION
	CG	GENERAL COMMERCIAL
	LDR	LOW DENSITY RESIDENTIAL

NOTE : THIS GENERAL PLAN MAP AMENDMENT WILL ONLY REFINE EXISTING LAND USE BOUNDARIES WITHIN THE WEST TRACT OF SPECIFIC PLAN 03-067. ALL EXISTING GENERAL PLAN LAND USE DESIGNATIONS FOR THE WEST TRACT WILL REMAIN UNALTERED.

The Revised Project – Club at Coral Mountain

The Revised Project proposes the same low-density residential, golf, and neighborhood commercial uses allowed under the existing entitlements for the site and analyzed as Alternative 2 in the DEIR (SCH #2021020310). General Plan Map and Zoning Map amendments are proposed to make minor modifications to acreages and distribution of land uses, which are contained in the Specific Plan Amendment. The Specific Plan Amendment (SPA) is proposed to adjust the location and layout of open space–recreation and low-density residential areas with minor adjustments to the respective acreages of existing land use designations. The Revised Project consists of a commercial corner on 7.7 acres allowing 60,000 square feet of retail, an 18-hole golf course on 187.5 acres, and up to 750 residential units on 191.8 acres. The tables below indicate a more detailed breakdown of the land use summary and the zoning of the Revised Project.

Table 2 Revised Project Land Use and Zoning Summary

Land Use	Zoning	Acres	Square Feet	Dwelling Units
General Commercial	Neighborhood Commercial (CN)	7.7	60,000	--
Low Density Residential	Low Density Residential (RL)	191.8	46,100	750
Open Space (Recreation)	Golf Course (GC)	187.5	--	--
Total		387.0*	106,100	750

*Gross acreage per WSA. Net acreage 384.5 acres.

As shown when comparing Tables 1 and 2, above, General Commercial lands would be reduced by 8.5%, Low Density Residential lands would be reduced by 6.1%, and Open Space lands would be increased by 9.1%. Given the limited changes in acreage, and the overall maintenance of the land uses allowed in Planning Areas (PA) III, V and VI, the Revised Project is substantially the same as Alternative 2 analyzed in the EIR, with minor refinements to the layout of golf and residential uses on the same project site as identified in the proposed SPA. The SPA proposes minor changes to the development standards and permitted uses on the west side of Madison Street, and would result in a mix of land uses as shown in Table 3.

Table 3 Revised Project Land Use Summary

Planning Area	Land Use	Land Area (Acres)	Square Feet	Dwelling Units
PA III	Single Family[1]	167.90	--	730
	Sports Club	5.90	24,500	10
	Golf Club	4.00	8,600	10
	Golf Maintenance	2.00	10,000	--
	Restaurants[5]	0.0	3,000	--
	Recreational Lake	12.0	--	--
PA V	Neighborhood Commercial[2]	7.70	60,000	--
PA VI	Golf Course Area[3]	181.9	--	--
	Golf Course Lake	3.0	--	--
	Public Right of Way	2.60	--	--
Total		387.0[4]	106,100	750

1. Includes residential homes, entries, streets/circ, amenity areas, landscaped common areas, community OS, Golf Club and Sports Club, each with attached/stacked flats or townhome product and golf course maintenance facility.
2. Commercial/Retail
3. Includes Golf Course and ancillary uses.
4. Gross acreage per WSA 387. Net acreage 864.4
5. Restaurants in PA III are only allowed as part of the clubhouse.

The SPA also proposes changes to the Design Guidelines section of the document, to accommodate a more contemporary architectural style.

Analysis

The following analysis has been prepared to provide a comparative evaluation of the environmental effects of the Revised Project with both Alternative 2 (the No Project/Existing Entitlement Alternative) and the Preferred Alternative (the previously proposed Coral Mountain Resort project) in the DEIR. This analysis utilizes the technical analysis provided in the DEIR regarding air quality, energy resources, greenhouse gas emissions, transportation, and water consumption as well as updates related to specific modelling including Air Quality, Transportation, Water and Sewer to current standards. For example, at the time the DEIR was written, the 10th Edition of the Institute of Transportation Engineers (ITE) trip generation rates, and CalEEMod Version 2016.3.2 were the resources utilized to analyze transportation and air quality related impacts, respectively. Since the publication of the DEIR in 2021, ITE trip generation rates and CalEEMod were updated. ITE 11th Edition updated the trip generation rates, resulting in an increase in trips per land use, while the updates to the CalEEMod software from 2016 version to the 2022 version updated the internal algorithm to produce more accurate outputs regarding air quality, GHG emissions, and energy use.

Each CEQA subject is addressed individually below. First, a summary of the analysis of the Preferred Alternative for that issue is provided, followed by a summary of the analysis of Alternative 2. Finally,

each section provides a comparison of the Revised Project to the Preferred Alternative and Alternative 2 in terms of the level of impact and the need for mitigation, if required.

Aesthetics

Preferred Alternative

The DEIR determined that the Preferred Alternative would result in less than significant impacts to scenic quality and visual character, less than significant impacts to scenic resources and light and glare with the implementation of mitigation measures, and significant and unavoidable impacts to scenic vistas.

To evaluate the Preferred Alternative's impact to scenic vistas, line of sight and visual simulations were generated for analysis in the DEIR. The residential developments associated with the Preferred Alternative would be visible (i.e., rooflines, landscaping) from public viewsheds. Although the rooflines and landscaping proposed for the Preferred Alternative would be similar to the existing residential developments in the surrounding area, the Preferred Alternative's development of these features would impact views of Coral Mountain and the base views of the Santa Rosa Mountains. Therefore, the DEIR established mitigation measures restricting building heights and increasing setbacks along the public rights-of-way (Mitigation Measures AES-1 and AES-2). However, the mitigation measures cannot reduce impacts to scenic vistas to less than significant levels, so impacts of the Preferred Alternative were determined to be significant and unavoidable.

According to the DEIR, scenic resources at the project include Coral Mountain to the southwest and an adobe structure located onsite. The DEIR concluded that because the Preferred Alternative does not propose construction on or immediately adjacent to Coral Mountain, no impacts would occur. The adobe structure, although vandalized, burned, and deteriorated, is considered a historical resource. Therefore, Mitigation Measure CUL-1 was established for the site. CUL-1 requires that a comprehensive recordation program be prepared by a qualified archaeologist for the site, requiring an appropriate buffer around the adobe and preservation in perpetuity of the adobe by the project homeowners association. This mitigation measure reduced potential impacts to less than significant levels.

The DEIR provided an in-depth analysis of the Preferred Alternative's impact to the scenic quality and visual character of the area. The analysis concluded that the Preferred Alternative would result in less than significant impacts to the scenic quality and visual character because the project is surrounded by similar uses in the area, particularly the existing residential communities east and north of the project. Project design and building materials also contributed to the Preferred Alternative not significantly impacting the scenic quality and visual character in the area.

The DEIR determined that outdoor lighting associated with landscaping, parking lots, residential, commercial, and resort buildings associated with the Preferred Alternative would comply with the lighting standards outlined in Section 9.100.150 and 9.150.080 of the La Quinta Municipal Code

(LQMC), and therefore, would result in less than significant impacts. The lighting analysis completed for the proposed 80-foot light poles around the Wave Basin, determined that they would not impact onsite or offsite areas. Per Section 9.100.150 of the LQMC, the illumination of outdoor recreational facilities is exempt from outdoor lighting standards established in the LQMC, however, they are required to (1) meet shielding requirements and (2) not operate after 10 p.m. To assure that the operation of the Wave Basin would conclude at 10 p.m., the DEIR established Mitigation Measure AES-3, which would limit the operation of the Wave Basin to 7 a.m. to 10 p.m. With implementation of this measure, impacts would be less than significant. The DEIR also concluded that the Preferred Alternative building materials would not result in glare, therefore, impacts would be less than significant.

Alternative 2

Alternative 2 proposes a low density residential and golf community consistent with the existing General Plan land uses, zoning and Specific Plan, which is also consistent with the uses in the surrounding area. Therefore, Alternative 2 would result in less than significant impacts to visual character due to Alternative 2's consistency with the surrounding context and existing Specific Plan (SP 03-067). Homes built under Alternative 2 would comply with the height limits established in the Specific Plan and in Section 9.50.020 of the LQMC. However, similar to the Preferred Alternative, development of Alternative 2 would obstruct views of Coral Mountain. Therefore, impacts associated with scenic vistas were found to be significant and avoidable, even with the implementation of Mitigation Measures AES-1 and AES-2.

Alternative 2 would not result in significant impacts to the scenic resources that are Coral Mountain and the adobe structure, because the Alternative does not propose development on Coral Mountain, and the Alternative would be required to implement Mitigation Measure CUL-1 to avoid impacts to the adobe structure. With the implementation of Mitigation Measure CUL-1, impacts to scenic resources would be less than significant.

Alternative 2 would also result in less than significant impacts to light and glare since the Alternative would comply with the outdoor lighting standards established in the LQMC, and would not propose 80-foot light poles. Thus, Mitigation Measure AES-3 was not applicable to Alternative 2. Additionally, Alternative 2 would not use building materials that would result in glare, similar to the Preferred Alternative.

Revised Project

The Revised Project's impacts to the surrounding scenic vistas and visual character would be consistent with those uses previously analyzed in the EIR for Alternative 2. Like Alternative 2, the Revised Project proposes low density residential homes along the northern and eastern boundaries. Adjustments to the golf course and residential land use configurations within the project site are proposed as a part of the Revised Project, but these refinements will not alter the appearance of the

project from the surrounding roadways. The Revised Project would follow the building development standards currently approved in the Specific Plan. Tables 4 and 5 below show the development standards proposed for the Preferred Alternative, Alternative 2 and the Revised Project. The Revised Project does not propose changes to development standards, and therefore would comply with the development standards in the approved Specific Plan, and as a result are the same and shown in the same column in Tables 4 and 5.

Table 4 Development Standards Planning Area V – Neighborhood Commercial

Neighborhood Commercial	Preferred Alt. Max/Min	Alt.2 & Revised Project Max/Min
Max. Structure Height	35 ft[1,2]	35 ft.[2]
Max. No. of Stories	2	2
Min. Front Setback	10 ft	10 ft
Min. Rear Setback	10 ft	10 ft
Min. Parking	1/250 ft GFA.	1/250 ft GLA
Max. Building Floor Area in PA I	60,000 SF	60,000 SF[6]
Min. Building Setback to Avenue 58	25 ft	25 ft
Min. Building Setback to Madison Street	25 ft	25 ft
Min. Setback from Interior Property Line[3]	0 ft	5/10 ft
Min. Building/Landscape Setback from Residential PA[4]	40 ft/20 ft	--
Max. Wall Height	6 ft	10 ft

Notes:

1. Height is limited to 22' within 150' of the Madison & Avenue 58 R.O.W.
2. Architectural and roof projections, such as chimneys, spires, finials and similar features not providing habitable or otherwise unusable space shall be permitted to extend up to fifteen feet above the maximum structure height.
3. Mechanical equipment to have a minimum 3-foot setback from interior property lines.
4. Landscape setback occurs within the building setback.
6. The Specific Plan as previously adopted represents 25% FAR, but what is proposed is 60,000 square feet, which is less than the 25% FAR.
7. Five bicycle parking spaces for each tenant having over twenty thousand square feet of gross floor area.

As indicated in the table above, the Preferred Alternative, Alternative 2, and the Revised Project's development standards for structure height, number of stories, setbacks, and parking are the same. The building floor area, setback from interior property line, and wall height for the Preferred Alternative and the Revised Project vary slightly, but not enough to change the impact to scenic vistas. The building floor area proposed for the Preferred Alternative is approximately 22,000 square feet (or 0.5 acres) smaller than the building area for Alternative 2 and the Revised Project; the setback from interior property line varies by 5-10 feet; and wall height varies by 4 feet.

Table 5 Development Standards Planning Area III – Low Density Residential

Low Density Residential	Preferred Alt			Alt 2 & Revised Project	
	Detached Product	Attached Product	Accessory Building[1]	Detached/ Attached Product	Ancillary Building
Min. Lot Size	3,600 sf	3,600 sf	--[7]		
Max. Structure Height	32 ft [2,3]	32 ft [2,3]	28 ft [2,3]	28/35 ft [2,3,8]	28 ft [2,3]
Max. No. Of Stories	2	2	2	2	1
Min. Area Per Unit	1,400 sf	1,000 sf	250 sf	1,500 sf	--
Min. Front Setback	10 ft	10 ft	Garage – 10 ft Other Structures 3 ft.	10 ft street 5 ft pedestrian	2 ft
Min. Rear Setback	5 ft	5 ft	2 ft	--	--
Min. Front/Side Facing Attached Garage (Carport) Setback	15 ft / 3 ft [5]	15 ft / 3 ft [5]	--	5 ft	--
Min. Interior/Corner Side Yard Setback[4]	5 ft / 5 ft	5 ft [6] / 5 ft	5 ft [6] / 5 ft	10 ft	10 ft
Min. Building To Building Setback [6]	0 ft	0 ft	0 ft	--	--
Max. Wall Height	6 ft	6 ft	6 ft	8 ft	10 ft
Max. Parking Required	2 garage spaces plus 0.5 guest space	2 garage spaces plus 0.5 guest space	--	Per current code	--

Notes:

1. Detached garages/carports, casitas, carriage house units
2. Height is limited to 22' within 150' of the Madison & Avenue 58 R.O.W.
3. Excluding chimneys, porticos other incidental architectural features etc. may exceed max. structure height by up to 5 feet.
4. AC units, trellis elements, pools, and spas are allowed to encroach into side and rear setback areas within 3’ of property line.
5. 0’ setback allowed for products, such as duplexes or zero lot line units, that share a common wall.
6. Subject to applicable building code requirements
7. -- = Not Applicable
8. Residence/Clubhouse

As indicated in the table above, the development standards for structure height and number of stories are similar between the Preferred Alternative and Alternative 2/Revised Project. Front, side, and interior setbacks vary between 2 and 10 feet. Finally, maximum wall heights for the Revised Project are 2 to 4 feet higher than those allowed within the Preferred Alternative. However, these differences are subtle and will not change the impacts associated with scenic vistas or visual character.

In addition to the commercial and residential land uses, the Preferred Alternative included development of a resort area, recreational open space, and a Wave Basin. Development standards

for these uses were analyzed in the DEIR. Alternative 2 and the Revised Project do not propose the resort, recreational open space, or Wave Basin facility. Instead, Alternative 2 and the Revised Project would develop a golf course. Golf courses provide large areas for greenspace, providing unobstructed views of scenic vistas. The golf course would provide similar views within golf course and residential communities that currently exist within the City of La Quinta, including the property east of Madison Street.

Design features of the Revised Project, including architecture, landscaping, and development standards are all required to adhere to the design guidelines in the Specific Plan. The Revised Project's architectural style will be different than the style currently described in SP 03-067, which proposed traditional Spanish-style homes. The Revised Project proposes a Desert Modern architectural style more consistent with current architectural trends. Although the architectural style will be different, the mass and scale and land use proposed for the Revised Project will be similar to the surrounding residential communities, which also include single family residential homes. Additionally, the Revised Project is surrounded by perimeter block wall and landscaping, similar to the existing residential communities in the local area, and will not create inconsistencies with the existing development in the surrounding area, including the existing Andalusia project on the east side of Madison Street.

Development of the perimeter block wall and residential homes, as well as perimeter landscaping which would be expected to occur under Alternative 2 and the Revised Project would result in partially obstructed views of the Santa Rosa Mountains, and complete obstruction of Coral Mountain from some locations, since the blockage occurs as a result of the construction of perimeter walls and houses. The impacts of the Revised Project would be equivalent to those analyzed in the DEIR for Alternative 2 and the Preferred Alternative. However, homes built under both the Revised Project and Alternative 2 would comply with Section 9.50.020 of the La Quinta Municipal Code, which limits building heights to 22 feet, if located within 150 feet of an image corridor (i.e., Avenue 58 and Madison Street). The Revised Project and Alternative 2 would also be required to adhere to design standards as shown in Table 1-4 and 1-5 above. The development of the Revised Project and Alternative 2 would result in equivalent impacts to scenic vistas because they would both include the construction of perimeter walls, landscaping, and homes along the perimeter roadways. Therefore, similar to the Preferred Alternative and Alternative 2, the Revised project would implement Mitigation Measure AES-1, which requires the perimeter walls to be setback from the Madison Street and Avenue 58 public rights-of-way by a minimum average of 30 feet (10 feet more than required under the LQMC), which would be confirmed through the City's review and approval of final perimeter wall and landscape plans, and Mitigation Measure AES-2, which requires a minimum setback of 75 feet between any residential structure and the Madison Street and Avenue 58 public rights-of-way.

As Alternative 2 and the Revised Project would allow development that would affect views of Coral Mountain from certain viewpoints on Avenue 58 and Madison Street, impacts to scenic vistas of Coral

Mountain would be significant and unavoidable under both scenarios. In addition, views of the Santa Rosas would be partially obstructed by the residential structures and perimeter improvements, but the mid-range and ridgelines of the Santa Rosas would generally remain visible.

Similar to the Preferred Alternative and Alternative 2 analyses in the DEIR, the Revised Project would result in less than significant impacts to scenic quality and visual character because the project is surrounded by similar uses in the area, particularly the existing residential communities east and north of the project. Building materials proposed for the Revised Project include high-performance materials, natural stone, stucco, architectural concrete, pre-finished metal panels, cementitious panels or siding, and thermally-modified wood siding. Additionally, the single family residential and golf course uses will be surrounded by block walls and landscaping, similar to the existing residential and golf communities in the area. The block walls and landscaping will conceal the property from the view of motorists and pedestrians along the public rights-of-way (Madison Street and Avenue 58). Therefore, the Revised Project would not significantly impact the scenic quality and visual character in the area.

The Revised Project and Alternative 2 would both include lighting, consistent with the requirements of the Specific Plan and the Municipal Code, including commercial lighting at the neighborhood shopping center at the northeast corner, and residential and safety lighting at the homes and golf course. The lighting would be expected to conform to Municipal Code standards, be shielded and low intensity, and not emit light beyond the property line. Compliance with Specific Plan and Municipal Code requirements would, under both the Revised Project and Alternative 2, ensure that impacts would be less than significant.

In summary, the Revised Project and Alternative 2 would involve construction and operation of the same low-density residential, neighborhood commercial, and golf course uses on the same project site, and accordingly, would result in the same aesthetic impacts.

As compared to the Preferred Alternative studied in the DEIR, the Revised Project would have reduced aesthetic impacts because the Revised Project does not include the Wave Basin or surrounding resort area and would not include the Wave Basin lighting. The impacts of the Revised Project are the same as Alternative 2 and no more significant impacts, or impacts not previously analyzed, would result from implementation of the Revised Project. The Preferred Alternative, Alternative 2, and the Revised Project would be required to implement the following mitigation measures:

AES-1 The perimeter walls around the low density residential planning areas shall be setback from the Madison Street and Avenue 58 public rights-of-way by a minimum average of 30 feet (10 feet more than required under the LQMC), which shall be confirmed through the City's review and approval of final perimeter wall and landscape plans to reduce impacts to existing views of Coral Mountain and the Santa Rosa Mountains.

AES-2 All residential structures shall be setback by a minimum of 75 feet from the Madison Street and Avenue 58 public rights-of-way to reduce impacts to existing views of Coral Mountain and the Santa Rosa Mountains.

Air Quality

Preferred Alternative

The DEIR determined that the Preferred Alternative would result in less than significant impacts involving a conflict with or obstruction to implementation of the applicable air quality plan(s); exposure of sensitive receptors to substantial pollutant concentrations; or resulting in other emissions (such as those leading to odors) adversely affecting a substantial number of people. With respect to any cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard, the Preferred Alternative would result in potentially significant impacts due to the potential exceedance of the SCAQMD threshold for VOC from construction and operational activities. As a result, two construction-source mitigation measures (AQ-1 and AQ-2) were provided to prevent the overlap of paving and architectural coating phases during construction (AQ-1) and requiring equipment greater than 150 horsepower to comply with the EPA/CARB Tier 3 emission standards (AQ-2).

With implementation of Mitigation Measures AQ-1 and AQ-2, construction activities would not exceed the SCAQMD thresholds and impacts would be less than significant. Mitigation Measure AQ-3 requires the use of low VOC paints for re-painting and maintenance of exterior structures consistent with SCAQMD Rule 1113. The DEIR found that, with implementation of the Project Design Features and mitigation measures AQ-1 through AQ-3, the Preferred Alternative would have less than significant impacts to air quality.

Alternative 2

Alternative 2 would involve construction and operation under the existing entitlements, consisting of a low density residential and golf community. Construction impacts associated with Alternative 2 would be similar to those analyzed under the Preferred Alternative, because the same area would be disturbed, and the entire site would be developed.

Based on the California Air Resources Board (CARB)'s Draft 2020 Mobile Source Strategy, traffic-related mobile sources contribute a majority of criteria air pollutants and greenhouse gas emissions. Alternative 2 is expected to generate 13% more trips compared to the Preferred Alternative due to the number of single-family residential dwelling units and the lack of internal relationships to services and activities associated with the Preferred Alternative. Alternative 2 would have reduced emissions associated with the production of electricity and water, because it would not include a Wave Basin, and the need for electricity associated with that feature. Although air quality emission increases or decreases are not linear in the CalEEMod model, Alternative 2 would result in elevated emissions associated with vehicle trips. Given that under the Preferred Alternative, the emissions associated

with NOx, which are directly influenced by vehicle emissions, would be below but close to significance thresholds, Alternative 2 would be expected to have significant NOx emissions, and to require mitigation. As with the proposed project, VOC emissions would also be expected to exceed significance thresholds, and mitigation would be required. For the Preferred Alternative, PDFs and mitigation resulted in an average reduction of 12% to 15% in criteria air pollutant emissions. By comparison, Alternative 2 is expected to achieve a less of a reduction in criteria air pollutant emissions from PDF implementation because Alternative 2 cannot be assumed to include the same level of vehicle trip reductions from commute trip reduction programs, telecommuting and alternative work schedules, employer-sponsored shuttles, on-site photovoltaic electricity supply as PDFs because of the substantially reduced employment levels under Alternative 2 (the other PDFs were assumed to be included in Alternative 2 with equal efficacy). Overall, however, impacts associated with Alternative 2 would be greater than the Preferred Alternative for operations, and equivalent during construction, as further described in the DEIR.

Revised Project

The Revised Project would involve General Plan Map and Zoning Map amendments to allow for minor modifications to acreages and distribution of land uses, but the proposed low-density residential, golf, and neighborhood commercial uses would be equivalent to the existing entitlements for the site, as it was analyzed for Alternative 2 in the DEIR. The Revised Project would be consistent with the growth projections from the City of La Quinta General Plan as they have been factored into the regional AQMP. As concluded for Alternative 2 and for the Preferred Alternative in the DEIR, the Revised Project would not conflict with or obstruct implementation of the applicable AQMP.

Implementation of the Revised Project would entail construction and operations substantially the same as what is analyzed in Alternative 2 in the EIR. Therefore, construction and operational impacts associated with the Revised Project would be the same as those projected for Alternative 2, because the same area would be disturbed, and the entire site would be developed with the same proposed uses. Like Alternative 2, the Revised Project would require Mitigation Measures AQ-1 to prevent the overlap of construction paving and architectural coating phases, as well as AQ-2 to comply with EPA/CARB Tier 3 emission standards on equipment greater than 150 horsepower. Mitigation Measure AQ-1 would help the Revised Project achieve a reduction of construction-related VOC emission levels, while Mitigation Measure AQ-2 would help achieve a reduction of construction-related PM10 emissions below the applicable numeric thresholds to prevent a cumulatively considerable net increase of the criteria pollutants for which the project region is non-attainment.

The DEIR Air Quality analysis for the Preferred Alternative utilized CalEEMod 2016 as the most current software version available at the time of DEIR NOP, to calculate the project emissions and compare them against the SCAQMD Air Quality Significance Thresholds published in April of 2019. In March of 2023, SCAQMD published updated operational thresholds for VOC and NOx applicable to the Coachella Valley which are lower relative to the 2019 thresholds. The comparison of SCAQMD Air

Quality Significance Thresholds is provided in Table 6. Since the time of DEIR preparation, a more current version of CalEEMod (2022) has also been made available for air emissions calculations.

In connection with the CEQA analysis for the Revised Project, Urban Crossroads prepared a supplemental Air Quality & GHG Assessment to provide updated operational emissions calculations for the Revised Project (see Appendix A) using CalEEMod 2022. The updated emissions calculations and a comparison of those calculations and the operational emissions for the Revised Project, Alternative 2 and the Preferred Alternative analyzed in the EIR, are provided in Table 7 below. For all criteria air pollutants (NOx, CO, SOx, PM10, and PM2.5) except VOC, Alternative 2, the Revised Project and the Preferred Alternative would generate emission levels below the applicable SCAQMD thresholds. The DEIR determined that Alternative 2 would result in increased emissions of VOCs compared to the Preferred Alternative, and the Revised project would have the same level of increased VOC emissions. In addition, these emissions calculations for the Revised Project are considered conservative because they do not include incorporation of Mitigation Measure AQ-3, which will require the use of low VOC paints and will reduce the Revised Project's VOC emissions. It should be noted that the table below shows the Preferred Alternative's emissions summary after taking into account Mitigation Measure AQ-3 and the project design features identified in the EIR.

Table 6 Comparison of SCAQMD Air Quality Significance Operational Thresholds

SCAQMD Air Quality Significance Operational Thresholds (in Pounds per Day)						
Publication Date	VOC	NOx	CO	SOx	PM10	PM2.5
April 2019	75	100	550	150	150	55
March 2023	55	55	550	150	150	55

Table 7 Air Quality Comparison Table

Comparison of Operational Emissions (in Pounds per Day) – Unmitigated						
	VOC	NOx	CO	SOx	PM10	PM2.5
Preferred Alternative	87.49	96.08	242.25	0.64	54.51	16.06
April 2019 SCAQMD Air Quality Significance Thresholds	75	100	550	150	150	55
Threshold Exceeded?	Yes	No	No	No	No	No
Alternative 2 and Revised Project*	94.64	67.81	501.84	1.13	34.62	7.88
March 2023 SCAQMD Air Quality Significance Thresholds	55	55	550	150	150	55
Threshold Exceeded?	Yes	Yes	No	No	No	No
*The operational emissions for Alternative 2 and the Revised Project are equivalent.						

Overall, the operational air quality emissions from the Revised Project are considered to be equivalent to and consistent with Alternative 2. The emission levels of Alternative 2 in relation to the SCAQMD

Thresholds are assumed to be comparable to the emission quantities calculated for the Revised Project in Table 7 because of the shared project dimensions and land uses. Although the level of operational VOC emissions under the Revised Project and Alternative 2 are greater than under the Preferred Alternative, this increased impact was fully disclosed in the DEIR and identified as a potentially significant impact under Alternative 2. However, the Revised Project will not have any increased emissions over what was analyzed and disclosed in the DEIR for Alternative 2, and therefore, the Revised Project will not result in any new or substantially more severe impacts than previously disclosed in the DEIR for any criteria air pollutant. In addition, the Revised Project (and Alternative 2) would have reduced emissions for NOx, PM10, and PM2.5, as compared to the Preferred Alternative. Moreover, the supplemental Air Quality/GHG assessment by Urban Crossroads demonstrates that the Revised Project will not have a significant impact relating to NOx emissions, as was stated could occur under Alternative 2 in the DEIR. The analysis of Alternative 2 in the DEIR concluded that Alternative 2 would have potentially significant air quality impacts concerning NOx and VOC, and that these impacts would be greater than under the Preferred Alternative.

The DEIR concluded that Alternative 2 would result in an increase in daily vehicle trips of approximately 13% as compared to the Preferred Alternative. Although the Revised Project would result in the same increase in daily vehicle trips as Alternative 2 because both scenarios involve exactly the same number of homes, commercial square footage, and golf course development, the increase in land use trip generation rates associated with the updated ITE 11th Edition result in an increase in projected total daily vehicle trips from 7,923 to 8,762, but this approximately 10.5% increase in total trips will not result in any new or substantially more severe air quality impacts because the same increase would apply to Alternative 2 and the Preferred Alternative if the updated ITE 11th Edition trip generation rates were applied to those scenarios. In addition, the Revised Project (like Alternative 2) would not require as much energy as the Preferred Alternative for treatment of water and for other Wave Basin operations (*see* pages 7-17 and 7-18 of the DEIR for a more detailed comparison of the Preferred Alternative and Alternative 2). Overall, the Revised Project will have the same Air Quality impacts as Alternative 2, and as discussed in the DEIR, these impacts will be greater than the Preferred Alternative with respect to operational emissions due to the increased VOC and NOx emissions. Accordingly, the Revised Project would not have any new or substantially more severe impacts than analyzed in the DEIR.

The same mitigation measures as those proposed in the DEIR for the Preferred Alternative would be implemented for the Revised Project, consisting of AQ-1 through AQ-3.

Given that the Revised Project would involve the same land use categories, with minor acreage and configuration changes, as those analyzed for Alternative 2 in the DEIR, this development scenario would not include facilities or activities known to generate other emissions, such as those leading to objectionable odors capable of adversely affecting a localized or substantial number of people. Construction of the Revised Project would result in temporary equipment exhaust and the application

of asphalt and architectural coatings that would emit short-term and intermittent odors detectable at close proximity, consistent with the DEIR findings for Alternative 2 and the Preferred Alternative, but the localized and regional emission levels would be mitigated specifically for VOC and PM10 to below the applicable thresholds to prevent a cumulative considerable increase or condition adversely affecting a substantial number of people. During the life of the project, the Revised Project would involve the temporary storage of typical solid waste (refuse) in covered containers and removed at regular intervals as a standard function of operational waste management, consistent with Alternative 2 and the Preferred Alternative. Operation of the Revised Project would also be required to comply with SCAQMD Rule 402, which prohibits the discharge, from any source whatsoever, of air contaminants, odors, or other material at quantities resulting in injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public. Pertaining to other construction or operational emissions, including those associated with objectionable odors, the Revised Project would result in less than significant impacts.

Construction-Source Mitigation Measures

AQ-1: During Phase 1 of construction, the paving installation activity shall not overlap with the architectural coating (building painting) activity. That prohibition shall be included on all building plans.

AQ-2: For equipment greater than 150 horsepower (>150 HP), off-road diesel construction equipment that complies with Environmental Protection Agency (EPA)/California Air Resources Board (CARB) Tier 3 emissions standards shall be required, and all construction equipment shall be tuned and maintained in accordance with the manufacturer's specifications.

Operational-Source Mitigation Measures

AQ-3: The project will require the use of low VOC paints for re-painting and maintenance of exterior structures consistent with SCAQMD Rule 1113(not to exceed 50 grams per liter VOCs for interior and exterior building envelope re-painting). Under federal and state law, SCAQMD is under a legal obligation to enforce air pollution regulations. These regulations are primarily meant to ensure that the surrounding (or ambient) air meets federal and state air quality standards. The South Coast AQMD also has broad authority to regulate toxic and hazardous air emissions, and these regulations are enforced in the same manner as those which pertain to the ambient air quality standards.

Biological Resources

Preferred Alternative

The DEIR identified seven federally/State listed species as having the potential to occur in the project vicinity. These include the Coachella Valley milkvetch, triple-ribbed milkvetch, Casey's June beetle, desert pupfish, desert slender salamander, Coachella Valley fringe-toed lizard and the Peninsular

bighorn sheep (PBS). However, it was determined that the project site contains suitable habitat for only one species, the Coachella Valley milkvetch (CVMV), which is covered under the Coachella Valley Multiple Species Habitat Conservation Plan (CVMSHCP). Therefore, payment of a development fee would mitigate any impacts to the CVMV. The Preferred Alternative would not affect any species identified as candidate, sensitive, or special status. Additionally, Peninsular bighorn sheep (PBS), which are Federally listed as Endangered, State-listed as Threatened, a California Fully Protected Species, and CVMSHCP covered species, have been identified in elevated terrain in La Quinta, and PBS habitat occurs in the vicinity of the project site with known PBS visits to the adjacent Coral Mountain. Potential impacts to PBS were determined to be less than significant because the project includes construction of a new sheep barrier along the western boundary of the project site, consistent with the sheep fence being installed in other areas in La Quinta adjacent to PBS habitat.

There are no jurisdictional waters regulated pursuant to the Federal Clean Water Act (CWA) by the U.S. Army Corps of Engineers (USACE) or the Regional Water Quality Control Board (RWQCB), and no lakes, rivers, or streambeds regulated pursuant to the California Fish and Game Code by the CDFW are present within the limits of the project site. Therefore, development of the Preferred Alternative would result in less than significant impacts to any riparian habitat or other sensitive natural community identified in local or regional plans.

The site does not contain, nor is adjacent to, federally protected wetlands, marshes or other drainage features. No blue-line stream corridors (streams or dry washes) are shown on U.S. Geological Survey (USGS) maps for the project site nor are there botanical indicators of such corridors. As a result, implementation of the Preferred Alternative would not result in the direct removal, filling or other hydrological interruption to federally protected wetlands.

The DEIR (and supporting technical reports) found no evidence of migratory wildlife corridors or native wildlife nursery sites on the project site or adjacent properties, and the Preferred Alternative is not anticipated to have significant impacts related to habitat fragmentation and regional wildlife movement. Although burrowing owls were not observed onsite during the field investigation, the site provides suitable habitat for the species and the owls can take up residence on the site at any time. Therefore, a pre-construction burrowing owl survey (Mitigation Measure BIO-1) was required using accepted protocol (as determined by CDFW) to reduce the impact to less than significant levels. The project site also contains suitable roosting and foraging habitat for multiple bat species. Therefore, to avoid impacts to all potential bat species which may occur on the site, maternity-season surveys and follow-up actions were provided in Mitigation Measure BIO-2 through BIO-5, reducing impacts to roosting bats to less than significant levels. Finally, to reduce the impact to potential nesting birds that could occur onsite to less than significant levels, Mitigation Measure BIO-6 requires vegetation removal to be conducted outside the general bird nesting season (January 15 through August 31) to ensure compliance with California Fish and Game Code and to avoid potential impacts to nesting birds. Any vegetation removal and/or construction activities that occur during the nesting season will

require that all suitable habitat be thoroughly surveyed for the presence of nesting birds by a qu Finally, the DEIR addressed the City's participation in the CVMSHCP, and required the payment of mandated fees to mitigate impacts to species covered by the Plan in Mitigation Measure BIO-6.alified biologist before commencement of clearing. If any active nests are detected a buffer of 300 feet (500 feet for raptors) around the nest adjacent to construction will be delineated, flagged, and avoided until the nesting cycle is complete.

Moreover, development of the Preferred Alternative would not conflict with any local policy relating to these species, because the City does not have a tree preservation policy or ordinance that protects any of the tree species that occur onsite.

Alternative 2

The Alternatives analysis in the DEIR determined that impacts to biological resources would be consistent with the Preferred Alternative because the same physical area would be developed, and any development that would occur onsite would be subject to Mitigation Measures BIO-1 through BIO-6, listed above. The mitigation measures would also be imposed for development of Alternative 2 to reduce impacts to biological resources to less than significant levels. The DEIR concluded that Alternative 2 would result in similar impacts to biological resources since both the Preferred Alternative and Alternative 2 would result in development of the 384.5-acre property. However, impacts would be mitigated to less than significant levels under both the Preferred Alternative and Alternative 2.

Revised Project

The Revised Project would result in similar impacts to biological resources, compared to both Alternative 2 and the Preferred Alternative analyzed in the DEIR, because the same area of land would be disturbed.

Development of the site could impact the CVMV, which is covered under the CVMSHCP. Therefore, the Revised Project would be required to pay the development fee to mitigate any impacts to the CVMV. Impact to any species identified as candidate, sensitive, or special status would be reduced to less than significant levels.

Consistent with all Alternatives in the DEIR, the site does not contain, nor is adjacent to, jurisdictional waters, lakes, rivers, or streambeds, federally protected wetlands, marshes or other drainage features. No blue-line stream corridors (streams or dry washes) are shown on U.S. Geological Survey (USGS) maps for the project site nor are there botanical indicators of such corridors. As a result, implementation of the Preferred Alternative, Alternative 2, or the Revised Project would not result in the direct removal, filling or other hydrological interruption to federally protected wetlands, or impacts to any riparian habitat or other sensitive natural community identified in local or regional plans.

As discussed above, development of the site could impact burrowing owls, nesting birds, or bats if they were to occur onsite. Therefore, under the Revised Project, as with Alternative 2, the actions required by Mitigation Measures BIO-1 through BIO-6 would be applied, reducing impacts to these species to less than significant levels.

Moreover, development of the Revised Project would not conflict with any local policy relating to these species, because the City does not have a tree preservation policy or ordinance that protects any of the tree species that occur onsite. Finally, the Revised Project would be required to pay mandated fees to mitigate impacts to species covered by the CVMSHCP in Mitigation Measure BIO-6.

As established in **Section 4.3, *Biological Resources*** of the DEIR, development of the 384.5-acre property would impact onsite biological resources, therefore, mitigation is recommended to reduce the impacts to less than significant levels. The mitigation measures were:

BIO-1: Burrowing owl surveys shall be performed by a qualified biologist, approved by the City prior to any site disturbance activities. A minimum of two surveys, occurring at least three weeks apart, shall be completed in advance of any site disturbance activities. If disturbance activities are expected to start during the burrowing owl breeding season, three surveys shall be completed. The final burrowing owl survey shall be completed within three days prior to initiation of any site disturbance activities. The pre-construction survey shall be conducted following accepted protocol and the requirements specified in the CVMSHCP (see pp. 4-168 & 4-169). Prior to construction, a qualified biologist will survey the construction area and an area up to 500 feet outside the project limits for burrows that could be used by burrowing owls. If the burrow is determined to be occupied, the burrow will be flagged, and a 160-foot diameter buffer will be established during non-breeding season or a 250-foot diameter buffer during the breeding season. The buffer area will be staked and flagged. No development activities will be permitted within the buffer until the young are no longer dependent on the burrow and have left the burrow.

If the burrow is found to be unoccupied, the burrow will be made inaccessible to owls, and construction may proceed. If either a nesting or escape burrow is occupied, owls shall be relocated pursuant to accepted Wildlife Agency protocols. Determination of the appropriate method of relocation, such as eviction/passive relocation or active relocation, shall be based on the specific site conditions (e.g., distance to nearest suitable habitat and presence of burrows within that habitat) in coordination with the Wildlife Agencies. If burrowing owls are observed within the Project site during construction activities, CDFW shall be notified immediately and provided with proposed avoidance and minimization measures, consistent with the requirements of the CVMSHCP.

BIO-2: In June 2021, a qualified bat biologist will conduct a second round of focused nighttime surveys for roosting bats at locations where suitable roosting habitat is identified. The nighttime

survey will include a combination of acoustic and exit count methods, and will take place during the bat maternity season (March 15–August 31 in the Coachella Valley) to enable detection of maternity-roosting bats. If maternity roosts are identified within the project area, the biologist will coordinate with CDFW to implement avoidance measures during the bat maternity season in accordance with CDFW's established standards. No construction activities will occur within a 300-foot buffer of maternity roost sites during the bat maternity season unless concurrence is received from CDFW to reduce that buffer distance based upon the bat species present and the activities occurring.

BIO-3: Removal of trees (including palm trees) shall occur outside the bat maternity season (March 15–August 31 in the Coachella Valley), which coincides with the bird nesting season, to avoid the potential for "take" of flightless young. Trees and snags that have been identified as confirmed or potential roost sites require a two-step removal process and the involvement of a bat biologist to ensure that no roosting bats are killed during this activity. Consistent with CDFW protocols this two-step removal shall occur over two consecutive days as follows: on Day 1, branches and limbs not containing cavities, as identified by a qualified bat biologist, will be removed. On Day 2, the remainder of the tree may be removed without supervision by a bat biologist. The disturbance caused by limb removal, followed by an interval of one evening, will allow bats to safely abandon the roost.

BIO-4: To avoid impacts to roosting bats from the installation of new light fixtures associated with the proposed development, all lighting fixtures shall have light shields or similar devices (i.e., dark sky compliant lighting) installed to ensure that there is no light trespass on to Coral Mountain and surrounding open space.

BIO-5: A qualified bat biologist shall confirm the absence of roosting bats prior to any restoration work or other disturbance of the adobe site. If bats are found or if the absence of bats cannot be confirmed, the bat biologist will install or directly supervise installation of humane eviction devices and exclusionary material to prevent bats from roosting in the building. Implementation of the humane eviction/exclusions is typically performed in the fall (September or October) preceding construction activity at each structure to avoid impacts to hibernating bats during the winter months or during the maternity season (March 15–August 31 in the Coachella Valley), when nonvolant (flightless) young are present. Any humane eviction/exclusion devices must be installed at least 10 days prior to the demolition of a structure housing bats to allow sufficient time for the bats to vacate the roost(s).

BIO-6: To ensure compliance with California Fish and Game Code and the MBTA and to avoid potential impacts to nesting birds, vegetation removal and ground disturbing activities shall be conducted outside the general bird nesting season. Any vegetation removal, ground disturbance, and/or construction activities that occur during the nesting season (February 1 – August 31) will require that all suitable habitats be surveyed for the presence of nesting birds

by a qualified biologist approved by the City. Prior to commencement of clearing, a qualified biologist shall conduct preconstruction surveys within 14 days and repeated 3 days prior to ground-disturbing activities. If any active nests are detected a buffer of 300 feet (500 feet for raptors) around the nest adjacent to construction will be delineated, flagged, and avoided until the nesting cycle is complete. During construction activities, the qualified biologist shall continue biological monitoring activities at a frequency recommended by the qualified biologist using his or her best professional judgment. If nesting birds are detected, avoidance and minimization measures may be adjusted and construction activities stopped or redirected by the qualified biologist using his or her best professional judgment to avoid any take of nesting birds.

In response to CDFW comments, the following mitigation measures were added to the EIR to address construction and operational noise on wildlife using Coral Mountain, project landscaping, lake maintenance, and Peninsular bighorn sheep:

BIO-7: To ensure that the Project will avoid any significant construction or operational noise impacts on wildlife using Coral Mountain, noise monitoring will occur for all construction activities using heavy equipment within 150 feet of the base of Coral Mountain. If noise levels exceed 75 dBA, construction or operational changes or other modifications shall be made, as directed by the project biologist to reduce the noise levels at Coral Mountain to below 75 dBA.

BIO-8: Existing native vegetation, particularly palo verde trees, will be retained where feasible. Landscaping shall include native desert species.

BIO-9: Onsite lakes will be designed and constructed by industry professionals and will incorporate proper aeration, circulation and filtration to maintain a balanced lake ecosystem. Lakes will be stocked with beneficial fish and plant species. Limited chemical applications will be utilized as necessary. Ongoing maintenance will ensure that onsite lakes function properly to control any invasive species or other nuisance conditions.

BIO-10: An education program about the Peninsular bighorn sheep and their associated habitat shall be implemented and maintained throughout the commercial, open space, and low-density community through the use of signage, pamphlets, and staff education. The Education Program should inform the reason of why specific measures are being taken to support recovery of Peninsular bighorn sheep. The Education Program should include the ecology of Peninsular bighorn sheep, what threats this species is currently facing, and how recovery actions will reduce these threats. This includes information that explains: (1) why restrictions on toxic plants, fences, and pesticides are needed; (2) how artificial feeding of coyotes could adversely affect bighorn sheep; and (3) how recreational activities may affect sheep. The use of interpretive signs is encouraged.

With the implementation of Mitigation Measures BIO-7 through BIO-10, impacts to wildlife using Coral Mountain, native desert species, lake ecosystems, and Peninsular bighorn sheep would be reduced to less than significant levels.

All mitigation measures identified in the DEIR (with the exception of the Wave Basin lighting measure which is no longer applicable) would also be imposed for development of the Revised Project to reduce impacts to biological resources to less than significant levels. The Revised Project, like Alternative 2, proposes a golf course, thus providing suitable grazing habitat for the sheep. Therefore, as a part of project design, the Revised Project would include a sheep protection plan to ensure that PBS are restricted from entering the project. The sheep protection plan includes implementation of fencing/walls along the entire project perimeter as a physical barrier to prevent PBS from accessing the site, as well as an approved native species plant palette to avoid specimens listed as "prohibited invasive ornamental plants" in certain open space areas and on lots adjoining any sheep barrier, consistent with the sheep protection plan included with the Preferred Alternative.

Accordingly, the Revised Project (like Alternative 2) will not have any new or substantially more severe impacts to biological resources than previously analyzed in the DEIR for either Alternative 2 or the Preferred Alternative.

Cultural Resources

Preferred Alternative

As discussed in the DEIR, the project site previously operated as an agricultural business until the late 20th century before being abandoned in the 1990s. Remains of the agricultural operations include a partially collapsed adobe, which has been recorded into the California Historical Resources Inventory. Although the survey completed for the DEIR determined that the adobe has been vandalized, burned, and further deteriorated, it still remains eligible for listing in the California Register of Historic Resources. Therefore, to avoid impacts to this site, no earth moving activities shall occur until the site is fenced and flagged; a comprehensive recordation project of the site has been completed; and preservation and stabilization of the remains in place as a community feature with an informational plaque has been completed, as described in Mitigation Measure CUL-1. CUL-1 also requires the preservation of the site in perpetuity by the Homeowners' Association for the project. The implementation of Mitigation Measure CUL-1 would reduce impacts to the adobe site to less than significant levels.

As stated in the DEIR, the vast majority of the previously recorded cultural resources within a one-mile radius of the project site (62 sites and 48 isolates) were prehistoric. The sites mainly consisted of ceramic lithic scatters with some bedrock milling features, ground stone artifacts, and the remnants of fire hearths. A total of eight sites and seven isolates are known to be present within or partially within the project boundary today. Only three sites constitute an archaeological and historical resource. Three of the sites contain panels of rock art as well as milling features and ceramics

contributory to the rock art panel areas. The technical analysis determined that the sites are also eligible for listing in the California Register. Therefore, fencing and delineation of the area prior to any development activity, the long-term protection of these sites, through prohibition of development, and the recordation of protective easements, as well as a program of research and documentation of the sites, were required as Mitigation Measure CUL-5 to reduce impacts to less than significant levels. Additionally, Mitigation Measure CUL-2 and CUL-3 require monitoring on the site for all earth moving activities by both an archaeological and Tribal monitor. Finally, all construction workers were required to receive sensitivity training during all aspects and phases of project construction (CUL-4). In addition to the findings of the archaeologist, the City conducted Tribal consultation in conformance with SB 18 and AB 52. The Agua Caliente Band of Cahuilla Indians requested consultation, and informed the City that this area is of high sensitivity to the Cahuilla people. A number of mitigation measures were recommended by the Tribe.

To avoid the disturbance of any human remains, the project was required to comply with California Health and Safety Code Section 7050.5, and the CEQA Guidelines Section 15064.5, in the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, no further excavation or disturbance of the site, or any nearby area reasonably suspected to overlay adjacent remains, until the County Coroner has examined the remains. In addition, CUL-2 and CUL-3, which require on-site monitoring, will ensure that ground disturbing activities are observed by experts who can recognize such resources if unearthed.

The mitigation measures which were applied to the Preferred Alternative were:

CUL-1: A comprehensive recordation program shall be prepared by a qualified archaeologist for Site 33-008388. The program shall contain detailed drawings and measurements to preserve the information on the adobe building. Such information would include the floor plan, elevations, building materials and their configurations, and any other notable structural and architectural details. The adobe remains and an appropriate buffer determined by the project archaeologist shall be flagged and cornered off during all ground disturbance and preserved in place. Prior to the occupancy of any structure in Planning Area II, the adobe will be fenced off and an informational plaque describing the history of the ranch complex shall be provided, and the project proponent shall provide the City with the CC&Rs for the project area, demonstrating that the feature would be maintained in perpetuity by the project's Homeowners Association. Special attention should be given to the residence foundation, which, may be the remains of one of the earlier structures at the site, dating from 1920s or before. The footings and slabs at this location should be cleared and measured, and attempts should be made to locate the original trash pits or privies which could contain valuable artifacts revealing much about life in the harsh environment at such an early date. The scatter of artifacts has the greatest number of pre-1925 artifacts, mostly in the form of sun-colored glass, but also in brown and olive glass, porcelain, ceramics and more. There may be remains

of an early structure near this point, hidden amidst the broad stand of tamarisk trees, an original windbreak. Search of these remains is required to ensure the most complete recovery possible of the early 20th century artifacts and features. Photos, measurements, and artifacts shall be catalogued, analyzed, reported, and curated at the Coachella Valley Museum (Love et al.1998:54*).*

CUL-2: The presence of a qualified archaeologist shall be required during all project related ground disturbing activities, including clearing and grubbing. A monitoring plan shall be prepared and approved by the ACBCI and the City prior to the initiation of any ground disturbing activity for all construction phases and activities. If potentially significant archaeological materials are discovered, all work must be halted in the vicinity of the archaeological discovery until the archaeologist can assess the significance of the find.

CUL-3: An approved Agua Caliente Band of Cahuilla Indians (ACBCI) Native American Cultural Resource Monitor shall be present during any ground disturbing activities (including archaeological testing and surveys) for the project. If potentially significant archaeological materials are discovered, all work must be halted in the vicinity of the archaeological discovery until the Tribal monitor can assess the significance of the find.

CUL-4: Prior to ground disturbance during any phase of the project, cultural sensitivity training shall take place for all workers, conducted by the Agua Caliente Tribal Historic Preservation Office (THPO).

CUL-5: Sites 33-00193, 33-001715, and 33-009545, along the base of Coral Mountain and at the toe of the slope, which contains the rock art panels and bedrock milling features, shall be avoided and protected in situ during project construction through the establishment of Environmentally Sensitive Areas. Deed restrictions shall be recorded for the Environmentally Sensitive Areas and provided to the City prior to any ground disturbance of any portion of Planning Area III. For the balance of Site 33-001715, where scattered artifacts but no features were found, mitigative surface collection and subsurface excavation shall be completed prior to ground disturbance to recover a representative sample of the cultural materials prior to the commencement of the project and as a condition of grading permit issuance. The excavation shall include a combination of standard archaeological units, shovel test pits, and backhoe trenches to optimize both efficient coverage of the site area and safe recovery of cultural remains. The survey protocols shall be approved by ACBCI and their approval provided to the City in writing prior to the initiation of any ground disturbing activity on the site.

Alternative 2

Since Alternative 2 would develop the same acreage as the Preferred Alternative, Alternative 2 would also be required to implement Mitigation Measures CUL-1 through CUL-5; therefore, reducing

impacts to existing cultural resources onsite, potential onsite cultural resources, and human remains to less than significant levels.

Revised Project

Since the Revised Project, like Alternative 2, would disturb the same physical area as the Preferred Alternative, the impacts will be consistent with the Preferred Alternative. Therefore, all of the mitigation measures applied to the Preferred Alternative would be applied to both Alternative 2 and the Revised Project, and impacts to cultural resources would be less than significant with implementation of mitigation.

Energy

Preferred Alternative

Construction:

During construction, the Preferred Alternative would consume 57,987.3 kWh of electricity, 813,083 gallons of diesel, and 498,139 gallons of gasoline, as determined in the DEIR. Consumption of natural gas would not occur during construction. The estimated construction electricity usage represents approximately 0.67 percent of the Preferred Alternative's estimated annual operational demand, which, as discussed below, would be within the supply and infrastructure service capabilities of IID. Additionally, there are no unusual project characteristics or construction processes that would require the use of equipment that would be more energy intensive than is used for comparable activities, or use of equipment that would not conform to current emissions standards (and related fuel efficiencies). Mitigation Measure AQ-2 requires that off-road diesel construction equipment (greater than 150 horsepower) complies with EPA/CARB Tier 3 emissions standards. The implementation of Mitigation Measure AQ-2 would assist in reducing construction-related gasoline consumption at the project site, and project construction would not consume petroleum in a wasteful or inefficient manner.

Operation:

The Preferred Alternative would consume approximately 8,642,729 kWh of electricity annually, 21,855,400 kBTU of natural gas annually, and 749,717 gallons of petroleum annually, per the DEIR. The Preferred Alternative would implement the use of photovoltaic (PV) systems to generate 15 percent of the power demand, high efficiency lighting, and applying energy efficient design building shells and building components, such as windows, roof systems, electrical lighting systems, and heating, ventilating and air conditioning systems to meet Building Code standards in effect at the time development occurs. The project would also be required to install water efficient plumbing fixtures and irrigation systems, light-emitting diode (LED) technology within homes, use recycled water (non-potable) for common area landscape irrigation, use drought-tolerant plants in landscape design, install Energy Star appliances, and install tankless water heater systems. These are required by State

Tile 24 and CalGreen standards. The Preferred Alternative would also reduce vehicle miles traveled and thus petroleum fuel consumption by providing a mix of various land uses onsite, and pedestrian and multi-modal connections between the land uses. With the implementation of the standards and requirements above, the DEIR determined that the Preferred Alternative would result in less than significant impacts to energy resources. The DEIR determined that the Preferred Alternative's energy consumption would not exceed the City's, IID's, or SoCal Gas's capacity for their respective service area (with implementation of the infrastructure improvements described in the project description and the Utilities and Service Systems discussion).

The DEIR also analyzed the Preferred Alternative's consistency with State and local energy plans, including EPA/CARB Tier 3 Emissions Standards, Title 24, La Quinta's Greenhouse Gas Reduction Plan, and the City's General Plan. Due to the mixed-use nature of the Preferred Alternative, and the project's implementation of Mitigation Measure AQ-2 during construction, and the standards and requirements imposed by State and local agencies, the DEIR concluded that the Preferred Alternative was consistent with the State and local energy plans.

Alternative 2

Construction:

Short-term energy consumption related to construction activities would be similar during development of both Alternative 2 and the Preferred Alternative, since they both would develop the same project area. Both the Preferred Alternative and Alternative 2 would consume 57,987.3 kWh of electricity, 813,083 gallons of diesel, and 498,139 gallons of gasoline, as determined in the DEIR. Therefore, like the Preferred Alternative, Alternative 2 would not result in excessive or unnecessary energy consumption.

Operation:

As analyzed in the DEIR, Alternative 2 would not result in the development of the tourist commercial portion of the site, which includes the Wave Basin, associated light fixtures, hotel uses, and ancillary resort commercial uses. Based on calculations using CalEEMod (Version 2016.3.2), the DEIR determined that Alternative 2 would require 5,071,006 kWh in electric power, and 13,182,066.5 kBTU in natural gas annually.

Table 8 Alternative 2 Energy Use

Land Use	Electricity KWh	Natural Gas kBTU
750 Residential (Low Density)	4,614,495*	13,182,066.5
60,000 sf Commercial	456,511	98,400
Golf	0	0
Total	**5,071,006**	**13,280,466.5**

*This number was determined by using the project's kWh value, dividing it by 496 (the project's proposed low density residential number) to receive the amount of electricity per residential unit (6,152.66 kWhr). Then 6,152.66 kWhr was multiplied by 750 to determine how much electricity 750 dwelling units would consume. The same was completed for natural gas.

The DEIR compared electricity and natural gas consumed by Alternative 2 to the Preferred Alternative and determined that electricity and natural gas would be reduced by 41 percent and 40 percent, respectively (see table below). This is a result of replacing the resort uses included in the Preferred Alternative with more single-family homes and a golf course.

Table 9 Energy Consumption Comparison

Source	Units	Alternative 2 Energy Consumption	Preferred Alternative Energy Consumption	Percent Difference
Electricity Total	kWh/yr	5,071,006	8,642,729	41% less
Natural Gas Total	kBTU/yr	13,280,466.5	21,855,400	40% less

However, updates to the CalEEMod modeling system to generate more accurate outputs have occurred since the DEIR was written. These updates result in increased operational electricity and natural gas consumption totals (compared to CalEEMod Version 2016.3.2 model) and are provided in the Supplemental Air Quality and Greenhouse Gas Assessment included in Appendix A. The Assessment concluded that the operation of 750 residential homes, a golf course, and commercial uses would consume 7,891,477 kWh per year of electricity, and 27,076,002 kBTU per year of natural gas. It is important to note that the increase in energy use between Alternative 2 and the Revised Project is solely the result of the CalEEMod update, as the proposed uses remain the same.

Similar to the Preferred Alternative, Alternative 2 would be required to implement State and local standards for energy efficiency as described above to meet Building Code standards in effect at the time development occurs.

Alternative 2 is anticipated to have a higher daily VMT and per capita VMT because it generates more daily trips because it lacks the complimentary mix of uses on-site and enhanced connectivity between those uses which reduce per capita VMT. Alternative 2 was expected to generate 13% more trips compared to the Preferred Alternative due to the increased number of single-family residential dwelling units and reduction in internal trip capture. The proposed 60,000 square feet of commercial uses at the corner of Avenue 58 and Madison Street would continue to result in a reduction in trips due to trip capture in Alternative 2. Therefore, due to the increased vehicle trips associated with the 750 residential units, Alternative 2 would result in an approximately 13% increased petroleum consumption compared to the Preferred Alternative, which equates to 831,228 gallons of petroleum consumed annually.

Table 10 Petroleum Consumption Comparison

	Preferred Alternative Annual Fuel Consumption	Alternative 2 Annual Fuel Consumption	Percent Difference
Gallons Petroleum	749,717	847,180	13% more

Additionally, under either alternative, fuel efficiencies are anticipated to increase during the lifetime of the project, as older vehicles are replaced with newer more efficient models (including plug-in hybrid, and zero emission vehicles). Thus, petroleum use is anticipated to decrease over time.

Overall, development and operation of the Preferred Alternative or Alternative 2 would not result in excessive, wasteful, or unnecessary energy consumption or cause any significant impacts regarding energy resources due to the compliance with State and local energy-efficiency standards.

Revised Project

Due to the undeveloped and vacant nature of the site, the 384.5-acre site does not currently consume energy resources and electricity and natural gas facilities are not currently provided to the site. As would be the case with the Preferred Alternative and Alternative 2, development and operation of the Revised Project would result in an increase of energy consumption at the site.

Construction

Short-term energy consumption related to construction activities during development of the Revised Project will be the same as under Alternative 2 and the Preferred Alternative because they would use similar amounts of electricity for tools and construction trailers, and petroleum fuels for the operation of machinery, large equipment, and employee vehicle trips. Natural gas would not be required during construction activities under any alternative, including the Revised Project. The table below illustrates construction-related energy use for the Preferred Alternative, Alternative 2, and the Revised Project, since all scenarios would develop the exact same acreage.

Table 11 Summary of Energy Use During Construction

Fuel Type	Units	Total Construction Energy Use
Electricity	kWh	57,987.3
Diesel	Gallons	813,086
Gasoline	Gallons	498,139

Notes: Electricity for the project is total construction usage. Mobile gasoline and diesel usage were calculated using the figures provided in the CalEEMod model.

Because construction activities associated with the Revised Project would be the same as Alternative 2, impacts would be similar and less than significant.

Operation

As stated above, the electricity and natural gas consumption values utilized in the DEIR were generated using the most recent version of CalEEMod at the time the DEIR was prepared (Version 2016.3.2). CalEEMod has since updated its model. These updates result in increased operational electricity and natural gas consumption totals (compared to CalEEMod Version 2016.3.2 model) as shown in the Supplemental Air Quality and Greenhouse Gas Assessment. The Supplemental Air Quality and Greenhouse Gas Assessment concluded that the operation of 750 residential homes, a golf course, and commercial uses would consume 7,891,477 kWh per year of electricity, and 27,076,002 kBTU per year of natural gas. The revised emissions between the two versions of the model are shown in Table 12. A comparison of the differences between the Preferred Alternative and Alternative 2 as analyzed in the EIR, and the Revised Project analyzed under the current model, is provided in Table 13.

Table 12 Alternative 2/Revised Project Energy Consumption Comparison V2016.3.2 Versus V2022.1.1.13

Source	Units	Energy Consumption 2016.3.2	Energy Consumption 2022.1.1.13	Delta (%)
Electricity Total	kWh/yr	5,071,006	7,891,477	55%
Natural Gas Total	kBTU/yr	13,280,466.5	27,076,002	104%

Table 13 Operational Energy Consumption Comparison

Source	Units	Preferred Alternative CalEEMod 2016.3.2	Alternative 2 CalEEMod 2016.3.2	Revised Project CalEEMod 2022.1.1.13
Electricity Total	kWh/yr	8,642,729	5,071,006	7,891,477
Natural Gas Total	kBTU/yr	21,855,400	13,280,466.5	27,076,002

Similar to the Preferred Alternative and Alternative 2, the Revised Project would be required incorporate energy efficient features to meet Building Code standards in effect at the time development occurs. The project would be required to comply with Title 24 and CalGreen requirements related to energy efficiency.

As compared to the Preferred Alternative (indicated in Table 13 above), the Revised Project will use 751,252 kWh/year (8.7%) less electricity due to the elimination of the Wave Basin and resort uses. While the Revised Project is calculated to use 5,220,602 kBTU/year (24%) more natural gas than the Preferred Alternative, this is solely due to the changes in CalEEMod modeling. In reality, the Revised Project (like Alternative 2) would use substantially less natural gas than the Preferred Alternative (as shown in Table 13 above). As determined in the DEIR, the Wave Basin would result in the use of 1,528,430 kWh of electricity per year, and the resort uses would consume 3,260,870 kWh per year of electricity and 523,643 kBTU of natural gas per year.

Energy use was not considered excessive, wasteful, or unnecessary under the Preferred Alternative or Alternative 2, and thus not a significant effect. Accordingly, the reduced energy consumption of the Revised Project would also not be considered excessive, wasteful, or unnecessary.

The Revised Project (like Alternative 2) will generate approximately 13% more daily trips than the Preferred Alternative, and thus result in approximately 97,463 more gallons of petroleum consumed compared to the Preferred Alternative (see Table 10, above) However, this is the same increase in daily trips analyzed in the DEIR for Alternative 2, and accordingly, does not constitute a substantial increase beyond what was analyzed in the DEIR.

Additionally, as is the case for all alternatives, fuel efficiencies are anticipated to increase during the lifetime of the project, as older vehicles are replaced with newer more efficient models (including plug-in hybrid, and zero emission vehicles). Thus, petroleum use is anticipated to decrease over time.

Overall, development and operation under all three scenarios (the Preferred Alternative, Alternative 2, and the Revised Project) would not result in excessive, wasteful, or unnecessary energy consumption or significant impacts regarding energy resources due to the compliance with State and local energy-efficiency standards.

Geology and Soils

Preferred Alternative

The DEIR, in the analysis of geology and soils, determined that development proposed in the Preferred Alternative is not located near an Alquist-Priolo Earthquake Fault Zone or near areas impacted by landslides. Therefore, impacts would be less than significant. Development would also be required to comply with State seismic standards for construction to lessen impacts of seismic shaking.

The DEIR also determined that impacts associated with erosion (waterborne and or airborne) would be less than significant with compliance to existing regulatory requirements, such as the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP). Soil conditions (i.e., the identification of liquefaction, collapsible soils, expansive soils onsite) were studied in the project-specific Geotechnical Report, which determined that impacts of unstable soil conditions would be less than significant with the implementation of mitigation measures. Development of the property would be required to comply with the recommendations provided in the site-specific Geotechnical Investigation (Appendix G of the DEIR) to ensure the onsite soils can support the proposed foundations and structures (Mitigation Measures GEO-1 and GEO-2).

In order to avoid impacts to potential paleontological resources onsite, the DEIR required the implementation of mitigation to reduce impacts to less than significant levels. The property would be required to retain a qualified paleontological monitor during all earth-moving operations reaching beyond the depth of two feet (GEO-3). With implementation of this measure, impacts were determined to be less than significant.

Mitigation measures specifically state:

GEO-1 All designs for any water body on the site shall be prepared by a qualified engineer and comply with all seismic codes in effect at the time they are constructed. All designs shall be based on and incorporate the recommendation of a qualified soils engineer in a site and water body specific report attached to the plans submitted to the City.

GEO-2 All earthwork including excavation, backfill and preparation of the subgrade soil, shall be performed in accordance with the geotechnical recommendations, presented below, and portions of the local regulatory requirements, as applicable. All earthwork should be performed under the observation and testing of a qualified soil engineer. The following geotechnical engineering recommendations for the proposed project are based on observations from the field investigation program, laboratory testing and geotechnical engineering analyses.

- Stripping: areas to be graded shall be cleared of the vegetation, associated root systems and debris. All areas scheduled to receive fill should be cleared of old fills and any irreducible matter. The stripping shall be removed off-sit or stockpiled for later use in landscape areas. Undocumented fill soil or loose soil shall be removed in its entirety and replaced as engineered fill. Voids left by obstruction shall be properly backfilled in accordance with the compaction recommendations of this report.
- Preparation of the Residential Building Areas: in order to provide firm and uniform foundation bearing conditions, the primary foundation bearing soil shall be over-excavated and recompacted. Over-excavation shall extend to a minimum depth of 3 feet below existing grade or 3 feet blow the bottom of the footings, whichever is deeper. Once adequate removals have been verified, the exposed native soil shall be scarified, the moisture-conditioned and compacted to a minimum of 90 percent relative compaction.
- Compaction: Soil to be used as engineered fill should be free of organic material, debris and other deleterious substances, and shall not contain irreducible matter greater than six (6) inches in maximum dimension. All fill materials shall be placed in thin lifts not exceeding six inches in a loose condition. If import fill is required, the material shall be of a non-expansive nature and shall meet the following criteria:

Plastic Index	Less than 12
Liquid Limit	Less than 35
Percent Soil Passing #200 Sieve	Between 15% and 35%
Maximum Aggregate Size	3 Inches

The subgrade and all fill material shall be compacted with acceptable compaction equipment, to at least 90 percent relative compaction. The bottom of the exposed

subgrade shall be observed by a representative of Sladden Engineering prior to fill placement. Compaction testing shall be performed on all lifts in order to verify proper placement of the fill materials.

- Shrinkage and Subsidence: Volumetric shrinkage of the material that is excavated and replaced as controlled compacted fill shall be anticipated. It is estimated that shrinkage could vary from 10 percent to 25 percent. Subsidence of the surfaces that are scarified and compacted shall be between 1 and 3 tenths of a foot. This will vary depending upon the type of equipment used, the moisture content of the soil at the time of grading and the actual degree of compaction attained.

GEO-3 All earth-moving operations reaching beyond the depth of two feet shall be monitored by a qualified paleontological monitor and continuous monitoring will become necessary if undisturbed, potentially fossiliferous lakebed sediments are encountered. The monitor shall be empowered to stop earth moving activities if fossils are identified. The monitor shall be prepared to quickly salvage fossils, but must have the power to temporarily halt or divert construction equipment to allow for removal of abundant or large specimens. A monitoring plan shall be provided to the City prior to the issuance of any earth moving permit, or the disturbance of any soils on the site, which will include:

- Samples of sediments shall be collected and processed to recover small fossil remains.
- Recovered specimens shall be identified and curated at a repository with permanent retrievable storage that would allow for further research in the future.

A report of findings, including an itemized inventory of recovered specimens and a discussion of their significance when appropriate, shall be prepared upon completion of the research procedures outlined above. The report shall be provided to the City within 30 days of the conclusion of monitoring activities.

Alternative 2

As was the case for the Preferred Alternative, Alternative 2 would not result in development in a fault zone, or next to a slope, since the land to be developed is the same. Similar to the Preferred Alternative, development of Alternative 2 would also be required to comply with State seismic standards for construction to lessen impacts of seismic shaking.

Mitigation Measures GEO-1 through GEO-3, provided for the Preferred Alternative, also would apply to Alternative 2 to address impacts associated with seismic-related ground failure, ground subsidence, collapsible soils, corrosive soils, and paleontological resources, thereby reducing impacts to less than significant levels.

Revised Project

As was the case for the Preferred Alternative and Alternative 2, the Revised Project would not result in development in a fault zone, or next to a slope, since the land to be developed is the same. Development would be required to comply with State seismic standards for construction to lessen impacts of seismic shaking.

As identified in the DEIR impacts concerning erosion (waterborne and soil) would be less than significant with compliance to existing regulatory requirements, such as the development and implementation of a SWPPP. The Revised Project would be required to implement these same requirements during construction.

The Revised Project would also be required to implement Mitigation Measures GEO-1 and GEO-2 to reduce impacts of onsite soils to from liquefaction, expansion, and soil collapse. The Revised Project would introduce lakes throughout the golf course area for retention and aesthetic purposes, similar to those proposed in Alternative 2. These features are typical for golf courses and would be required to comply with seismic standards for construction.

Finally, as would occur under any alternative, paleontological resources could occur onsite due to the undisturbed subsurface lakebed sediments from Holocene Lake Cahuilla, which are considered to have high paleontological sensitivity. Therefore, Mitigation Measure GEO-3 requires that all earthmoving operations reaching beyond the depth of two feet be monitored by a qualified paleontological monitor. Under any of the alternatives or the Revised Project, this mitigation measure reduces impacts to less than significant levels.

As would be the case for Alternative 2, the mitigation measures identified in the DEIR would be applied to the Revised Project to address impacts associated with strong seismic ground shaking, seismic-related ground failure, ground subsidence, collapsible soils, corrosive soils, and paleontological resources, thereby reducing impacts to less than significant levels.

As analyzed in the EIR, Alternative 2 would result in similar, less than significant effects relating to geology and soils, and the same analysis and conclusions apply equally to the Revised Project.

Greenhouse Gas Emissions

Preferred Alternative

The DEIR found that the Preferred Alternative would not conflict with regulations adopted for the purpose of reducing the emissions of greenhouse gases, specifically based on consistency with the applicable 2017 Scoping Plan Update aimed to achieve a statewide reduction in GHG emissions level to 40% below 1990 levels by 2030, resulting in less than significant impacts on plan conformance.

The DEIR determined that the Preferred Alternative would result in potentially significant impacts to greenhouse gas emissions. The DEIR found that the amortized annual construction emissions, events emissions, and operational project emissions from the Preferred Alternative would total approximately 17,270.47 MTCO2e per year, without PDFs and mitigation (See Table 14 below). When

adjusted for the service population of 2,672, the unmitigated GHG emissions resulted in a service population efficiency of 6.46 MTCO2e per SP per year, exceeding the threshold of 3.65 MTCO2e per SP per year and warranting the use of carbon credits to off-set the totals to the extent of meeting the service population efficiency target.

Implementation of MM GHG-1 would require the purchase of carbon credits to offset the GHG emissions generated by the project that are in excess of the applicable threshold. However, as the credits would not change the actual GHG emissions levels of the project itself and the use of carbon credits as mitigation for GHG emissions has not been widely adopted in the Coachella Valley area for residential and resort community projects, the DEIR conservatively considered impacts associated with GHG emissions generated by the proposed project to be significant and unavoidable because the City cannot determine with certainty that the project's GHG emissions will be reduced to a less than significant level.

Alternative 2

The Alternatives analysis in the DEIR determined that Alternative 2 would result in construction related GHG emission levels similar to those of the Preferred Alternative, in part because the same area would be disturbed, and the entire site would be developed.

Based on the California Air Resources Board (CARB)'s Draft 2020 Mobile Source Strategy, traffic-related mobile sources contribute a majority of criteria air pollutants and greenhouse gas emissions. Alternative 2 was expected to generate approximately 13% more trips compared to the previously proposed project due to the increased number of single-family residential dwelling units and the lack of internal relationships to services and activities associated with the Preferred Alternative. Alternative 2 would have reduced criteria air pollutant and GHG emissions associated with the production of electricity and water, because it would not include a wave basin, and the need for electricity associated with that feature. Although emission increases or decreases are not linear in the CalEEMod model, Alternative 2 was determined in the DEIR to result in elevated GHG emissions associated with vehicle trips, as shown in Table 14. For the proposed project, PDFs resulted in a GHG emissions reduction of approximately 30%. Compared to the Preferred Project, Alternative 2 was expected to achieve a lower reduction in GHG emissions from PDF implementation because Alternative 2 could not be assumed to include commute trip reduction programs, telecommuting and alternative work schedules, and employer-sponsored shuttles with the same efficacy due to the substantially reduced number of workers (the other PDFs were assumed to be included in Alternative 2). Overall, therefore, GHG impacts associated with Alternative 2 were determined in the DEIR to be greater than the Preferred Alternative for operations and equivalent for construction activities, and would be significant and unavoidable.

Revised Project

The Revised Project would be subject to the more current and increasingly stringent energy efficiency standards for design, construction, and operation, which, combined with CARB Mobile Source Strategy aimed at reducing emissions of precursors to criteria pollutants, greenhouse gases (GHG), and toxic air contaminants from mobile sources, would allow this development scenario to be consistent with the current statewide Scoping Plan Update, resulting in less than significant impacts on plan conformance.

Construction impacts associated with the Revised Project would be substantially the same as those analyzed for Alternative 2 in the EIR, because the same project site acreage would be disturbed and developed over a similar period of time with the same uses. Once amortized over the 30-year project life, these construction emissions did not constitute a material portion of total project GHG emissions (approximately 414 MTCO2e per year or 2.5%).

A Supplemental Air Quality and GHG Assessment was prepared for the Revised Project. As displayed in Table 14, the revised project would result in unmitigated GHG emissions totaling approximately 14,978.42 MTCO2e per year after accounting for amortized annual construction emissions assumed to be equivalent to the preferred alternative. Such emission totals would be lower than those calculated for the Preferred Alternative. However, when adjusted for the respective service population (population and employment) of 2,228, the unmitigated service population efficiency would be approximately 6.72 MTCO2e per SP per year, which is relatively higher than the Preferred Alternative. Therefore, by comparison, the Revised Project would result in relatively lower total GHG emissions, but slightly higher emissions when adjusted for the respective service population. Regardless, the Revised Project, like both the Preferred Alternative and Alternative 2, would result in significant and unavoidable GHG impacts. Both the Preferred Alternative and the Revised Project would require the purchase of carbon credits to reduce the annual emission levels and respective service population efficiency levels below 3.65 MTCO2e per SP per year.

Table 14 Comparison of GHG Emissions

Unmitigated GHG Emissions (in MTCO2e/yr)					
	Amortized Annual Construction Emissions	Operational Event Emissions	Operational Emissions (Area, Energy, Mobile, Waste, Water Usage)	Total Project Emissions per year	Service Population (Population and Employment)
Preferred Alternative	414.62	546.89	16,310.41	17,270.47	2,672
Alternative 2 and Revised Project*	414.62 (Assumed Equivalent to Preferred Alternative)	Not Applicable	14,563.80	14,978.42	2,228
*The operational emissions for Alternative 2 and the Revised Project are equivalent.					

Overall, the Revised Project will have the same GHG impacts as Alternative 2, and as discussed in the DEIR, these impacts will be greater than the Preferred Alternative with respect to operational

emissions. Accordingly, the Revised Project would not have any new or substantially more severe impacts than analyzed in the DEIR on the basis of plan conformance and quantitative emissions. The same mitigation measure proposed in the DEIR for the Preferred Alternative would be implemented for the Revised Project, consisting of carbon credits in quantities that would help the project achieve a compliant population efficiency. Consistent with the DEIR findings for the Preferred Alternative and Alternative 2, because the use of carbon credits has not been broadly adopted in the Coachella Valley to mitigate GHG emissions impacts of residential and resort communities, and because even with the purchase of carbon credits will not lower the project's actual GHG emissions, this analysis conservatively considers the Revised Project to have a significant and unavoidable impact concerning GHG emissions, consistent with Alternative 2 and the Preferred Alternative.

Hazards and Hazardous Materials

Preferred Alternative

Construction:

The Preferred Alternative would not result in a significant hazard to the public or the environment due to routine transport, use, or disposal of hazardous materials, or release hazardous materials into the environment during construction with the project's compliance with State law and standard measures (i.e., Storm Water Pollution Prevention Plan) which regulate safety procedures when using, handling, and storing hazardous materials during construction.

Operation:

Operation of the Preferred Alternative included a hotel/resort, commercial, residential, and recreational and open space uses on approximately 384.5 acres of vacant land. The nature of these uses was not expected to involve, as a primary activity, the routine transport, use, or disposal of hazardous materials in quantities or in a manner that would pose a threat to the project and its surroundings or create a significant hazard through a foreseeable accident condition involving the release of hazardous materials into the environment. However, operation of the Wave Basin, proposed in the Preferred Alternative, would involve the on-site storage of chemicals in quantities greater than or equal to fifty-five (55) gallons, and/or greater than or equal to five hundred (500) pounds for pools, which are considered hazardous materials. Therefore, under the administration of the County of Riverside Department of Environmental Health (DEH), and in compliance with the Hazardous Materials Release Response Plans and Inventory Law, Chapter 6.95 of the California Health and Safety Code (HSC), the Wave basin would be required to secure a permit from the DEH and electronically submit a business plan in the Statewide Informational Management System. Compliance would result in less than significant impacts.

The DEIR concluded that the Preferred Alternative is not located within one-quarter mile of an existing or proposed school or included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. Additionally, since the project site is surrounded by developed

streets, and proposes multiple access points to the proposed land uses, the DEIR determined that implementation of the Preferred Alternative would not interfere with critical facilities, emergency transportation and circulation, or emergency preparedness coordination. A Traffic Control Plan would be required as a condition of approval to be implemented throughout all construction activities. This plan will reduce potential impacts that may arise due to conflicts with construction traffic. Project access points would be reviewed by the Fire Department, to ensure adequate access for emergency vehicles. Finally, the DEIR found that the site is not located in an area affected by wildfires.

Overall, impacts associated with hazards and hazardous materials were found to be less than significant, and no mitigation measures were required.

Alternative 2

Construction

Construction of Alternative 2 was expected to involve the temporary management and use of oils, fuels and other potentially flammable substances in a manner similar to the Preferred Alternative. Thus, as a regulatory requirement, Alternative 2 would be required to comply with the requirements of law, and implement a SWPPP during construction to regulate safety procedures when using, handling, and storing hazardous materials during construction. Impacts would be comparable to the Preferred Alternative and less than significant.

Operation

Under Alternative 2, the property would develop low density residential units, a golf course, and commercial retail uses. The nature of the uses proposed under Alternative 2 was not expected to involve the routine transport, use, or disposal of hazardous materials in quantities or a manner that would pose a threat to the project and its surroundings or create a significant hazard through a foreseeable accident condition. This is because residential and commercial uses typically use cleaning or maintenance materials (paints, cleaning supplies, etc.), stored in small quantities during operation. However, if the golf course component of Alternative 2 were to store hazardous materials in quantities greater than 55 gallons of liquid, 500 pounds of solid, and 200 cubic feet of compressed gas, the same requirement to submit a Hazardous Materials Business Plan to the Riverside County Fire Department would apply.

Construction and operation of the 384.5-acre site, under Alternative 2 will increase vehicular and multi-modal transportation along the local major roadways in the City. Primary access to the site would be expected to occur along Madison Street, with access to the commercial portion of the site from both Madison Street and Avenue 58. These roadways would provide public and emergency access into and out of the project property. As with the Preferred Alternative, no alteration to existing emergency evacuation routes would be proposed.

As with the Preferred Alternative, a Traffic Control Plan would be required as a condition of approval to be implemented throughout all construction activities. This plan will reduce potential impacts that may arise due to conflicts with construction traffic. Project access points would be reviewed by the Fire Department, to ensure adequate access for emergency vehicles.

As determined in the DEIR, the site is not located within one-quarter mile of an existing or proposed school, or in an area impacted by wildfires, therefore, neither alternative would result in significant impacts to a school facility or wildfire.

Alternative 2 was determined to also result in less than significant impacts associated with hazards and hazardous materials.

Revised Project

Construction

Construction activities associated with the Revised Project are the same as with Alternative 2, because they involve constructing the same homes, commercial square footage and golf course on the same site. Construction of the Revised Project is expected to involve the temporary management and use of oils, fuels, and other potentially flammable substances. Hazardous materials would be delivered, stored, and handled to manufacturer instructions and industry standards. Additionally, the contractor would be required to identify a controlled staging area within the project limits for storing materials and equipment, as required by a Storm Water Pollution Prevention Plan (SWPPP). The handling of potentially hazardous materials on-site would occur. Similar to Alternative 2, the Revised Project would implement safety procedures when using, handling, or storing hazardous materials and impacts would be less than significant.

Operation

As the uses are the same under the Revised Project and Alternative 2, the operational effects relating to the use of hazardous materials would also be the same. As with Alternative 2, common hazardous materials utilized during the operation of residential, commercial, and golf uses can include everyday commercial products, such as pesticides, cleaning fluids, and household products. The golf course would result in the use and storage of larger amounts of pesticides and fertilizers as well as the maintenance of golf carts and other equipment used onsite than the Preferred Alternative, but these amounts would not be expected to be any greater than currently used and stored throughout the City's golf courses, nor are they expected to create any significant hazard because hazardous materials during operation of the Revised Project, as with Alternative 2, would be delivered, stored, and handled to manufacturer instructions and industry standards. Consistent with Alternative 2, there would be no uses onsite that would potentially create a risk to the public or environment or any activities that would inhibit any established hazard evacuation plan because the Revised Project

would implement safety procedures when using, handling, and storing hazardous materials and impacts would be less than significant.

As compared to the Preferred Alternative, the Revised Project would have similar effects relating to hazards and hazardous materials, which would be less than significant. If the Revised Project were to store hazardous materials in substantial quantities, the operator would be required to submit a Hazardous Materials Business Plan to the Riverside County Fire Department.

The project site is not located within one-quarter mile of an existing or proposed school, therefore, no Alternative would impact a school facility.

Construction and operation of the Revised Project would increase vehicular and multi-modal transportation along local roadways in the City, similar to Alternative 2. Primary access to the site would be expected to occur along Madison Street, with access to the commercial portion of the site from both Madison Street and Avenue 58. These roadways will provide public and emergency access into and out of the property. As with the Preferred Alternative and Alternative 2, no alteration to existing emergency evacuation routes would be proposed.

A Traffic Control Plan will be required as a condition of approval to be implemented throughout all construction activities for all the alternatives and for the Revised Project. This plan will reduce potential impacts that may arise due to conflicts with construction traffic. Project access points would be reviewed by the Fire Department, to ensure adequate access for emergency vehicles.

Finally, the property is not located in a Moderate, High, or Very High Fire Hazard Severity Zone (VHFHSZ) according to CALFIRE's High Fire Hazard Severity Zones in State Responsible Areas Map. Therefore, impacts of exposing people or structures to a significant risk involving wildland fires are expected to be less than significant for the Revised Project, as they were for all Alternatives.

The Revised Project (like Alternative 2) would result in similar, less than significant impacts relating to hazards and hazardous materials.

Hydrology and Water Quality

Preferred Alternative

The DEIR determined that the Preferred Alternative would result in less than significant impacts to all hydrology and water quality thresholds, including any water quality standards, waste discharge requirements, surface water quality, and ground water quality, groundwater supplies, sustainable groundwater management, erosion, siltation, flooding, urban runoff, and implementation of a water quality control plan or sustainable groundwater management plan as explained below.

The DEIR found, during construction and life of the project, that the Preferred Alternative would be required to implement the various compliance plans under the Clean Water Act, National Pollutant Discharge Elimination System (NPDES), state, and local regulations to prevent violations or impacts

to surface water quality standards and waste discharge requirements. A Stormwater Pollution Prevention Plan (SWPPP) would be implemented during the period of construction to comply with the NPDES General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities. During the life of the project, water quality standards and waste discharge requirements would be met and demonstrated through a project-specific Water Quality Management Plan (WQMP). The WQMP is also a requirement under the City of La Quinta Municipal Code, Section 8.70.070. The Preferred Alternative relied on proposed on-site facilities to intercept and retain stormwater runoff on-site, sized according to the stormwater volume resulting from the controlling 100-year storm event for the conditions of each project drainage area, as mandated by Section 13.21.120 (A) of the La Quinta Municipal Code and outlined in the La Quinta Engineering Bulletin #06-16.

On the matter of groundwater supplies, the DEIR found that the Preferred Alternative would demand approximately 958.63-acre feet per year (AFY) based on the analysis performed for the approved Water Supply Assessment and Water Supply Verification (WSA/WSV). CVWD found that there was sufficient water supply to accommodate the land uses under the Preferred Alternative. Moreover, the Preferred Alternative would be subject to the locally adopted water-efficient landscape ordinance.

On the matter of groundwater quality, the DEIR found that the Preferred Alternative would implement the required non-structural and structural pollution source control measures that work toward the protection of groundwater quality. Non-structural source control measures consist of site operations, activities, and/or programs described in the WQMP and implemented by the project operator to educate site managers, employees, and residents to prevent potential pollutants from being produced, coming into contact with the storm drain system, and impacting groundwater. Structural source control measures consist of facility design standards to prevent direct contact between potential pollutants and stormwater runoff. These measures would be privately maintained during the life of the project.

The Preferred Alternative was found in the DIER to not result in any physical modifications to an existing CVWD recharge facility or result in any stormwater runoff condition capable of interfering with the facility's operation. On-site retention facilities would contribute to infiltration and groundwater recharge.

On the matter of erosion, siltation, flooding, and urban runoff conditions, the Preferred Alternative was found to result in an increase in impervious land cover through the introduction of structures, hardscape and streets. However, the proposed storm drainage system with required on-site retention facilities and stabilized surfaces would control the volume and conveyance of runoff to prevent erosion and siltation. Flooding would be prevented through compliance with the City's engineering standards for land subdivision and development. Since the Preferred Alternative was required to

retain urban runoff on-site, it would not result in discharge affecting public storm drainage infrastructure.

Moreover, all water quality pollution source control measures and stormwater management would be implemented consistent with the approved WQMP during the life of the project. Less than significant impacts were found for all hydrology and water quality thresholds. No mitigation was necessary.

Alternative 2

The Alternatives analysis in the DEIR determined that Alternative 2 would result in site disturbance to an equivalent extent as the Preferred Alternative. Standard engineering design for Alternative 2 would be required to comply with City standards for the on-site retention of storm flows during the 100-year storm, and would be expected to design retention basins, and similar facilities to those proposed for the Preferred Alternative. Alternative 2 would be subject to the same regulatory requirements, permit coverages, and engineering design approvals as the Preferred Alternative. These would include the most current National Pollution Discharge Elimination System (NPDES) programs associated with construction and post-construction stormwater management and surface water quality standards; a Storm Water Pollution Prevention Plan (SWPPP) to obtain coverage under the State's NPDES Construction General Permit; and the development, approval, and implementation of a Water Quality Management Plan (WQMP). No aspect of Alternative 2 would require deviation from these regulatory requirements and the associated stormwater controls. As discussed In the DIER Alternatives discussion under Utilities and Service Systems, Alternative 2 would require more water to irrigate the 18-hole golf course than would be required for the Preferred Alternative; however, this increase in water demands was determined not to substantially decrease groundwater supplies or interfere with groundwater recharge. Therefore, after following the regulatory program requirements designed specifically to prevent hydrologic, stormwater and surface water impairments, the impacts resulting from Alternative 2 would be similar to the Preferred Alternative and less than significant.

Revised Project

The disturbed area associated with the Revised Project would be the same as the 384.5-acres disturbed by Alternative 2. Standard engineering design for the Revised Project would be required to comply with City standards for the on-site retention of storm flows during the 100-year storm, and would require retention basins and similar facilities. The Revised Project would be subject to the same regulatory requirements, permit coverages, and engineering design approvals as Alternative 2. These would include the most current National Pollution Discharge Elimination System (NPDES) programs associated with construction and post-construction stormwater management and surface water quality standards; a Storm Water Pollution Prevention Plan (SWPPP) to obtain coverage under the State's NPDES Construction General Permit; and the development, approval, and implementation of

a Water Quality Management Plan (WQMP). As was the case under Alternative 2, the Revised Project would have no need for a deviation from regulatory requirements and associated stormwater controls.

As discussed below under the Utilities and Service Systems heading, the Revised Project, like Alternative 2, would require similar water quantities to irrigate the 18-hole golf course and other recreational amenities; however, this increase in water demand is not expected to interfere with groundwater recharge or substantially decrease groundwater supplies based on the findings in the WSA for the Revised Project, which determined that there are adequate water supplies available for the Revised Project and all other existing and planned future growth. Refer to Appendix D for a copy of the WSA for the Revised Project. Therefore, the Revised Project would not have a significant effect on water supplies or groundwater management efforts. With compliance with regulatory program requirements designed specifically to prevent hydrologic, stormwater and surface water impairments, the impacts resulting from the Revised Project would be the same as Alternative 2 and would be less than significant.

Land Use and Planning

Preferred Alternative

The project site is currently located within the Andalusia at Coral Mountain Specific Plan (SP 03-067) area. Under SP-03-067, the land use designations for the property includes Low Density Residential, Open Space Recreational, and General Commercial land uses, and the zoning designations for the project include Low Density Residential (RL), Golf Course (GC), and Neighborhood Commercial (CN). The Preferred Alternative proposed changes to the General Plan and Zoning Map consisting of General Commercial, Low Density Residential, Open Space – Recreation, and Tourist Commercial land use designations, and Neighborhood Commercial, Low Density Residential, Parks and Recreation, and Tourist Commercial zoning designations.

The DEIR analyzed the Preferred Alternative's consistency with the various chapters within the La Quinta General Plan, Zoning Code, and the surrounding area. Based on the consistency analysis provided in the DEIR, it was determined that the Preferred Alternative would be consistent with the goals and polices within the General Plan, and that the Specific Plan proposed for the Preferred Alternative would result in changes in development standards, however, those changes would not be substantial. Therefore, impacts to land use and planning were determined to be less than significant.

Alternative 2

Alternative 2 would implement the land uses currently allowed under SP 03-067, would not require a General Plan Amendment or Zone Change, and would not result in impacts to land use or planning since the site is currently designated for residential, commercial, and golf uses. Therefore, under Alternative 2, there would be no changes in existing land use conditions, or conflicts with any land

use plan, policy, or regulation. Alternative 2 was determined to have reduced land use and planning impacts as compared to the Preferred Alternative.

Revised Project

Similar to Alternative 2, the Revised Project would implement the same residential, commercial and golf course land uses allowed under SP-03-067. Although the Revised Project includes minor adjustments to the General Plan land use and zoning maps to coincide with the revised configuration of the residential and golf course layout, these minor map amendments will not amend the land use and zoning designations for the property or introduce any new allowed land uses. Additionally, since the site is currently designated for the same residential, commercial, and golf uses and the Revised Project is not proposing any increases in the densities or intensities of development, it is considered consistent with the existing land use designations and would not result in conflicts with any land use plan, policy, or regulation.

As compared to the Preferred Alternative, both the Revised Project and Alternative 2 would have reduced land use and planning related impacts because neither substantially amends the General Plan or zoning to allow Tourist Commercial uses, or modifies the Land Use and Zoning Maps to accommodate a substantially different land use pattern. Impacts associated with land use and planning for the Revised Project is considered to be substantially the same as with Alternative 2, and would be less than significant.

Noise

Preferred Alternative

The DEIR determined that the Preferred Alternative would result in noise during short-term construction activities, and long-term operational activities.

Construction

Based on the stages of construction, the noise impacts associated with the Preferred Alternative were expected to create temporarily high noise levels at the nearby receiver locations and onsite locations. However, the DEIR determined that construction noise would not exceed the 85 dBA threshold established by NIOSH (see Table 4.11-15 in DEIR). Therefore, with compliance with the City of La Quinta's established hours of construction set forth in Municipal Code, Section 6.08.050, construction noise impacts would be less than significant.

Although the impacts were determined to be less than significant, to lessen construction noise, the Preferred Alternative would be required to implement Mitigation Mesasures NOI-1 through NOI-4. These mitigation measures require: the project's compliance with the City's Municipal Code requirements regarding construction activities; construction contractors to equip all construction equipment (fixed or mobile) with properly operating and maintained mufflers, consistent with industry standards; equipment staging areas to be located in areas that will create the greatest

distance between construction-related noise sources and noise-sensitive receivers; and contractors to design delivery routes to minimize exposure of sensitive land uses to delivery truck-related noise. These mitigation measures are reproduced below:

NOI-1: Prior to approval of grading plans and/or issuance of building permits, plans shall include a note indicating that project construction activities shall comply with the City of La Quinta Municipal Code requirements.

NOI-2: During all project site construction, the construction contractors shall equip all construction equipment, fixed or mobile, with property operating and maintained mufflers, consistent with manufacturers' standards. The construction contractor shall place all stationary construction equipment so that emitted noise is directed away from the noise sensitive receptors nearest the project site.

NOI-3: The construction contractor shall locate equipment staging in areas that will create the greatest distance between construction-related noise sources and noise-sensitive receivers nearest the project site during all project construction (i.e., to the center).

NOI-4: The contractor shall design delivery routes to minimize the exposure of sensitive land uses or residential dwellings to delivery truck-related noise.

The DEIR also analyzed the Preferred Alternative-related vibration during construction. The DEIR determined that vibrational impacts to the closest sensitive receiver to the project would be less than significant because the worst-case construction vibration levels would not exceed the threshold of significance, as shown in Table 4.11-27 of the DEIR. Additionally, onsite construction was not anticipated to significantly impact onsite residents and residential structures since building standards for seismic activity in the area exceed impacts created by vibration of construction activity. Therefore, impacts of construction-related vibration would be less than significant.

Operation

The analysis of the Preferred Alternative operation in the DEIR concluded that exterior noise levels perceived from the proposed low density residential homes, and the operation of the Wave Basin would experience exterior noise levels exceeding the City's 65 dBA CNEL exterior noise level standards. Thus, Mitigation Measure NOI-5 requires a minimum block wall of 6 feet in height to be developed along the northern and eastern project boundaries to provide an effective noise barrier, as follows:

NOI-5: A six-foot perimeter wall will be developed along the northern and eastern property boundaries, adjacent to the proposed Low Density Residential Planning Area (PA II), in order to protect the proposed onsite residential uses from off-site traffic noise. The barriers shall provide a weight of at least four pounds per square foot of face area with no decorative cutouts or line-of-sight openings between shielded areas and the roadways. The barrier must

present a solid face from top to bottom. Unnecessary openings or decorative cutouts shall not be made. All gaps (except for weep holes) should be filled with grout or caulking.

The DEIR's analysis of the operation of the Preferred Alternative evaluated the operational noise impacts of the Wave Basin/wave machine activity, outdoor pool/spa activity, outdoor activity, and neighborhood commercial land use activity. These noise level impacts would likely vary throughout the day and will be limited to the daytime and evening hours of 7 a.m. and 10 p.m., established in the DEIR as Mitigation Measure NOI-6, and compliant with the recreational operational hours established by the City of La Quinta:

NOI-6: The operation of the Wave Basin and associated Wave machines shall be limited to the daytime and evening hours of 7:00 a.m. and 10:00 p.m., compliant with the recreational operational hours allowed by the City of La Quinta.

Overall, the DEIR determined that operational noise would be less than significant with implementation of Mitigation Measures NOI-5 and NOI-6.

Alternative 2

The Alternatives analysis in the DEIR determined that Alternative 2 would result in an increase of construction- and operations-related noise onsite and in the surrounding area as compared to existing conditions.

Construction

Alternative 2 would result in similar levels of development as the Preferred Alternative, therefore, impacts would be less than significant. However, similar to the Preferred Alternative, Alternative 2 would be required to implement Mitigation Measures NOI-1 through NOI-4 (outlined above) to lessen construction noise.

Similar to the Preferred Alternative, Alternative 2 would result in periodic vibration from the use of heavy equipment during construction. However, these impacts are considered less than significant because vibrational impacts to the closest sensitive receiver to the project do not exceed the threshold of significance under the Preferred Alternative, as shown in Table 4.11-27 of the DEIR, and Alternative 2 will involve very similar construction equipment. Additionally, onsite construction is not anticipated to significantly impact onsite residents and residential structures since building standards for seismic activity in the area exceed impacts created by vibration of construction activity.

Operation

The DEIR concluded that operational noise impacts from Alternative 2 would be less than significant since it proposes uses similar to those in the surrounding area, which consist of residential and golf communities. Alternative 2 would not include the operation of a hotel, resort commercial, or Wave Basin. Because these uses would not be present onsite noise levels would be lower under Alternative 2. Additionally, the operation of Alternative 2 could include special events held on the golf course,

but these events are not expected to cause significant noise impacts due to the limited nature of the events and the distance from any off-site sensitive receptors. Under Alternative 2, Mitigation Measure NOI-6 would not be required.

Alternative 2 would result in a higher number of vehicle trips on City roadways than the Preferred Alternative, which would marginally increase the levels of noise on these roadways. However, given the capacity and the dispersed nature of the trips, noise levels from these trips would not increase ambient noise levels significantly, and impacts would not be significant. The DEIR concluded that Alternative 2 would result in reduced operational noise impacts as compared to the Preferred Alternative, and neither would result in significant and unavoidable operational noise impacts.

Revised Project

The Revised Project would result in the development and operation of the site with same uses and densities/intensities as Alternative 2, and therefore, would result in a comparable increase in the noise environment at the project site.

Construction

Construction of the Revised Project would increase the ambient noise level at and surrounding the site in substantially the same manner as under Alternative 2, since the entire site would be developed. As with Alternative 2, construction activities would be limited to daytime hours by Section 6.08.050 of the La Quinta Municipal Code. Construction would not occur outside of these hours. The impacts of construction noise, as was determined in the DEIR, would be less than significant, however, the implementation of Mitigation Measures NOI-1 through NOI-4 would further lessen such construction noise. The same mitigation measures as those proposed in the DEIR for the Preferred Alternative would be implemented for either Alternative 2 or the Revised Project.

With implementation of these mitigation measures implementation of any Alternative would result in less than significant noise impacts during construction at the site.

Similar to the Preferred Alternative and Alternative 2, development of the Revised Project would result in periodic vibration during the use of heavy equipment during construction. However, these impacts are considered to be less than significant because the worst-case construction-related vibration levels do not exceed the threshold of significance under the Preferred Alternative, as shown in Table 4.11-27 of the DEIR, and the Revised Project will involve very similar construction equipment. Additionally, onsite construction is not anticipated to significantly impact onsite residents and residential structures since building standards for seismic activity in the area exceed impacts created by vibration of construction activity.

Operation

Operational noise from the Revised Project would be the same as Alternative 2 and would not be considered significant since the proposed low-density residential, neighborhood commercial and golf

uses are similar to those in the surrounding area, which consist of residential and golf communities, and would not involve operation of the Wave Basin, hotel or other tourist/commercial uses.

Similar to Alternative 2, the operation of the Revised Project could include special events on the golf course typical of private country clubs, but these events are not expected to cause significant noise impacts, because they would be restricted to allowable hours established by the City of La Quinta. Under the Revised Project, Mitigation Measure NOI-6 would not be required.

Overall, the noise generated by the Revised Project and Alternative 2 would be substantially the same and would be less than significant.

As compared to the Preferred Alternative, the Revised Project would have reduced operational noise levels due to the removal of the Wave Basin and other resort uses. Although the Revised Project could generate slightly greater roadway noise due to the increase in overall daily trips, these noise levels would be less than significant, like Alternative 2, because of the existing capacity of the roadways and the dispersed nature of the trips. The Revised Project would result in reduced on-site noise levels as compared to the Preferred Project, and impacts would be less than significant.

Public Services

Preferred Alternative

The Preferred Alternative would result in less than significant impacts to fire, and police services with the payment of Development Impact Fees (DIF) in place at the time of construction, which is adequate to mitigate any significant impacts from new development. Additionally, the Preferred Alternative would be required to implement all applicable fire safety requirements, to include installation of fire hydrants, and sprinkler systems.

The Preferred Alternative would also be required to pay developer fees to the Coachella Valley Unified School District (CVUSD) and a Park and Recreation Fee. The Preferred Alternative would not directly or indirectly induce substantial growth. As such, the Preferred Alternative would not result in any substantial adverse physical impacts to existing schools, parks, or other public facilities. Additionally, the Preferred Alternative would not generate an increase in demand that would warrant the expansion or construction of new public facilities. Impacts would be less than significant.

Alternative 2

Alternative 2 would introduce residents and uses that would increase demand on the City of La Quinta's public services. There would be an increased demand for police, fire, and emergency services, as well as schools, public facilities, and parks as a result of the development of the proposed 750 low density residential units. However, Alternative 2 would be required to comply with applicable laws and codes imposed by the City and Riverside County Fire Department, and would pay applicable Development Impact Fees. As a result, the DEIR determined that impacts would be less than significant.

Revised Project

The Revised Project would introduce residents and uses that would increase demand on the City of La Quinta's public services consistent with Alternative 2. There would be an increased demand for police, fire, and emergency services, as well as schools, public facilities, and parks as a result of the development of up to 750 residential units. However, the Revised Project would be required to comply with applicable laws and codes imposed by the City and Riverside County Fire Department and pay applicable Development Impact Fees. These requirements and fees are designed to offset the demands of new development, apply to all new development, and would apply to the Revised Project just as they would to Alternative 2. As with Alternative 2, impacts will be less than significant.

As compared with the Preferred Alternative, the Revised Project would result in similar impacts to public services because the Revised Project would develop the 384.5-acre site and be required to pay Development Impact Fees (DIF) to support fire and police infrastructure, a developer fee to CVUSD to support construction and reconstruction of schools, and a Parks and Recreation fee to support parks within La Quinta. These impacts, however, would be less than significant under either Alternative.

Transportation

Preferred Alternative

The DEIR determined that the Preferred Alternative would result in a total of 10 impacted intersections under build out (Phase 3) conditions.

For the intersection of Madison Street at Avenue 58, addition of project traffic would require the installation of the traffic signal, and therefore, the required signal would be installed by the project as a condition of approval. The project would then be reimbursed all costs beyond the fair share calculation for this improvement. In addition, the Preferred Alternative would also be responsible for the installation of the main access traffic signal at Madison Street, improvements to adjacent roadways, and fair share contributions to offsite improvements pursuant to the transportation component of the City's DIF. Additionally, the project would participate in the Traffic Uniform Mitigation Fee (TUMF) program prior to issuance of building permits.

For the remaining deficient study intersections, improvements were determined to be needed under both with or without project conditions. The Preferred Alternative was required to contribute to these CIP-programmed improvements on a fair share basis, as shown in Table 1.13-29 of the DEIR**,** through payment of the City's Development Impact Fees (DIF)**.**

With the implementation of the Mitigation Measures described in the DEIR, and the imposition of conditions of approval, impacts associated with compliance with the General Plan transportation policies would be reduced to less than significant levels. These mitigation measures are:

TRA-1 The project proponent shall contribute DIF as required by the City of La Quinta.

TRA-2 The project proponent shall contribute TUMF traffic impact mitigation fees prior to the issuance of Building Permits.

TRA-3 The project proponent shall ensure that streetscape improvement plans for the project frontage on Avenue 58, Madison Street and Avenue 60, are submitted to the City for review and approval prior to the initiation of landscape or roadway improvements.

TRA-4 The project proponent shall ensure that clear unobstructed sight distances are provided at all site access points and internal intersections. Sight distances shall be reviewed and approved by the City prior to approval of landscape and street improvement plans.

TRA-5 The project proponent shall ensure that final layout and site access design are subject to the review and approval of the City Traffic Engineer prior to final project approval.

TRA-6 The project proponent shall ensure that emergency police, fire and paramedic vehicle access are provided for the project prior to final project approval.

TRA-7 The project proponent shall ensure that traffic signing and striping plans shall be developed in conjunction with street improvement plans and submitted to the City of La Quinta for review and approval during the project approval process.

TRA-8 The project proponent shall ensure that Construction Traffic Control Plans are reviewed and approved by the City prior to project construction. These plans are to be implemented during construction activities. Construction includes onsite and offsite improvements.

TRA-9 If Special Events are to take place prior to the completion of Phase 3 construction, Phase 3 typical operations traffic improvements will be completed or the applicant shall provide a focused traffic analysis with the Temporary Use Permit that identifies any improvements that are not necessary to maintain acceptable levels of service at study intersections. If the analysis does not demonstrate acceptable operations, the TUP will be denied.

TRA-10 If Special Events are to take place prior to the construction of Phase 3, a special event traffic and parking plan will be submitted with each Temporary Use Permit to ensure that special events will not cause any significant traffic or parking impacts. If the analysis does not demonstrate acceptable operations, the TUP will be denied.

TRA-11 Traffic Management Plans will be submitted to the City and the Police Department for review and approval prior to special events. Timing for installation of traffic management measures will be scaled to the size and duration of the event. In general, signage for large events should be in place five days prior and two days following special events. The City and Police Department may impose additional measures if determined to be necessary. Individual management plans for specific special events shall be submitted at least 30 days prior to the start of the event. The special event Traffic Management Plans shall include the measures identified in Mitigation Measures TRA-12 through TRA-14 below.

TRA-12 In developing the Special Event Traffic Management Plan, the project proponent shall include the use of Portable changeable message signs (CMS) or moveable mechanical electronic message boards. CMS will be located at critical locations identified by the La Quinta Police Department (LQPD) and in place 5 days ahead of the event and 2 days after.

TRA-13 In developing the Special Event Traffic Management Plan the project proponent shall include the use of law enforcement personnel and/or special event flaggers to direct traffic in locations reviewed and approved by the City and Police Department.

TRA-14 In developing the Special Event Traffic Management Plan the project proponent shall include the use of public service announcements (PSA) to provide information to event guests and surrounding neighborhoods prior to the event. Examples include online event information, brochures and changeable message signs that include details such as suggested routes, drop-off and parking facility locations.

TRA-15 The project proponent shall ensure that the proposed Coral Mountain Interpretive Center trail designated by the Desert Recreation District Master Plan and associated with the future Coral Mountain Interpretive Center is incorporated into project plans. Accommodations for this trail shall be located along the approximate toe of Coral Mountain, within the designated conservation area at the southwestern edge of the property.

Likewise, build out of the Preferred Alternative, in conjunction with General Plan (2040) cumulative build out conditions would result in potential impacts, without improvements. However, with the implementation of project and CIP-programmed improvements, cumulative transportation impacts would be reduced to less than significant levels.

Project VMT was determined in the DEIR to be potentially significant, but would be reduced by PDFs, which are enforceable by the City pursuant to the terms of the Development Agreement, and would be anticipated to collectively reduce project home-based VMT by approximately 6% (from 11.64 VMT/resident to 10.94 VMT/resident). With this reduction, the home-based VMT was determined to be less than the City's VMT residential threshold of 12.98 VMT/resident. In addition, implementation of the project was anticipated to result in a reduction in Citywide VMT for service population and would not increase VMT at the regional level. Accordingly, the DEIR found that the Preferred Alternative's VMT impacts were less than significant.

To ensure special events at the Wave Basin would not result in any significant hazards due to geometric design features or incompatible uses, a queuing analysis was performed for the Preferred Alternative to assess the adequacy of turn bay lengths to accommodate vehicle queues at the project entries. The results are found in Table 4.13-28b of the DEIR. Turn bays on surrounding streets were anticipated to accommodate the estimated 95th Percentile queue length during Weekend Special Events. Accordingly, impacts for the Preferred Alternative were determined to be less than significant,

following implementation of mitigation measures TRA-5 through TRA-7, as well as the review and approval process at the City of La Quinta.

In addition, prior to construction, both the Fire Department and Police Department would review the project site plan, and individual sub-area plans as they are brought forward, to ensure safety measures are addressed, including emergency access, consistent with Fire Department and Police Department standards. The Preferred Alternative was determined to have less than significant impacts concerning emergency access.

Alternative 2

Alternative 2 would have the same short-term construction-related traffic impacts as the Preferred Alternative because the same project site would be developed over a comparable period of time. As with the Preferred Alternative, such impacts would be less than significant because a traffic control plan would be required throughout all construction activities.

Alternative 2 was determined in the DEIR to result in an approximately 13% increase in total daily vehicle trips as compared with the Preferred Alternatives, as well as increases in AM and PM peak hours, as shown in Table 7-2 of the DEIR. As a result, the DEIR concluded that Alternative 2 could potentially result in increased impacts at intersections and necessitate additional improvements at area intersections to mitigate these impacts. These impacts are addressed in TRA-1 and TRA-2, which call for the payment of DIF and TUMF to fund the project's fair share of the necessary area roadway improvements.

As is the case with the Preferred Alternative, however, mitigation through the payment of DIF fees and fair share contributions to planned improvements would be expected to reduce impacts to less than significant levels. Mitigation Measures TRA-9 through TRA-14 do not apply to Alternative 2 as they specifically addressed the special events of the Preferred Alternative.

TRA-15 ensure that the proposed Coral Mountain Interpretive Center trail designated by the Desert Recreation District Master Plan (DRDMP) and associated with the future Coral Mountain Interpretive Center is incorporated into project plans. This mitigates potential impacts to area trails. Both the Preferred Alternative and Alternative 2 would be required to implement this mitigation. Impacts to area trail plans and the DRDMP will be less than significant.

Alternative 2 was also anticipated to have a higher daily VMT and per capita VMT because it would generate more daily trips and lacked the Preferred Alternative's complementary mix of uses on-site and enhanced connectivity between those uses. Alternative 2 was expected to generate 13% more trips compared to the Preferred Alternative. This would result in an overall higher VMT for Alternative 2. Impacts associated with VMT were anticipated to be significant and unavoidable.

Overall, Alternative 2 would generate more daily trips on area roadways, resulting in increased VMT impacts and potentially greater LOS impacts, compared to the proposed project.

TRA-3 through TRA-7 provide mitigation that addresses appropriate project roadway, adjacent roadway, and access point design, including approved unobstructed sight distances, adequate emergency access, and approved signing and striping plans. These Mitigation Measures would be applied to both Alternative 2 and the Revised Project. Following implementation, impacts will be less than significant.

Revised Project

The Revised Project and Alternative 2 would have substantially the same construction and operational impacts regarding transportation because they both involve construction of the same mix of uses on the same project site at the same density and intensity of development.

Short-term construction vehicle trip impacts would result from the development of the residential homes, neighborhood commercial center and golf course. However, these impacts would be limited to permitted construction activity hours per the La Quinta Municipal Code and a Traffic Control Plan would be required as a condition of approval to be implemented throughout all construction activities. Compliance with regulatory requirements would ensure that the Revised Project would not have any significant transportation impacts during construction, similar to both the Preferred Alternative and Alternative 2.

As was proposed for the Preferred Alternative and Alternative 2, primary access to the site will occur at Madison Street, with secondary access from Avenues 58 and 60. These roadways will provide adequate public and emergency access into and out of the project for residents, golf club members, as well as employees, vendors, service providers and public safety equipment and personnel.

The Revised Project would have the same operational impacts as Alternative 2 because it would develop the same uses on the same property with the same density and intensity of development. A Supplemental LOS Assessment, which included an update to the trip generation and distribution anticipated for the Revised Project has been completed (see Appendix B). This analysis is based on recent updates to the ITE trip generation tables which occurred with publication of the 11th Edition of the ITE Manual in 2021 (the 10th Edition of the Manual was in effect at the time the DEIR was prepared). As a result of this update, an increase in the total peak hour and daily trips shown in the DEIR for Alternative 2 is forecast, as shown in Table 15 below. It is important to note that should Alternative 2 be studied today, it would show the same increase of 839 trips as the Revised Project because the project components are the same. Notably, Table 15 shows that the increase from the ITE update occurs primarily in the daily trip totals and has little effect on peak hour totals.

Table 15 Revised Project and Alternative 2 Trip Generation Comparison

Land Use	AM Peak Hour			PM Peak Hour			Daily
	In	Out	Total	In	Out	Total	
Trip Generation Comparison							
Revised Project							
-750 DU SFDR, 60 TSF Retail, 18 Hole Golf Course (ITE 11th Edition)	189	402	591	505	329	834	8,762
Alternative 2							
-750 DU SFDR, 60 TSF Retail, 18 Hole Golf Course (ITE 10th Edition)	175	414	589	505	324	829	7,923
Alternative 2 Delta (Revised Project – Alt 2)	**14**	**-12**	**2**	**0**	**5**	**5**	**839**

Source: ITE Trip Generation 10th Edition and ITE Trip Generation 11th Edition.

Table 16 illustrates that the Revised Project would have a higher trip generation than the Preferred Alternative. The increase would amount to 1,768 ADT. Comparatively, if the Preferred Alternative was analyzed today, the numbers would also increase due to revisions in ITE modelling standards.

Table 16 Revised Project and Coral Mountain Trip Generation Comparison

Land Use	AM Peak Hour			PM Peak Hour			Daily
	In	Out	Total	In	Out	Total	
Trip Generation Comparison							
Revised Project							
-750 DU SFDR, 60 TSF Retail, 18 Hole Golf Course (ITE 11th Edition)	189	402	591	505	329	834	8,762
Preferred Alternative							
-750 DU Res, 60 TSF Retail, 150 RM Hotel, 12 AC Wave Basin, 15 TSF Village, 16 TSF Farm (ITE 10th Edition)	143	304	447	383	255	638	6,994
Delta (Revised Project – Coral Mountain Resort)	**46**	**98**	**144**	**122**	**74**	**196**	**1,768**

Source: ITE Trip Generation 10th Edition and ITE Trip Generation 11th Edition

Operation of the Revised Project is shown to have an approximately 11 percent increase in total daily trips as compared to Alternative 2, but this increase is solely due to the revisions to the ITE modelling standards that were refined between 2020 (10th Edition) and 2023 (11th Edition). However, the increase in peak hour totals, which is what drives level of service and intersection/roadway impacts increase by less than 1%.

The Supplemental LOS Assessment also analyzed whether the Revised Project would have any new or substantially more severe effects on area roadways and intersections. Ten existing intersections will fall below acceptable LOS levels with implementation of the Revised Project. These are the same existing intersections that would fall below acceptable LOS levels under the Preferred Alternative. The same improvements to these intersections (as well as a traffic signal at the main project entrance and Madison Street) are required to maintain acceptable levels of service for both the Revised Project, Alternative 2 and the Preferred Alternative.

Impacts associated with study roadway segments were slightly higher for the Revised Project when compared with the Preferred Alternative, however the proposed roadway improvements were

identical, including additional access and turning lanes. With roadway improvements, impacts will be less than significant.

Table 17 compares the calculated delay and LOS for the Revised Project with the Preferred Alternative. Impacts associated with the Revised Project would increase slightly at most intersections with some intersections showing reductions in impacts, including the #19 Project Main Access/Madison Street AM Peak Hour. With the same intersection improvements identified in the DEIR, the Revised Project would not result in a significant impact to any intersections.

Table 17 Intersection Comparison of Preferred Alternative and Revised Project (2026)

#	Intersection	Traffic Control[3]	Preferred Alternative				Revised Project			
			Delay (Secs)[2]		Level of Service[2]		Delay (Secs)[2]		Level of Service[2]	
			AM	PM	AM	PM	AM	PM	AM	PM
1	Madison St/Avenue 58									
	-Without Improvements	AWS	41.6	**37.8**	**E**	**E**	19.9	>80	C	F
	-With Improvements	**TS**	29.9	30.9	C	C	27.0	32.1	C	C
2	Madison St/Airport Blvd.	TS	10.5	10.8	B	B	9.5	10.7	A	B
3	Madison St./ Avenue 54									
	-Without Improvements	AWS	**45.9**	**39.3**	**E**	**E**	>80	>80	F	F
	-With Improvements	**TS**	42.6	41.4	D	D	42.3	52.8	D	D
4	Madison St./ Avenue 52	TS	32.3	32.0	C	C	32.4	33.4	C	C
5	Madison St./ Avenue 50	TS	32.5	32.5	C	C	32.3	33.7	C	C
6	Jefferson St./ Avenue 54									
	-Without Improvements	AWS	**>80**	**>80**	**F**	**F**	57.6	>80	F	F
	-With Improvements	**TS**	21.9	21.8	C	C	22.6	22.7	C	C
7	Jefferson St./ Avenue 52									
	-Without Improvements	RDB	**>80**	**>80**	**F**	**F**	>80	>80	F	F
	-With Improvements	RDB	13.5	13.4	B	B	17.5	34.8	C	D
8	Jefferson St./ Pomelo	TS	29.0	28.9	C	C	19.5	35.9	B	D
9	Jefferson St./ Avenue 50									
	-Without Improvements	TS	48.1	48.1	D	**D**	53.2	60.3	D	E
	-With Improvements	TS	47.3	47.3	D	D	52.0	51.7	D	D
10	Madison St./ Avenue 60	AWS	12.7	13.9	B	B	10.5	15.4	B	C
11	Monroe St./Avenue 60									
	-Without Improvements	AWS	**47.0**	**45.2**	**E**	**E**	32.7	>80	D	F
	-With Improvements	**TS**	35.3	35.4	D	D	34.8	38.3	C	D
12	Monroe St./Avenue 58									
	-Without Improvements	AWS	**>80**	**>80**	**F**	**F**	>80	>80	F	F
	-With Improvements	**TS**	30.2	30.4	C	C	26.6	41.1	C	D
13	Monroe St./Airport Blvd									
	-Without Improvements	AWS	**66.3**	**66.4**	**F**	**F**	>80	>80	F	F
	-With Improvements	**TS**	22.9	22.8	C	C	24.5	26.3	C	C
14	Monroe St./ Avenue 54									
	-Without Improvements	AWS	**>80**	**>80**	**F**	**F**	>80	>80	F	F
	-With Improvements	**TS**	32.6	32.6	C	C	35.2	38.0	D	D
15	Monroe St./ Avenue 52									
	-Without Improvements	AWS	**>80**	**>80**	**F**	**F**	>80	>80	F	F
	-With Improvements	**TS**	34.3	34.3	C	C	34.2	45.3	C	D
16	Monroe St./ 50th Avenue	TS	20.7	20.7	C	C	17.9	26.0	B	C
17	Jackson St./ 58th Avenue	AWS	14.6	14.6	B	B	10.1	23.4	B	C
18	S. Access/ Avenue 60	**CSS**	8.9	8.9	A	A	9.0	9.1	A	A
19	Madison St/Main Access	**CSS**	30.9	32.2	D	D	13.2	12.3	B	B
20	Project Access 1/Ave. 58	**CSS**	12.6	12.1	B	B	10.1	11.1	B	B
21	Project Access 2/Ave. 58	**CSS**	9.9	10.3	A	B	9.4	10.0	A	A
22	Madison St /Project Access 3	**CSS**	11.0	11.1	B	B	9.7	11.8	A	B
23	Madison St/Golf Course S. Access	-	-	-	-	-	10.3	11.3	B	B

The applicable Mitigation Measures for both Alternative 2 and the Revised Project are Mitigation Measures TRA-1 through TRA-8 and TRA-15. Following implementation of these Mitigation Measures, regulatory requirements, and conditions of approval, impacts are anticipated to be less than

significant. The following improvements are necessary with the Preferred Alternative, Alternative 2 and the Revised Project.

Full Improvements:

- Madison Street at Project Main Access entrance

Traffic Signals:

- Madison Street at Avenue 58
- Madison Street at Project Main Access
- Madison Street at Avenue 54
- Jefferson Street at Avenue 54
- Monroe Street at Avenue 60
- Monroe Street at Avenue 58
- Monroe Street at Airport Boulevard
- Monroe Street at Avenue 54
- Monroe Street at Avenue 52

Lane Improvements:

- Jefferson Street at Avenue 50 • Project South Access at Avenue 60 • Project Access 1 at Avenue 58 • Project Access 2 at Avenue 58 • Madison Street at Project Access 3

Roundabout:

- Jefferson Street at Avenue 52 – (reconstruction of the current roundabout design)

As described in the DEIR, these improvements would be required under all Alternatives, and the appropriate fair share contribution towards these improvements would be calculated based on trip generation impacts to study intersections as illustrated in Table 18**.**

Finally, the Supplemental LOS Assessment identifies the Revised Project's fair share contribution to the need for future intersection improvements throughout the project study area, which are very similar to the Preferred Alternative, with slight increases at most intersections due to the slightly increased peak hour trip generation rate of the Revised Project. The Revised Project will be required to provide fair share mitigation payments toward planned improvements at two additional intersections (#16 and #17). The Revised Project would also construct an additional access point at #23 Madison Street and Golf Course South Access.

Table 18 Project Fair Share Contributions Comparison (2026)

Intersection #	Intersection	Preferred Alternative	Revised Project
1	Madison Street/Avenue 58	23%	29%
3	Madison Street/Avenue 54	9%	11%
6	Jefferson Street/Avenue 54	4%	5%
7	Jefferson Street/Avenue 52	2%	3%
9	Jefferson Street/Avenue 50	2%	3%
11	Monroe Street/Avenue 60	6%	8%
12	Monroe Street/Avenue 58	11%	14%
13	Monroe Street/Airport Blvd	6%	8%
14	Monroe Street/Avenue 54	5%	6%
15	Monroe Street/Avenue 52	4%	5%
16	Monroe Street/50th Avenue	-	4%
17	Jackson Street/58th Avenue	-	12%

Based on the foregoing comparison, the Revised Project will not have any new or substantially more severe effects on intersections and roadways than the Preferred Alternative project, and such impacts associated with compliance with General Plan transportation policies, would be less than significant following the implementation of Mitigation Measures, regulatory requirements and conditions of approval.

The Revised Project is anticipated to have slightly higher daily VMT and per capita VMT than Alternative 2 analyzed in the DEIR, due solely to the increased trip generation rates adopted by ITE with its most recent update. It is noted that if Alternative 2 were analyzed today the trip generation data would be identical to the Revised Project because the model inputs (number of homes, square footage of commercial, etc.) would be identical. A Supplemental VMT Assessment was prepared for the Revised Project, which is attached as Appendix C. As compared with the Preferred Alternative, the Revised Project would have slightly higher daily and per capita VMT because the mix of uses in the Revised Project (and Alternative 2) generate more daily trips. As shown in Table 19, residential home-based VMT would be 13.14 per resident which very slightly exceeds the Citywide home-based VMT of 12.98 per resident which is shown in Table 21. Also as shown in Table 19, the Preferred Alternative would result in a home-based VMT of 11.64, which is slightly below the Citywide home-based VMT, with implementation of on-site Project Design Features that would increase trip capture in the Preferred Alternative.

Table 19 Preferred Alternative Baseline and Cumulative Project Residential Home-Based VMT

Category	Project 2012	Project 2040	Project 2020 (interpolated)
Residents	1,698	1,698	1,698
VMT	19,437	20,642	19,773
VMT / Resident	11.45	12.14	11.64

Table 20 Revised Project Baseline and Cumulative Project Residential Home-Based VMT

Category	Project 2012	Project 2040	Project 2020 (interpolated)
Residents	1,875	1,875	1,875
VMT	23,993	26,232	24,632
VMT / Resident	12.80	13.99	13.14

Table 21 Base Year Citywide Home-Based VMT

Category	City of La Quinta
VMT	544,993
Population	42,000
VMT / Resident	12.98

The non-residential VMT also increases slightly with the Revised Project over the previously proposed project. As shown in Table 22, the sub-regional link-level VMT per service population with the Revised Project would be 21.57, as compared to 21.53 VMT per service population attributed to the Preferred Alternative.

Table 22 Preferred Alternative and Revised Project Base Year Sub-Regional Link-Level VMT

Category	Without Project Employment	Preferred Alternative With Project Employment	Revised Project With Project Employment
VMT Interacting with CVAG Area	15,173,739	15,166,580	15,179,349
CVAG Area Population	510,550	510,550	510,550
CVAG Area Employment	193,090	193,764	193,203
VMT / Service Population	21.56	21.53	21.57

This minor increase in VMT for the Revised Project is consistent with the analysis of Alternative 2 in the EIR, which concluded that Alternative 2 would have somewhat greater VMT impacts than the Preferred Alternative due to an increase in trip generation rates and a decrease in the rate of internal capture. As with the Preferred Alternative and Alternative 2, the Revised Project will include design elements that reduce VMT to the maximum extent feasible. Project design will establish residential neighborhoods that are linked through multi-use trails. Community amenities will include activity hubs for the project with open space and trail connections providing easy access to the amenities. The perimeter roadway frontages will provide access for pedestrians, cyclists, and equestrians through provision of a multi-use trail as a component of the public street system. The trail network along the primary entry road will connect to the community trail system.

The Revised Project shall ensure that the future trail for the Coral Mountain Interpretive Center is incorporated into project plans. Accommodations for this trail shall be located along the approximate

toe of Coral Mountain, within the designated conservation area at the southwestern edge of the property.

In addition, the proposed 60,000 SF of commercial uses at the corner of Avenue 58 and Madison Street would continue to result in a reduction in VMT by providing resident-serving commercial amenities in the immediate vicinity of project residents and the existing adjacent communities. VMT impacts associated with the Revised Project would however remain significant and unavoidable, as they would under Alternative 2.

A queuing analysis was performed for both the Preferred Alternative and for the Revised Project. Less than significant impacts were anticipated relative to hazards due to geometric design feature or incompatible uses for both Projects.

Similar to the Preferred Alternative and Alternative 2, the Revised Project is not anticipated to increase hazards due to geometric design feature or incompatible uses, following implementation of the mitigation measures, as well as the review and approval process at the City of La Quinta. Impacts were anticipated be less than significant.

Prior to construction, both the Fire Department and Police Department would review the project site plan, and individual sub-area plans as they are brought forward, to ensure safety measures are addressed, including emergency access, consistent with Fire Department and Police Department standards. Similar to the Preferred Alternative and Alternative 2, the Revised Project is not anticipated to result in inadequate emergency access. Therefore, impacts were determined to be less than significant relative to inadequate emergency access.

Cumulative Impacts

Similar to the Preferred Alternative, the Revised Project would be responsible for the Traffic Signal at #19 Madison Street and the Main access and improvements to adjacent roadways in the cumulative 2040 condition. Similar to the Preferred Alternative, the Revised Project would be responsible for fair share contributions to offsite improvements pursuant to the transportation component of the City's DIF. Additionally, the project will participate in the Traffic Uniform Mitigation Fee (TUMF) program prior to issuance of building permits.

Table 23 illustrates the 2040 fair share contribution for 17 area roadway improvements for both the Preferred Alternative and the Revised Project for the 2040 condition. These fair share percentages represent impacts based on 2040 project traffic volumes (GP buildout). The Revised Project will be responsible for slightly higher Fair Share Contributions for a majority of intersections.

Table 23 Project 2040 Fair Share Contributions

Intersection #	Intersection	Preferred Alternative	Revised Project
1	Madison Street/Avenue 58	10%	14%
3	Madison Street/Avenue 54	4%	5%
4	Madison Street/Avenue 52	2%	3%
5	Madison Street/Avenue 50	1%	2%
6	Jefferson Street/Avenue 54	2%	3%
7	Jefferson Street/Avenue 52	2%	2%
9	Jefferson Street/Avenue 50	2%	2%
10	Madison Street/Avenue 60	4%	6%
11	Monroe Street/Avenue 60	2%	4%
12	Monroe Street/Avenue 58	4%	6%
13	Monroe Street/Airport Blvd	2%	3%
14	Monroe Street/Avenue 54	2%	3%
15	Monroe Street/Avenue 52	2%	3%
16	Monroe Street/50th Avenue	1%	2%
17	Jackson Street/58th Avenue	2%	3%

Build out of both the Preferred Alternative and the Revised Project, in conjunction with General Plan (2040) build out conditions would result in potential impacts, without improvements. However, with the implementation of the Revised Project and CIP-programmed improvements, cumulative transportation impacts will be reduced to less than significant levels except for impacts associated with VMTs which would be significant and unavoidable. This is consistent with the DEIR determination that Alternative 2 would have less than significant LOS-related impacts with implementation of mitigation, but would have a significant and unavoidable VMT impact.

As indicated in the DEIR for Alternative 2, overall VMT impacts of the Revised Project are anticipated to be significant and unavoidable because even with incorporation of all feasible mitigation measures, the home-based VMT per capita and the VMT per service population slightly exceed the City's thresholds of significance. However, this impact is the same under both the Revised Project and Alternative 2, and therefore, the Revised Project would not have any new or substantially more severe impacts than analyzed in the DEIR.

Tribal Cultural Resources

Preferred Alternative

During tribal consultation, the Agua Caliente Band of Cahuilla Indians (ACBCI) indicated that the area is especially important, and the Tribal Historic Preservation Officer (THPO) requested that their importance be protected, and that the Coral Mountain Rock Art Complex be avoided and preserved, as required by Mitigation Measure TCR-5. Mitigation Measure TCR-6 requires surface collection and

subsurface excavation to recover a representative sample of the cultural materials prior to the commencement of the project.

The ACBCI determined that, based on their resource inventories, and the breadth and significance of resources identified in and surrounding the project, the area is considered significant to the Tribe, and further surface investigation, testing, and excavation, if necessary, is needed to assure that impacts to Tribal resources in the area are not significant. In order to ensure that the impact is reduced to less than significant levels, the following mitigation measures were included in the DEIR:

TCR-1: Before ground disturbing activities begin, the applicant shall contact the ACBCI Tribal Historic Preservation Office to arrange cultural monitoring. The project requires the presence of an approved Agua Caliente Native American Cultural Resource Monitor(s) during any ground disturbing activities (including archaeological testing and surveys). Should buried cultural deposits be encountered, the Monitor may request that destructive construction halt in the vicinity of the deposits, and the Monitor shall notify a Qualified Archaeologist (Secretary of the Interior's Standards and Guidelines), within 24 hours, to investigate and, if necessary, prepare a mitigation plan for submission to the State Historic Preservation Officer and the Agua Caliente Tribal Historic Preservation Office.

TCR-2: The presence of a qualified archaeologist shall be required during all project related ground disturbing activities, including clearing and grubbing. A monitoring plan shall be prepared and approved by the ACBCI and provided to the City prior to the initiation of any ground disturbing activity for all construction phases and activities. If potentially significant archaeological materials are discovered, all work must be halted in the vicinity of the archaeological discovery until the archaeologist can assess the significance of the find.

TCR-3: Before ground disturbing activities, the project's archaeologist shall prepare an Archaeological Treatment, Disposition, and Monitoring Plan to be submitted to the ACBCI Tribal Historic Preservation Office for approval. The Treatment, Disposition and Monitoring Plan shall be deemed rejected by ACBCI's Tribal Historic Preservation Office if no action to approve the plan is taken within 30 days from submission for approval. If the ACBCI Tribal Historic Preservation Office rejects two Treatment, Disposition and Monitoring Plans submitted for approval, the applicant may appeal the second denial to the La Quinta City Council for a final determination. The approved Treatment, Disposition and Monitoring Plan shall be provided to the City prior to any ground disturbance on the site.

TCR-4: Before ground disturbing activities**,** the project's archaeologist shall prepare a Rock Art Management Plan, based on recommendations made in the report by McCarthy and Mouriquand, and shall submit the plan to the ACBCI Tribal Historic Preservation Office for approval. The Rock Art Management Plan shall be deemed rejected by ACBCI's Tribal Historic Preservation Office if no action is taken to approve the plan within 30 days of submission for

approval. If the ACBCI Historic Preservation Office rejects two Rock Art Management Plans submitted for approval, the applicant may appeal the second denial to the La Quinta City Council for a final determination. The approved Rock Art Management Plan shall be provided to the City prior to any ground disturbance on the site.

TCR-5: Sites 33-00193, 33-001715, and 33-009545, along the base of Coral Mountain and at the toe of the slope, which contain the rock art panels and bedrock milling features, shall be avoided and protected in situ during project construction through the establishment of Environmentally Sensitive Areas; the Environmentally Sensitive Areas shall be recorded on the property, and proof of recordation shall be provided to the City prior to any ground disturbance in Planning Area III. Nominations of these sites to the National Register of Historic Places shall be filed with the appropriate federal agency prior to the issuance of the first grading permit; and the sites shall be subject to the provisions of the Rock Art Management Plan.

TCR-6: For the portion of Site 33-001715 outside the preservation area established in **TCR-5**, mitigative surface collection and subsurface excavation shall be completed prior to any ground disturbance in Planning Area III to recover a representative sample of the cultural materials prior to the commencement of the project and as a condition of grading permit issuance. The excavation shall include a combination of standard archaeological units, shovel test pits, and backhoe trenches to optimize both efficient coverage of the site area and safe recovery of cultural remains. The survey protocols shall be approved by ACBCI. A report of findings, including written confirmation of completion to ACBCI's satisfaction, shall be provided to the City prior to ground disturbance.

TCR-7: Prior to ground disturbance in Planning Area III, a qualified archaeologist shall complete surface collection, testing and excavation if necessary, for sites 33-1716, 33-1717, 33-8386, 33-9001, 33-9003, 33-28907, 33-28908, 33-28909, 33-28910, 33-28911, 33-28912. A report of findings, including written confirmation of completion to ACBCI's satisfaction, shall be provided to the City prior to ground disturbance.

TCR-8: A comprehensive recordation program shall be prepared by a qualified archaeologist for Site 33-008388. The program shall contain detailed drawings and measurements to preserve the information on the adobe building. Such information would include the floor plan, elevations, building materials and their configurations, and any other notable structural and architectural details. The adobe remains and an appropriate buffer determined by the project archaeologist shall be flagged and cornered off during all ground disturbance and preserved in place. Prior to the occupancy of any structure in Planning Area II, the adobe will be fenced off and an informational plaque describing the history of the ranch complex shall be provided, and the project proponent shall provide the City with the CC&Rs for the project area, demonstrating that the feature would be maintained in perpetuity by the project's Homeowners

Association. Special attention should be given to the residence foundation, which, may be the remains of one of the earlier structures at the site, dating from 1920s or before. The footings and slabs at this location should be cleared and measured, and attempts should be made to locate the original trash pits or privies which could contain valuable artifacts revealing much about life in the harsh environment at such an early date. The scatter of artifacts has the greatest number of pre-1925 artifacts, mostly in the form of sun-colored glass, but also in brown and olive glass, porcelain, ceramics and more. There may be remains of an early structure near this point, hidden amidst the broad stand of tamarisk trees, an original windbreak. Search of these remains is required to ensure the most complete recovery possible of the early 20th century artifacts and features. Photos, measurements, and artifacts shall be catalogued, analyzed, reported, and curated at the Coachella Valley Museum (Love et al.1998:54).

TCR-9: The applicant shall coordinate with ACBCI Tribal Historic Preservation Office to ensure there are a sufficient number of Native American monitors for the number of earth-moving machinery for each phase of development. The applicant shall provide the City with fully executed monitoring agreements prior to each phase of ground disturbing activity.

TCR-10: Should human remains be inadvertently discovered during ground disturbance, the provisions of California Health and Safety Code Section 7050.5, and the CEQA Guidelines Section 15064.5 shall be followed. In the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site of the remains, or any nearby area reasonably suspected to overlay adjacent remains, until the County Coroner has examined the remains. If the coroner determines the remains to be Native American or has reason to believe that they are those of Native American, the coroner shall contact the Native American Heritage Commission within 24-hours.

TCR-11: Prior to any ground disturbance, the applicant shall sign a curation agreement with the ACBCI THPO. A fully executed copy of the agreement shall be provided to the City.

TCR-12: Prior to any ground disturbance, cultural sensitivity training shall take place for all contractors with the staff at the Agua Caliente Tribal Historic Preservation Office (THPO).

Mitigation Measure TCR-7 requires a qualified archaeologist to complete surface collection, testing and excavation, if necessary, for the sites. A report of findings including written confirmation of completion to ACBCI's satisfaction, shall be provided to the City prior to ground disturbance. Since the project is located within the ACBCI's Tribal Traditional Use Area and the Tribe's records indicate that Tribal cultural resources are located within the project area, cultural monitoring is required as Mitigation Measure TCR-1. In addition, TCR-2 and TCR-9 require monitoring on the site for all earth moving activities by both archaeological and Tribal monitors. Mitigation Measures TCR-3 and TCR-4

require the preparation of an Archeological Treatment, Disposition, and Monitoring Plan and a Rock Art Management Plan prior to ground disturbing activities. TCR-5 through TCR-8 mitigates potential disturbance of the sites by implementing the preservation and testing of the site areas. Mitigation Measure TCR-10 implements State law relating to the protection of human remains from vandalism and inadvertent destruction. To further protect resources that may be uncovered during project development, Mitigation Measure TCR-11 and TCR-12 will require a curation agreement with the ACBCI and construction worker sensitivity training during all aspects and phases of project construction. With implementation of these mitigation measures, the Preferred Alternative was determined to have less than significant impacts on Tribal Cultural Resources.

Alternative 2

Alternative 2 was determined to have similar impacts to tribal cultural resources as the Preferred Alternative, since both alternatives would disturb the 384.5-acre site and be required to implement the same Mitigation Measures TCR-1 through TCR-12 to reduce impacts to less than significant levels by avoiding sensitive areas, testing surface and subsurface areas, monitoring during construction, preparing an Archeological Treatment, Deposition, and Monitoring Plan and Rock Art Management Plan, and coordinating with the ACBCI.

Revised Project

The Revised Project would result in substantially the same impacts to tribal cultural resources as Alternative 2 and the Preferred Alternative because they involve development of the same project site. The Revised Project would be required to implement the same mitigation measures identified in the DEIR, which would reduce impacts to less than significant levels.

With implementation of these mitigation measures, the Revised Project's impacts to Tribal Cultural Resources would be the same as for Alternative 2, and would be less than significant.

Utilities and Service Systems

Preferred Alternative

The DEIR determined that the Preferred Alternative would not require or result in the relocation or construction of new or expanded off-site wastewater treatment, storm water drainage systems, natural gas, or telecommunication facilities. However, the project would be required to construct an offsite pipeline in Avenue 60, in accordance with an existing agreement with Coachella Valley Water District (CVWD). The infrastructure and design components for the pipeline will be consistent with CVWD requirements and the Urban Water Management Plan (UWMP) and would occur along an existing right-of-way. Therefore, development of the pipeline would not result in significant impacts. In addition, the Preferred Alternative included installation of a new connection and upgrades to the existing IID substation facility at 81600 Avenue 58, which IID identified as necessary to provide

adequate electricity to the site. Impacts relating to these expansions to utility and service systems were determined in the DEIR to be less than significant.

Development of the project would result in an overall increase in water demand from the project site during operation. The project-specific Water Supply Assessment (WSA) analyzed the Preferred Alternative's water consumption and whether supply would be available to the Preferred Alternative. Based upon the analysis in the WSA, the estimated total domestic water demand for indoor and outdoor use is approximately 958.63 acre-feet per year (AFY), or 2.49 acre-feet per acre. This quantity is approximately 0.49-percent of the total project water to be supplied by the CVWD in 2040 (194,300 AFY). With almost 30 million AF of combined storage supplemented by groundwater management planning adopted in the 2015 UWMP and 2010 CVWMP Update, the aquifer was determined to have sufficient available water to supply the project and other present and anticipated needs for normal year, as well as one or more multiple dry years, over the next 20 years (see page 4.15-31 of the DEIR). This was based on the volume of water available in the aquifer, CVWD's Colorado River contract supply, SWP Table A amounts, water rights and water supply contracts, and CVWD's commitment to eliminate overdraft and reduce per capita water use in CVWD's service area. CVWD has committed sufficient resources to further implement the primary elements of the 2010 CVWMP Update and 2015 UWMP, which includes the full utilization of imported water supplies, purchase of additional water supplies, water conservation, and source substitution. Impacts to water supply were concluded to be less than significant.

The Preferred Alternative was proposing a new 15-inch and 12-inch sewer main that would collect flow from the development and convey it to an existing 15-inch gravity sewer main at Avenue 58 and 12-inch sewer main off of Madison Street. Flows would then be delivered to CVWD's Wastewater Reclamation Plant No.4 (WRP-4). WRP-4 has a plant capacity of 9.9 MGD and is located in Thermal. The annual average flow to this facility is approximately 4.75 MGD. The Preferred Alternative was estimated to generate wastewater at 156,839 GPD or 0.157 MDG, which is one percent of the plant's capacity, and which will increase flows by 3.3% over existing volumes. The Preferred Alternative would not cause existing volumes or planned capacity to be exceeded, and was determined to be consistent with the requirements set forth in CVWD's existing agreement to provide sanitary sewer service to the project. Impacts were determined to be less than significant.

The Preferred Alternative would consume electricity provided by IID. IID has indicated that additional offsite improvements will be required to meet the Preferred Alternative's power demand. The Preferred Alternative would be required to install twelve, 6-inch conduits along Avenue 58 to bring additional power to the site and install a transformer bank at IID's existing substation yard located at Avenue 58 and Monroe Street. The offsite improvements for the conduit system will take place in the existing right of way, on both sides of Avenue 58, between Andalusia and PGA West, and on Madison Street, west of Andalusia, and will be installed underground during Phase I of the development. The Preferred Alternative would account for approximately 0.19 percent of IID's total estimated demand

in 2031. The DEIR determined that with the project's connection to the IID substation, it is anticipated that IID's existing and planned electricity capacity and electricity supplies would be sufficient to support the Preferred Alternative's demand.

Underground natural gas lines exist adjacent to the project site along Avenue 58 and Madison Street, north and east of the project, respectively. Construction impacts associated with the installation of natural gas connections are expected to be confined to trenching in order to extend them from Madison Street into the Preferred Alternative site. As stated above, the Preferred Alternative is anticipated to consume approximately 21,855,400 kBTU/year, which is approximately 1.47 percent of the City's natural gas consumption at build-out of the City, and approximately 0.0025 percent of the 2030 forecasted consumption in SoCalGas's planning area. The Preferred Alternative would be designed to comply with Title 24, Part 6 of the California Code of Regulations (CCR) regarding energy consumption. Therefore, the project would not require or result in the relocation or construction of new or expanded natural gas facilities.

The Preferred Alternative would generate 3,674.5 cubic yards of solid waste during the operation of the residential and commercial land uses. The waste generated by the Preferred Alternative would be approximately 0.023 percent of the remaining capacity at Badlands Disposal site, 0.0025 percent of El Sobrante Landfill's remaining capacity, and 0.019 percent of the remaining capacity of the Lamb Canyon Disposal site, per the DEIR (page 4.15-33). In addition, all future development would be required to comply with mandatory commercial and residential recycling requirements of Assembly Bill 341. The Preferred Alternative would comply with all applicable solid waste statutes, policies and guidelines; and the Preferred Alternative would be served by a landfill with sufficient capacity to serve the project. Therefore, impacts relative to solid waste were determined to be less than significant.

The Preferred Alternative would comply with all applicable solid waste statutes, policies and guidelines. All development is required to comply with the mandatory commercial and residential recycling requirements of Assembly Bill 341. The California Green Building Standards Code (Cal Green) applies to all cities in California, and mandates that all new building construction develop a waste management plan that includes diversion of at least 65% of construction and demolition material from landfills, through recycling and/or reuse. Prior to applying for a permit, the contractor or property owner must submit a Construction & Demolition Debris Management Plan to the City's Environmental Coordinator. There were no impacts relative to applicable solid waste regulations because the project is required to, and would, comply with all such regulations.

Alternative 2

The Alternatives analysis in the DEIR determined that Alternative 2 would result in an increased demand for water to irrigate the golf course but would result in decreased demand for electricity and natural gas. Wastewater collection and treatment, solid waste, and telecommunication services would be similar under Alternative 2 and the Preferred Alternative.

As analyzed in the DEIR, Alternative 2 would result in 1,058.54 AFY of water consumption. This is an increase of 99.91 AFY compared to the Preferred Alternative, which would consume 958.63 AFY. The outdoor water consumption for Alternative 2 is 921.14 AFY, as compared to 801.47 AFY for the Preferred Alternative. Additional water lines would also be required, consistent with the Preferred Alternative, to connect to water mains in surrounding streets, but these would not be any greater than the lines required for the Preferred Alternative. The DEIR found that although Alternative 2 would use more water than the Preferred Alternative, neither would have a significant impact because the WSA identifies sufficient water supplies to serve either scenario and other present and anticipated needs for a normal year, as well as one or more multiple dry years, over the next 20 years.

Wastewater services required for Alternative 2 would be similar to the Preferred Alternative. The sewage generated by the project would be somewhat reduced when compared to the Preferred Alternative, due to the lack of resort commercial development associated with Alternative 2, so sewage treatment capacity would be sufficient to serve the alternative. Additional sewer lines would also be required, consistent with the Preferred Alternative, to connect to sewer mains in surrounding streets, but these would not be any greater than the lines required for the Preferred Alternative.

Burrtec would provide the property with solid waste services. Solid waste generated by Alternative 2 would be somewhat less than the waste generated by the Preferred Alternative, because of the reduction in resort and resort commercial uses on the property. Compared to Alternative 2, the Preferred Alternative would generate somewhat greater amounts of solid waste, but impacts would be less than significant.

Electricity would be required for construction and operation of Alternative 2. However, it is likely that electricity consumed by Alternative 2 would be somewhat reduced, as compared to the Preferred Alternative, as a result of replacing the resort uses and the Wave Basin included in the Preferred Alternative with single-family homes and a golf course. Given the residential and commercial development generated under Alternative 2, it is likely that the same improvements to the IID substation required under the Preferred Alternative would be required. These improvements will provide power for the Preferred Alternative and Alternative 2.

Natural Gas, provided by Southern California Gas Company (SoCalGas), would be required for the operation of Alternative 2. However, the Supplemental Air Quality & GHG Assessment prepared for Revised Project concluded that natural gas consumption would be increased with the development of the 750 single family residential homes, golf course, and commercial space (due to the updates in CalEEMod see Energy discussion for further information). Alternative 2 would be required to connect to existing SoCalGas infrastructure to provide natural gas to the project. Additional natural gas infrastructure is not required for the Preferred Alternative and would not be expected for Alternative 2. The increase of natural gas demand would be less than significant.

Similar to the Preferred Alternative, Alternative 2 would be required to connect to existing telecommunication services, either by Frontier or Spectrum, to provide telecommunication services to the project site. Additional infrastructure would not be required**.** The increase of telecommunication demand for the site would be less than significant for both scenarios.

Revised Project

Similar to Alternative 2, the Revised Project would result in an increased demand for water to irrigate the golf course compared to the Preferred Alternative. The remaining utilities, including wastewater collection and treatment, solid waste, and telecommunication services would be similar under the Revised Project, Alternative 2, and the Preferred Alternative. However, as described below, none of these Alternatives, including the Revised Project, would cause any significant and unavoidable impacts concerning utilities.

Water

The Revised Project would have substantially the same demand for water as Alternative 2 during both construction and operation, as the same area would be disturbed and developed on the same property with the same mix of residential, golf, and commercial uses. Like Alternative 2, the Revised Project would develop up to 750 homes, 60,000 square feet of neighborhood commercial uses, and an 18-hole golf course. A new WSA has been prepared for the Revised Project and is attached as Appendix D, which takes into account updated information from CVWD regarding water supplies and the Indio Subbasin groundwater management efforts. Per this new WSA, the Revised Project would result in a total water demand of 1,220.74 acre-feet per year (AFY), which is greater than the water demand identified for Alternative 2 in the DEIR (1,058.54 AFY), but would not have any new or substantially more severe impacts because CVWD has adequate water supplies available to serve the Revised Project and all other present and anticipated needs for normal year, as well as one or more multiple dry years, over the next 20 years, as determined by CVWD in the approved WSA for the Revised Project.

Table 24 Preferred Alternative, Alternative 2 and Revised Project Total Water Demand

	Preferred Alternative	Alternative 2	Revised Project
Total Water Demand	958.63 AFY	1,058.54 AFY	1,220.74 AFY

As described in Section 7 of the WSA for the Revised Project, the water demand for the Revised Project is accounted for in CVWD long-term growth projections, and CVWD has adequate water supplies to serve the project and all other existing uses and planned future demand through 2045 during normal, single-dry-year, and multiple-dry-year conditions.

As compared to the Preferred Alternative, the Revised Project (and Alternative 2) would use somewhat more water (approximately 1,220.74 AFY and 1058.54 AFY, respectively, vs. 958 AFY) but

would not exceed available supplies or interfere with CVWD's ongoing groundwater management efforts. Additional water lines would be required to connect to water mains in surrounding streets to serve the Revised Project, but these would not be any greater than the lines required for Alternative 2 or the Preferred Alternative. Therefore, consistent with the Preferred Alternative and Alternative 2, the Revised Project would have less than significant impacts related to water use or water supplies.

Wastewater

Wastewater services required for the Revised Project would be substantially the same as for Alternative 2 analyzed in the EIR. Additional sewer lines would be required to connect to sewer mains in surrounding streets to serve the Revised Project, but these would not be any greater than the lines required for the previously proposed project or Alternative 2 and would result in less than significant impacts. The Revised Project was estimated to generate wastewater at 34,200 GPD or 0.0342 MDG, which is 0.35 percent of the WRP-4's capacity, and which will increase flows by 0.72 percent over existing volumes. The Preferred Alternative was estimated to generate wastewater at 156,839 GPD or 0.157 MDG, which is one percent of the plant's capacity, and which would increase flows by 3.3 percent over existing volumes. The Revised Project would produce less wastewater effluent compared to the Preferred Alternative, due to the removal of the resort uses. The Revised Project, Alternative 2, and the Preferred Alternative would avoid causing existing volumes or planned capacity to be exceeded, and are consistent with the requirements set forth in CVWD's existing agreement to provide sanitary sewer service to the project. Impacts are less than significant.

Solid Waste

As with the previously proposed project and Alternative 2, Burrtec would provide the Revised Project with solid waste services. Construction waste produced by Revised Project would be the same as under Alternative 2 and, like the Preferred Alternative, would have less than significant impacts.

Solid waste generated by Revised Project and Alternative 2 would be somewhat less than the Preferred Alternative because the proposed golf course uses would generate less solid waste than the resort uses. However, under all scenarios, impacts would be less than significant as all Alternatives would be required to comply with all recycling requirements and would not exceed any State or local standards or exceed available landfill capacity.

Electricity

The electricity required for construction and operation of the Revised Project would be substantially the same as Alternative 2 because both projects propose golf course, residential, and commercial uses on the same project site. As discussed above in the Energy section, the Revised Project would use approximately 8.7% less electricity than required for the Preferred Alternative because the golf course uses require significantly less energy than the Wave Basin and resort uses.

Like the Preferred Alternative and Alternative 2, the Revised Project would be required to connect to and upgrade an existing IID substation to provide electricity to the project site, including improvements to the existing substation and installing an underground distribution line in existing, disturbed public right-of-way. The electrical demand for the Revised Project would be supported by this proposed infrastructure.

Each Alternative would result in less than significant impacts to electricity, and no Alternative would result in significant and unavoidable impacts.

Natural Gas

Natural gas, provided by Southern California Gas Company (SoCalGas), would be required for the operation of the Revised Project in amounts substantially the same as for Alternative 2 because they both involve the same uses, at the same densities and intensities, on the same project site. As discussed above in the Energy section, although the Revised Project is replacing the Wave Basin and resort uses with single-family homes and a golf course, the Revised Project would use approximately 24% more natural gas than the Preferred Alternative, due to the updates to the CalEEMod modeling.

The Revised Project would be required to connect to existing SoCalGas infrastructure to provide natural gas to the project site, as would be the case for both the Preferred Alternative and Alternative 2. Additional natural gas infrastructure is not required for the Revised Project or Alternative 2 and the increase in natural gas demand for all scenarios would be less than significant.

Telecommunications

Like Alternative 2, the Revised Project would be required to connect to existing infrastructure, either by Frontier or Spectrum, to provide telecommunication services to the site, including internet and cable services. Additional infrastructure would not be required**.** The increase of telecommunication demand for the Revised Project (and Alternative 2) would also be similar for the Preferred Alternative and would be less than significant for all three scenarios.

Summary of Comparative Impacts

A summary comparison of impacts associated with the project Alternatives is provided in Table 25, Comparison of Alternatives to Project. As displayed in the table, the first row indicates the proposed project and alternatives, while the following rows indicates the environmental topic and their impacts. The table provides the environmental impacts of the Preferred Alternative (as analyzed in the DEIR) and whether Alternative 2 or the Revised Project reduces, increases, or creates similar impacts to the Preferred Alternative.

As described in further detail above, the Revised Project would result in substantially the same impacts as Alternative 2 because both include developing the same uses, at the same densities and intensities, on the same project site. The refinements proposed to the boundaries of the golf/open

space and residential areas, and the minor adjustments to the respective acreages, would not alter any of the potentially significant adverse effects identified and analyzed in the DEIR for Alternative 2.

As compared to the Preferred Alternative, the Revised Project will not have any new significant adverse environmental effects or substantially more severe environmental effects, other than an increase in VMT that exceeds the City's threshold of significance, as previously disclosed for Alternative 2 in the DEIR.

As indicated in the table below, the Revised Project will have similar impacts to biological resources, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, public services, and tribal cultural resources compared to Alternative 2 and the Preferred Alternative. This is because all scenarios propose the development of the approximately 385-acre site. Any development that occurs on the site would be required to implement mitigation measures established to reduce impacts to biological resources, cultural resources, and tribal cultural resources that occur or could occur onsite. Because the existing soil conditions at the project site did not exhibit the ideal conditions for development, mitigation measures were established to ensure that the onsite soil creates appropriate foundational conditions for development, which would apply to all three scenarios. Therefore, the Preferred Alternative, Alternative 2, and the Revised Project would be required to implement the mitigation measures identified in the DEIR, and impacts concerning hazards and hazardous materials, hydrology and water quality, and public services at the project site would be less than significant.

The Revised Project (and Alternative 2) would have reduced impacts in the areas of aesthetics, as compared to the Preferred Alternative, since the Revised Project does not include the 80-foot light fixtures for the Wave Basin. However, Alternative 2, the Revised Project, and the Preferred Alternative would result in significant and unavoidable impacts to scenic vistas regarding Coral Mountain and the Santa Rosa Mountains, since any development onsite would obstruct views of these natural landforms. The Revised Project (and Alternative 2) would also reduce impacts to electricity demands, land use and planning, and noise, since the Revised Project will not include the operation of the Wave Basin or resort facilities. Electricity consumed for the Wave Basin and resort facilities resulted in increased electricity use compared to Alternative 2 and the Revised Project. It is expected that the Revised Project and Alternative 2 would result in the same electricity, natural gas, and petroleum demand since they both propose 750 residential homes, 60,000 square feet of commercial, and a golf course. As discussed above, neither the Revised Project nor Alternative 2 would require changes to the land uses or zoning onsite, unlike the Preferred Alternative. Therefore, the Revised Project and Alternative 2 would result in reduced impacts to land use and planning. Finally, noise would be reduced with the development and operation of the Revised Project and Alternative 2 because neither scenario includes the Wave Basin facility or resort component. The Revised Project and Alternative 2 would develop a residential golf community, similar to those in the surrounding area, therefore, noise would be reduced compared to the Preferred Alternative.

On the other hand, the Revised Project would have increased effects relating to air quality, energy resources (natural gas demand and petroleum use), GHG emissions, VMT, and water use. As analyzed above, the operation of the 750 residential homes, 60,000 square feet of commercial, and golf course cause an increase in daily vehicle trips compared to the Preferred Alternative. This is because the Preferred Alternative proposed fewer residential units and a mix of various land uses, which reduced VMTs. Alternative 2 and the Revised Project would increase impacts to air quality to significant and unavoidable levels, compared to the Preferred Alternative. GHG emissions and VMT impacts would be significant and unavoidable for the Preferred Alternative, Alternative 2 and the Revised Project. Finally, the addition of the golf course in Alternative 2 and the Revised Project results in an increase in water use compared to the Preferred Project, per the new WSA generated for the Revised Project and approved by CVWD. However, the WSA determined that the local water purveyor has enough water to supply the Revised Project. Thus, impacts would be less than significant.

As determined above, the Revised Project and Alternative 2 will result in similar impacts because they both propose the development of 750 residential homes, 60,000 square feet of commercial, and a golf course. The land uses (Low Density Residential, General Commercial, and Open Space Recreation) and zoning (Low Density Residential, Neighborhood Commercial, and Golf Couse) will remain the same with the Revised Project and Alternative 2. The Revised Project proposes a slight reconfiguration of the land uses to accommodate the golf course design, but the residential density and commercial square footage does not change. Cumulative impacts of Alternative 2 have been analyzed in the La Quinta General Plan and General Plan Environmental Impact Report. Since the Revised Project proposes the same number of residential homes, commercial square footage, and golf course uses, cumulative impacts generated by the Revised Project would be similar to Alternative 2.

Cumulative effects to aesthetics would be similar to the Alternative 2 since they both propose development of the project site and the development proposed is similar to uses in the surrounding area (north, east, and southeast) and has been analyzed in the GP and GP EIR. Cumulative impacts to biological resources, cultural resources, and tribal cultural resources would be similar to Alternative 2, since all scenarios propose development on the site, however, the site and future projects will be required to implement mitigation measures to reduce impacts. Additionally, the Revised Project would result in similar impacts to public services compared to Alternative 2 and the Preferred Alternative. These impacts are reduced by the payment of development impact fees. Future projects would be required to pay development impact fees to reduce impacts to public services.

Impacts to geology and soils, land use and planning, hazards and hazardous materials, and hydrology and water quality, are site-specific and require some mitigation. Similar to the Revised Project, Alternative 2 and the Preferred Alternative, future projects would be required to comply with local and state regulations, as well as mitigation measures (if necessary) to reduce impacts.

Impacts to air quality, greenhouse gas emissions, energy resources, noise, transportation, and utilities would be reduced by local and state regulatory requirements and mitigation measures (if necessary).

Future developments would be required to comply with local and state regulatory requirements and mitigation measures (if necessary) to reduce their impacts to air quality, GHG emissions, energy resources, noise, transportation, and utilities. Overall, the Revised Project, Alternative 2, and the Preferred Alternative would not result in cumulative impacts, as determined in the La Quinta General Plan, General Plan EIR, and in the DEIR.

Table 25 Comparison of Alternatives and Project

Environmental Topic	Preferred Alternative	Alternative 2 No Project/Existing Entitlements	Revised Project
Aesthetics	Significant and Unavoidable	Reduced (Significant and Unavoidable)	Reduced (Significant and Unavoidable)
Air Quality	Less than Significant with Mitigation	Increased (Significant and Unavoidable)	Increased (Significant and Unavoidable)
Biological Resources	Less than Significant with Mitigation	Similar (Less than Significant with Mitigation)	Similar (Less than Significant with Mitigation)
Cultural Resources	Less than Significant with Mitigation	Similar (Less than Significant with Mitigation)	Similar (Less than Significant with Mitigation)
Energy	Less than Significant	Reduced Electricity; Increased Petroleum Demand and Natural Gas (Less than Significant)	Reduced Electricity; Increased Petroleum Demand and Natural Gas (Less than Significant)
Geology and Soils	Less than Significant with Mitigation	Similar (Less than Significant with Mitigation)	Similar (Less than Significant with Mitigation)
Greenhouse Gas	Significant and Unavoidable	Increased (Significant and Unavoidable)	Increased (Significant and Unavoidable)
Hazards and Hazardous Materials	Less than Significant	Similar (Less than Significant)	Similar (Less than Significant)
Hydrology and Water Quality	Less than Significant	Similar (Less than Significant)	Similar (Less than Significant)
Land Use and Planning	Less than Significant	Reduced (No Impact)	Reduced (No Impact)
Noise	Less than Significant with Mitigation	Reduced (operational) (Less than Significant with Mitigation)	Reduced (operational) (Less than Significant with Mitigation)
Public Services	Less than Significant	Similar (Less than Significant)	Similar (Less than Significant)
Transportation	Less than Significant with Mitigation	Increased (Significant and Unavoidable)	Increased (Significant and Unavoidable)
Tribal Cultural Resources	Less than Significant with Mitigation	Similar (Less than Significant with Mitigation)	Similar (Less than Significant with Mitigation)
Utilities & Service Systems	Less than Significant	Increased Water Demand and Natural Gas; Reduced Electricity; Similar Others (Less than Significant)	Increased Water Demand and Natural Gas; Reduced Electricity; Similar Others (Less than Significant)

MEMORANDUM

URBAN | CROSSROADS

DATE: June 19, 2023
TO: Mr. John Gamlin, CM Wave Development LLC
FROM: Haseeb Qureshi, Urban Crossroads, Inc.
Shannon Wong, Urban Crossroads, Inc.
JOB NO: 15455-02 AQ & GHG

CLUB AT CORAL MOUNTAIN SUPPLEMENTAL AIR QUALITY & GREENHOUSE GAS ASSESSMENT

Mr. John Gamlin,

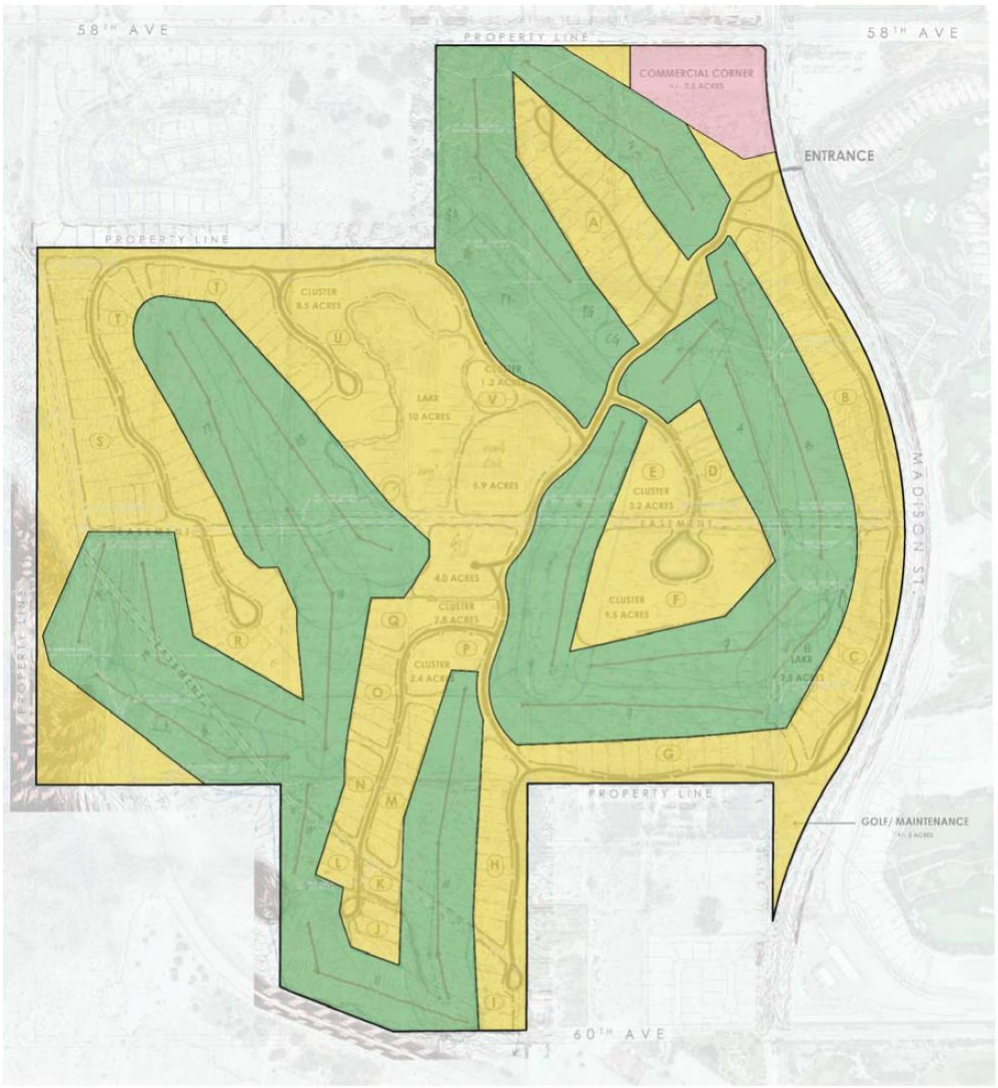
Urban Crossroads, Inc. is pleased to provide the following Supplemental Air Quality & Greenhouse Gas Assessment for the Club at Coral Mountain (**Project**). The Project is located on the southwest corner of re-aligned Madison Street at 58th Avenue in the City of La Quinta. This analysis provides air quality and greenhouse gas information regarding the Alternative 2 "Existing Entitlements" scenario presented in the CORAL MOUNTAIN ALTERNATIVES TRIP GENERATION AND AIR QUALITY AND GREENHOUSE GAS COMPARISON letter prepared by Urban Crossroads, Inc. (May 2021).

PROJECT OVERVIEW

The Project does not change existing General Plan land use or zoning designations for the site, consistent with the approved Andaluisa Specific Plan and Alternative 2 analyzed in the Final Environmental Impact Report Coral Mountain Resort (SCH #2021020310). A Specific Plan Amendment is proposed to adjust the location and layout of open space–recreation and low-density residential areas with minor adjustments to the respective acreages of existing land use designations. It eliminates prior proposed land uses (no C-T Zone, surf wave basin, or hotel). The Project consists of a commercial corner (60,000 square feet of retail), an 18-hole golf course, and up to 750 residential units. The preliminary site plan for Project Alternative 2 is shown on Exhibit 1.

To ensure that this supplemental assessment is consistent with technical studies prepared for Final Environmental Impact Report Coral Mountain Resort (SCH #2021020310), air quality and greenhouse gas estimates utilize a 2026 Opening Year consistent with the FEIR.

EXHIBIT 1: PRELIMINARY SITE PLAN



Residential Land Area :	± 193.7 Acres
Commercial Land Area :	± 7.7 Acres
Golf Course Area :	± 183.0 Acres
Total Project Area :	± 384.4 Acres

N

AIR QUALITY EMISSIONS

The estimated maximum daily operational emissions are summarized in Table 1. Detailed construction model outputs are presented in Attachment A.

TABLE 1: TOTAL PROJECT REGIONAL OPERATIONAL EMISSIONS

Source	Emissions (lbs/day)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Summer						
Mobile Source	54.21	45.96	448.99	1.02	33.14	6.40
Area Source	40.02	11.63	49.90	0.07	0.92	0.93
Energy Source	0.40	6.84	2.96	0.04	0.55	0.55
Total Maximum Daily Emissions	**94.64**	**64.43**	**501.84**	**1.13**	**34.62**	**7.88**
Winter						
Mobile Source	43.20	49.77	314.54	0.90	33.14	6.40
Area Source	35.82	11.20	4.76	0.07	0.91	0.91
Energy Source	0.40	6.84	2.96	0.04	0.55	0.55
Total Maximum Daily Emissions	**79.42**	**67.81**	**322.26**	**1.02**	**34.60**	**7.86**

GREENHOUSE GAS EMISSIONS

The estimated GHG emissions for the Project land use are summarized in Table 2. As shown in Table 2, the Project would generate a total of approximately 14,563.80 $MTCO_2e/yr$. Detailed operation model outputs for the proposed Project are presented in Attachment A.

TABLE 2: PROPOSED PROJECT GHG EMISSIONS TOTAL

Source	Emission (lbs/day)				
	CO_2	CH_4	N_2O	R	Total CO_2e
Mobile Source	11,426.34	0.49	0.57	16.12	11,623.49
Area Source	171.33	0.00	0.00	0.00	171.54
Energy Source	2,375.97	0.25	0.02	0.00	2,387.18
Water	107.98	1.15	0.03	0.00	145.20
Waste	67.12	6.71	0.00	0.00	234.83
Refrigerants	0.00	0.00	0.00	1.56	1.56
Total CO_2e (All Sources)	**14,563.80**				

AIR QUALITY AND GREENHOUSE GAS CONCLUSION

Results of the assessment indicate that the Alternative 2 "Existing Entitlements" would result in slightly more emissions of VOCs compared to the May 2021 Coral Mountain Specific Plan Air Quality Impact Analysis.

Similarly, results of the assessment indicate that the Alternative 2 "Existing Entitlements" would result in slightly more greenhouse gas emissions compared to the May 2021 Coral Mountain Specific Plan Greenhouse Gas Analysis.

ATTACHMENT A
CALEEMOD PROJECT EMISSIONS MODEL OUTPUTS

15455 - Club at Coral Mountain (Operations) Detailed Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	15455 - Club at Coral Mountain (Operations)
Operational Year	2026
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	3.00
Precipitation (days)	8.80
Location	33.625128, -116.253837
County	Riverside-Salton Sea
City	La Quinta
Air District	South Coast AQMD
Air Basin	Salton Sea
TAZ	5696
EDFZ	19
Electric Utility	Imperial Irrigation District
Gas Utility	Southern California Gas
App Version	2022.1.1.13

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Single Family Housing	750	Dwelling Unit	244	1,462,500	8,784,643	—	2,423	—

Regional Shopping Center	60.0	1000sqft	1.38	60,000	0.00	—	—	—
Golf Course	18.0	Hole	126	0.00	0.00	0.00	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	64.8	94.6	64.4	502	1.13	2.20	32.4	34.6	2.16	5.72	7.88	472	133,078	133,550	53.3	5.11	325	136,731
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	49.3	79.4	67.8	322	1.02	2.18	32.4	34.6	2.14	5.72	7.86	472	121,491	121,963	53.6	5.24	17.6	124,882
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	38.0	69.8	41.5	275	0.72	1.14	23.1	24.3	1.11	4.08	5.19	472	84,987	85,459	51.9	3.70	107	87,966
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	6.93	12.7	7.58	50.1	0.13	0.21	4.22	4.43	0.20	0.74	0.95	78.2	14,071	14,149	8.59	0.61	17.7	14,564

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	58.2	54.2	46.0	449	1.02	0.72	32.4	33.1	0.68	5.72	6.40	—	103,804	103,804	4.12	4.80	316	105,655
Area	5.76	40.0	11.6	49.9	0.07	0.92	—	0.92	0.93	—	0.93	0.00	14,337	14,337	0.27	0.03	—	14,352
Energy	0.80	0.40	6.84	2.96	0.04	0.55	—	0.55	0.55	—	0.55	—	14,351	14,351	1.48	0.10	—	14,419
Water	—	—	—	—	—	—	—	—	—	—	—	67.0	585	652	6.94	0.17	—	877
Waste	—	—	—	—	—	—	—	—	—	—	—	405	0.00	405	40.5	0.00	—	1,418
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	9.42	9.42
Total	64.8	94.6	64.4	502	1.13	2.20	32.4	34.6	2.16	5.72	7.88	472	133,078	133,550	53.3	5.11	325	136,731
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	47.2	43.2	49.8	315	0.90	0.72	32.4	33.1	0.68	5.72	6.40	—	92,342	92,342	4.39	4.94	8.19	93,931
Area	1.31	35.8	11.2	4.76	0.07	0.91	—	0.91	0.91	—	0.91	0.00	14,213	14,213	0.27	0.03	—	14,227
Energy	0.80	0.40	6.84	2.96	0.04	0.55	—	0.55	0.55	—	0.55	—	14,351	14,351	1.48	0.10	—	14,419
Water	—	—	—	—	—	—	—	—	—	—	—	67.0	585	652	6.94	0.17	—	877
Waste	—	—	—	—	—	—	—	—	—	—	—	405	0.00	405	40.5	0.00	—	1,418
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	9.42	9.42
Total	49.3	79.4	67.8	322	1.02	2.18	32.4	34.6	2.14	5.72	7.86	472	121,491	121,963	53.6	5.24	17.6	124,882
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	34.9	32.1	33.7	249	0.67	0.51	23.1	23.6	0.48	4.08	4.56	—	69,016	69,016	2.94	3.42	97.3	70,207
Area	2.28	37.3	0.98	22.6	0.01	0.07	—	0.07	0.07	—	0.07	0.00	1,035	1,035	0.02	< 0.005	—	1,036
Energy	0.80	0.40	6.84	2.96	0.04	0.55	—	0.55	0.55	—	0.55	—	14,351	14,351	1.48	0.10	—	14,419
Water	—	—	—	—	—	—	—	—	—	—	—	67.0	585	652	6.94	0.17	—	877
Waste	—	—	—	—	—	—	—	—	—	—	—	405	0.00	405	40.5	0.00	—	1,418
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	9.42	9.42

Total	38.0	69.8	41.5	275	0.72	1.14	23.1	24.3	1.11	4.08	5.19	472	84,987	85,459	51.9	3.70	107	87,966
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	6.37	5.86	6.15	45.5	0.12	0.09	4.22	4.31	0.09	0.74	0.83	—	11,426	11,426	0.49	0.57	16.1	11,623
Area	0.42	6.80	0.18	4.12	< 0.005	0.01	—	0.01	0.01	—	0.01	0.00	171	171	< 0.005	< 0.005	—	172
Energy	0.15	0.07	1.25	0.54	0.01	0.10	—	0.10	0.10	—	0.10	—	2,376	2,376	0.25	0.02	—	2,387
Water	—	—	—	—	—	—	—	—	—	—	—	11.1	96.9	108	1.15	0.03	—	145
Waste	—	—	—	—	—	—	—	—	—	—	—	67.1	0.00	67.1	6.71	0.00	—	235
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.56	1.56
Total	6.93	12.7	7.58	50.1	0.13	0.21	4.22	4.43	0.20	0.74	0.95	78.2	14,071	14,149	8.59	0.61	17.7	14,564

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	29.1	27.0	24.1	238	0.55	0.39	17.5	17.9	0.36	3.09	3.46	—	55,993	55,993	2.14	2.54	171	56,976
Regional Shopping Center	27.3	25.6	20.0	191	0.42	0.30	13.4	13.7	0.28	2.36	2.64	—	42,986	42,986	1.83	2.06	130	43,775
Golf Course	1.73	1.56	1.85	19.2	0.05	0.03	1.53	1.56	0.03	0.27	0.30	—	4,825	4,825	0.15	0.20	14.9	4,904
Total	58.2	54.2	46.0	449	1.02	0.72	32.4	33.1	0.68	5.72	6.40	—	103,804	103,804	4.12	4.80	316	105,655

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	23.7	21.6	26.2	165	0.49	0.39	17.5	17.9	0.36	3.09	3.46	—	49,791	49,791	2.27	2.62	4.43	50,632
Regional Shopping Center	22.1	20.3	21.6	137	0.37	0.30	13.4	13.7	0.28	2.36	2.64	—	38,267	38,267	1.97	2.11	3.38	38,948
Golf Course	1.43	1.27	2.02	12.7	0.04	0.03	1.53	1.56	0.03	0.27	0.30	—	4,284	4,284	0.16	0.21	0.39	4,351
Total	47.2	43.2	49.8	315	0.90	0.72	32.4	33.1	0.68	5.72	6.40	—	92,342	92,342	4.39	4.94	8.19	93,931
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	4.09	3.75	4.07	30.2	0.08	0.06	2.85	2.91	0.06	0.50	0.56	—	7,696	7,696	0.32	0.38	10.9	7,827
Regional Shopping Center	2.01	1.87	1.73	12.6	0.03	0.02	1.10	1.12	0.02	0.19	0.22	—	3,000	3,000	0.14	0.16	4.20	3,054
Golf Course	0.27	0.24	0.35	2.63	0.01	0.01	0.27	0.28	0.01	0.05	0.05	—	730	730	0.03	0.03	1.04	742
Total	6.37	5.86	6.15	45.5	0.12	0.09	4.22	4.31	0.09	0.74	0.83	—	11,426	11,426	0.49	0.57	16.1	11,623

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	5,036	5,036	0.63	0.08	—	5,075
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	—	638	638	0.08	0.01	—	643
Golf Course	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	5,674	5,674	0.71	0.09	—	5,717
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	5,036	5,036	0.63	0.08	—	5,075
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	—	638	638	0.08	0.01	—	643
Golf Course	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	5,674	5,674	0.71	0.09	—	5,717
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	834	834	0.10	0.01	—	840
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	—	106	106	0.01	< 0.005	—	106
Golf Course	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	939	939	0.12	0.01	—	947

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.79	0.39	6.73	2.87	0.04	0.54	—	0.54	0.54	—	0.54	—	8,548	8,548	0.76	0.02	—	8,572
Regional Shopping Center	0.01	0.01	0.11	0.09	< 0.005	0.01	—	0.01	0.01	—	0.01	—	129	129	0.01	< 0.005	—	129
Golf Course	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.80	0.40	6.84	2.96	0.04	0.55	—	0.55	0.55	—	0.55	—	8,677	8,677	0.77	0.02	—	8,702
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.79	0.39	6.73	2.87	0.04	0.54	—	0.54	0.54	—	0.54	—	8,548	8,548	0.76	0.02	—	8,572
Regional Shopping Center	0.01	0.01	0.11	0.09	< 0.005	0.01	—	0.01	0.01	—	0.01	—	129	129	0.01	< 0.005	—	129
Golf Course	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.80	0.40	6.84	2.96	0.04	0.55	—	0.55	0.55	—	0.55	—	8,677	8,677	0.77	0.02	—	8,702
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.14	0.07	1.23	0.52	0.01	0.10	—	0.10	0.10	—	0.10	—	1,415	1,415	0.13	< 0.005	—	1,419
Regional Shopping Center	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	21.4	21.4	< 0.005	< 0.005	—	21.4
Golf Course	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

Total	0.15	0.07	1.25	0.54	0.01	0.10	—	0.10	0.10	—	0.10	—	1,437	1,437	0.13	< 0.005	—	1,441

4.3. Area Emissions by Source

4.3.2. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	1.31	0.66	11.2	4.76	0.07	0.91	—	0.91	0.91	—	0.91	0.00	14,213	14,213	0.27	0.03	—	14,227
Consumer Products	—	32.6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	2.58	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	4.45	4.20	0.43	45.1	< 0.005	0.02	—	0.02	0.03	—	0.03	—	124	124	0.01	< 0.005	—	125
Total	5.76	40.0	11.6	49.9	0.07	0.92	—	0.92	0.93	—	0.93	0.00	14,337	14,337	0.27	0.03	—	14,352
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	1.31	0.66	11.2	4.76	0.07	0.91	—	0.91	0.91	—	0.91	0.00	14,213	14,213	0.27	0.03	—	14,227
Consumer Products	—	32.6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	2.58	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	1.31	35.8	11.2	4.76	0.07	0.91	—	0.91	0.91	—	0.91	0.00	14,213	14,213	0.27	0.03	—	14,227

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.02	0.01	0.14	0.06	< 0.005	0.01	—	0.01	0.01	—	0.01	0.00	161	161	< 0.005	< 0.005	—	161
Consumer Products	—	5.95	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.47	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.40	0.38	0.04	4.06	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	10.2	10.2	< 0.005	< 0.005	—	10.2
Total	0.42	6.80	0.18	4.12	< 0.005	0.01	—	0.01	0.01	—	0.01	0.00	171	171	< 0.005	< 0.005	—	172

4.4. Water Emissions by Land Use

4.4.2. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	58.5	570	629	6.07	0.15	—	825
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	8.52	15.1	23.7	0.88	0.02	—	51.8
Golf Course	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	67.0	585	652	6.94	0.17	—	877

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	58.5	570	629	6.07	0.15	—	825
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	8.52	15.1	23.7	0.88	0.02	—	51.8
Golf Course	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	67.0	585	652	6.94	0.17	—	877
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	9.68	94.4	104	1.00	0.03	—	137
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	1.41	2.51	3.92	0.14	< 0.005	—	8.57
Golf Course	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	11.1	96.9	108	1.15	0.03	—	145

4.5. Waste Emissions by Land Use

4.5.2. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	370	0.00	370	37.0	0.00	—	1,295
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	34.0	0.00	34.0	3.39	0.00	—	119
Golf Course	—	—	—	—	—	—	—	—	—	—	—	1.29	0.00	1.29	0.13	0.00	—	4.52
Total	—	—	—	—	—	—	—	—	—	—	—	405	0.00	405	40.5	0.00	—	1,418
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	370	0.00	370	37.0	0.00	—	1,295
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	34.0	0.00	34.0	3.39	0.00	—	119
Golf Course	—	—	—	—	—	—	—	—	—	—	—	1.29	0.00	1.29	0.13	0.00	—	4.52
Total	—	—	—	—	—	—	—	—	—	—	—	405	0.00	405	40.5	0.00	—	1,418
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	61.3	0.00	61.3	6.13	0.00	—	214
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	5.62	0.00	5.62	0.56	0.00	—	19.7
Golf Course	—	—	—	—	—	—	—	—	—	—	—	0.21	0.00	0.21	0.02	0.00	—	0.75
Total	—	—	—	—	—	—	—	—	—	—	—	67.1	0.00	67.1	6.71	0.00	—	235

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	9.37	9.37
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.05	0.05
Golf Course	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	9.42	9.42
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	9.37	9.37
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.05	0.05
Golf Course	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	9.42	9.42
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.55	1.55

Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Golf Course	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.56	1.56

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Sequest	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Single Family Housing	6,165	7,110	6,360	2,309,668	55,000	63,431	56,740	20,605,336
Regional Shopping Center	2,222	6,969	5,092	1,208,160	13,767	48,325	35,311	7,950,146
Golf Course	374	358	340	133,915	5,524	5,288	5,022	1,977,847

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

Hearth Type	Unmitigated (number)
Single Family Housing	—
Wood Fireplaces	0
Gas Fireplaces	675
Propane Fireplaces	0

Electric Fireplaces	0
No Fireplaces	75

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
2961562.5	987,188	90,000	30,000	—

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	180

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Single Family Housing	7,004,433	262	0.0330	0.0040	26,673,236
Regional Shopping Center	887,044	262	0.0330	0.0040	402,766
Golf Course	0.00	262	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Single Family Housing	30,505,331	201,482,379

Regional Shopping Center	4,444,351	0.00
Golf Course	0.00	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Single Family Housing	687	—
Regional Shopping Center	63.0	—
Golf Course	2.40	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Single Family Housing	Average room A/C & Other residential A/C and heat pumps	User Defined	750	< 0.005	2.50	2.50	10.0
Single Family Housing	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
Regional Shopping Center	Other commercial A/C and heat pumps	User Defined	750	< 0.005	4.00	4.00	18.0
Regional Shopping Center	Stand-alone retail refrigerators and freezers	User Defined	150	0.04	1.00	0.00	1.00
Golf Course	Other commercial A/C and heat pumps	User Defined	750	< 0.005	4.00	4.00	18.0
Golf Course	Stand-alone retail refrigerators and freezers	User Defined	150	0.04	1.00	0.00	1.00

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)

5.17. User Defined

Equipment Type	Fuel Type
—	—

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	23.8	annual days of extreme heat
Extreme Precipitation	0.10	annual days with precipitation above 20 mm
Sea Level Rise	0.00	meters of inundation depth
Wildfire	1.02	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider different increments of sea level rise coupled with extreme storm events. Users may select from four model simulations to view the range in potential inundation depth for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 50 meters (m) by 50 m, or about 164 feet (ft) by 164 ft.
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	1	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	0	0	0	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	1	1	1	2
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	1	1	1	2
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	88.7
AQ-PM	7.70
AQ-DPM	31.9
Drinking Water	45.4
Lead Risk Housing	0.23
Pesticides	0.00
Toxic Releases	1.99
Traffic	1.51
Effect Indicators	—
CleanUp Sites	0.00
Groundwater	0.00
Haz Waste Facilities/Generators	0.00
Impaired Water Bodies	0.00
Solid Waste	0.00
Sensitive Population	—
Asthma	30.6
Cardio-vascular	44.1

Low Birth Weights	—
Socioeconomic Factor Indicators	—
Education	9.73
Housing	8.04
Linguistic	9.46
Poverty	10.4
Unemployment	86.8

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	95.6242782
Employed	0.667265495
Median HI	96.99730527
Education	—
Bachelor's or higher	86.93699474
High school enrollment	100
Preschool enrollment	84.22943667
Transportation	—
Auto Access	77.83908636
Active commuting	1.039394328
Social	—
2-parent households	99.56371102
Voting	90.82509945
Neighborhood	—
Alcohol availability	93.32734505

Park access	13.6147825
Retail density	9.29038881
Supermarket access	2.399589375
Tree canopy	53.34274349
Housing	—
Homeownership	99.40972668
Housing habitability	98.58847684
Low-inc homeowner severe housing cost burden	71.07660721
Low-inc renter severe housing cost burden	99.08892596
Uncrowded housing	96.93314513
Health Outcomes	—
Insured adults	93.18619274
Arthritis	0.0
Asthma ER Admissions	75.3
High Blood Pressure	0.0
Cancer (excluding skin)	0.0
Asthma	0.0
Coronary Heart Disease	0.0
Chronic Obstructive Pulmonary Disease	0.0
Diagnosed Diabetes	0.0
Life Expectancy at Birth	76.3
Cognitively Disabled	92.5
Physically Disabled	95.1
Heart Attack ER Admissions	61.0
Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0

Pedestrian Injuries	19.6
Physical Health Not Good	0.0
Stroke	0.0
Health Risk Behaviors	—
Binge Drinking	0.0
Current Smoker	0.0
No Leisure Time for Physical Activity	0.0
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	97.7
Elderly	0.4
English Speaking	98.1
Foreign-born	10.3
Outdoor Workers	98.2
Climate Change Adaptive Capacity	—
Impervious Surface Cover	84.8
Traffic Density	1.0
Traffic Access	23.0
Other Indices	—
Hardship	9.7
Other Decision Support	—
2016 Voting	99.2

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	4.00

Healthy Places Index Score for Project Location (b)	78.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Operations: Vehicle Data	Trip characteristics based on information provided in the trip generation assessment
Operations: Hearths	SCAQMD Rule 445 no wood burning devices. Wood burning devices added to gas devices.
Operations: Architectural Coatings	SCAQMD Rule 1113
Operations: Refrigerants	As of 1 January 2022, new commercial refrigeration equipment may not use refrigerants with a GWP of 150 or greater. Further, R-404A (the CalEEMod default) is unacceptable for new supermarket and cold storage systems as of 1 January 2019 and 2023, respectively. Beginning 1 January 2025, all new air conditioning equipment may not use refrigerants with a GWP of 750 or greater.

May 26, 2023

Mr. John Gamlin
CM Wave Development LLC
2440 Junction Place, Suite 200
Boulder, CO 81301

CLUB AT CORAL MOUNTAIN SUPPLEMENTAL LOS ASSESSMENT

Dear Mr. John Gamlin:

The firm of Urban Crossroads, Inc. is pleased to submit this Supplemental Assessment for the proposed Club at Coral Mountain development ("Project"), which is located on the southwest corner of re-aligned Madison Street at 58th Avenue in the City of La Quinta. This analysis provides traffic level of service (LOS) information regarding the Alternative 2 "Existing Entitlements" scenario presented in the CORAL MOUNTAIN ALTERNATIVES TRIP GENERATION AND AIR QUALITY AND GREENHOUSE GAS COMPARISON letter prepared by Urban Crossroads, Inc. (May 2021).

The Project does not change existing General Plan land use or zoning designations for the site, consistent with the approved Andalusia Specific Plan and Alternative 2 analyzed in the Final Environmental Impact Report Coral Mountain Resort (SCH #2021020310). A Specific Plan Amendment is proposed to adjust the location and layout of open space–recreation and low density residential areas with minor adjustments to the respective acreages of existing land use designations. It eliminates prior proposed land uses (no C-T Zone, surf wave basin, or hotel). The Project consists of a commercial corner (60,000 square feet of retail), an 18-hole golf course, and up to 750 residential units.

For this supplemental LOS assessment, information regarding Project traffic flows on adjacent roadways is provided. A VMT assessment has been prepared in a separate document.

To ensure that this supplemental assessment is consistent with technical studies prepared for Final Environmental Impact Report Coral Mountain Resort (SCH #2021020310), traffic projections utilize the 2026 and 2040 "without Project" datasets presented in the October 2021 Coral Mountain Specific Plan Traffic Impact Analysis.

PROJECT ACCESS

The Project is proposed to be served by the access locations listed below:

- Madison Street / Main Access (residential and golf full access)
- South Access / Avenue 60 (resident only access)
- Project Access 1 / Avenue 58 (commercial corner full access)
- Project Access 2 / Avenue 58 (commercial corner right-in/right-out access)

- Madison Street / Project Access 3 (commercial corner right-in/right-out access)
- Madison Street / Golf Course Service Access (full access, maintenance)

To meet the City of La Quinta separation standard between driveways along Avenue 58 and adjacent to the Project commercial corner, Project Access 1 will be located 250 feet east of S. Valley Lane and approximately 280 feet west of Project Access 2. All other proposed Project access locations meet City of La Quinta intersection spacing standards.

A preliminary site plan the Project is shown on Exhibit 1. Exhibit 2 depicts the location of the Project in relation to the existing roadway network and overall study area.

SUMMARY OF FINDINGS

Table 1 shows the summary of future intersection operations with and without improvements for the following scenarios:

- Existing Plus Ambient Growth Plus Cumulative Projects without the Project for 2026
- Existing Plus Ambient Growth Plus Project Plus Cumulative Projects (EAPC) for 2026
- General Plan buildout (2040) Without Project Conditions
- General Plan buildout (2040) With Project Conditions

The project's cumulative impacts at the study area intersections are mitigated to operate at an acceptable level of service (LOS "D" or better) with cumulative improvements shown on Exhibit 3. These cumulative improvements are consistent with the October 2021 Coral Mountain Specific Plan Traffic Impact Analysis.

A summary of roadway segment volume-to-capacity analysis is provided on Table 2 for the above scenarios, including General Plan improvements for 2040 conditions. Study area roadway segments are anticipated to operate at acceptable LOS for EAPC 2026 and General Plan buildout (2040) traffic conditions.

Avenue 58 shall be constructed to its ultimate half-section width as a Secondary along the commercial portion of the Project.

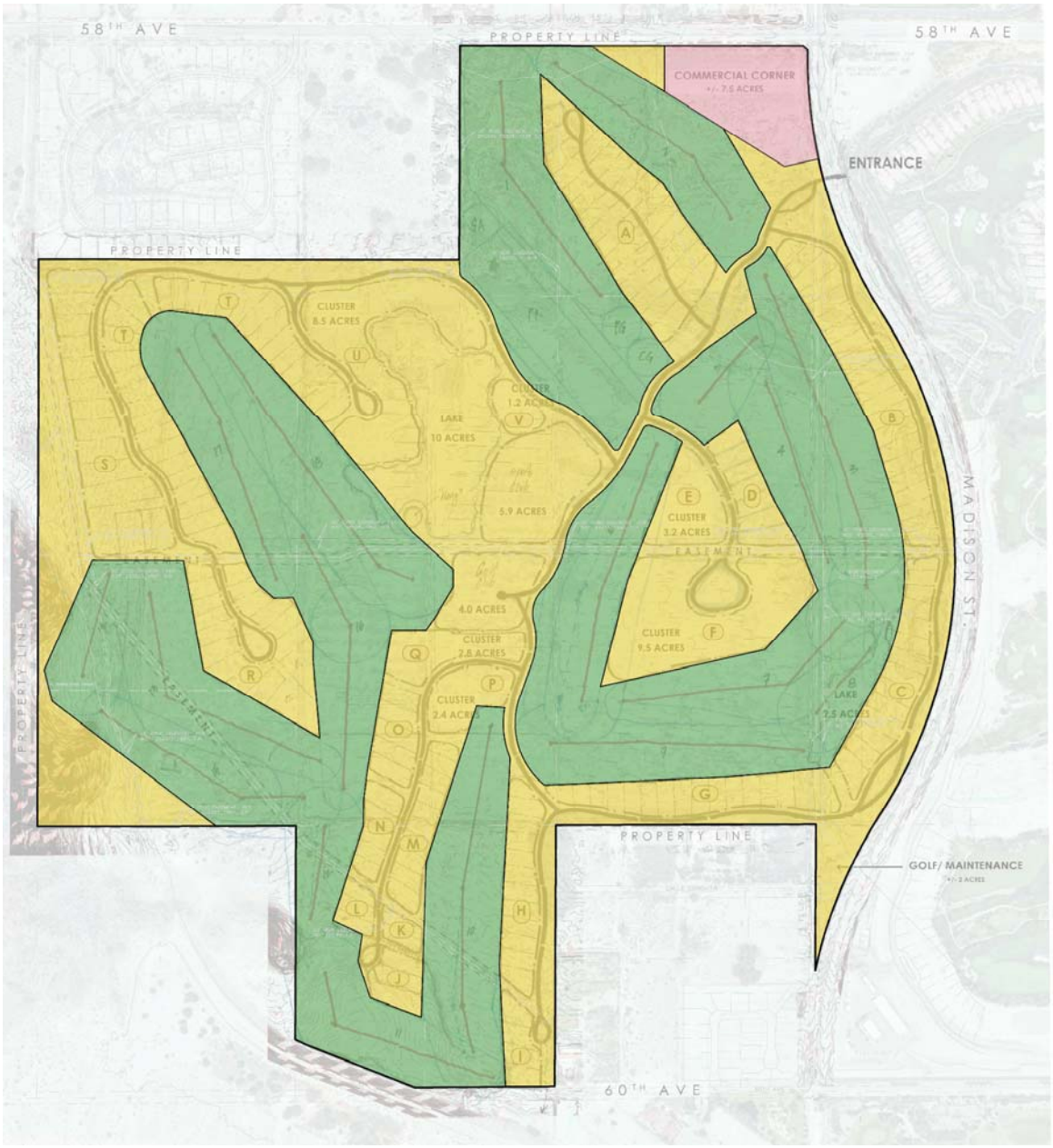
Madison Street shall be constructed to its ultimate half-section width as a Secondary along the commercial and residential portions of the Project.

Avenue 60 shall be constructed as a 2-lane roadway along the Project boundary.

For Project Access 1 & Avenue 58 (intersection 20), provide northbound cross-street stop control. Construct south leg with one shared northbound left-right turn lane. Accommodate westbound left turn lane within two-way left turn lane (TWLTL) striping.

Northbound cross-street stop control should be provided for Project Access 2 & Avenue 58 (intersection 21). Construct south leg with one right turn outbound lane. Left turns shall not be accommodated at this intersection.

EXHIBIT 1: PRELIMINARY SITE PLAN

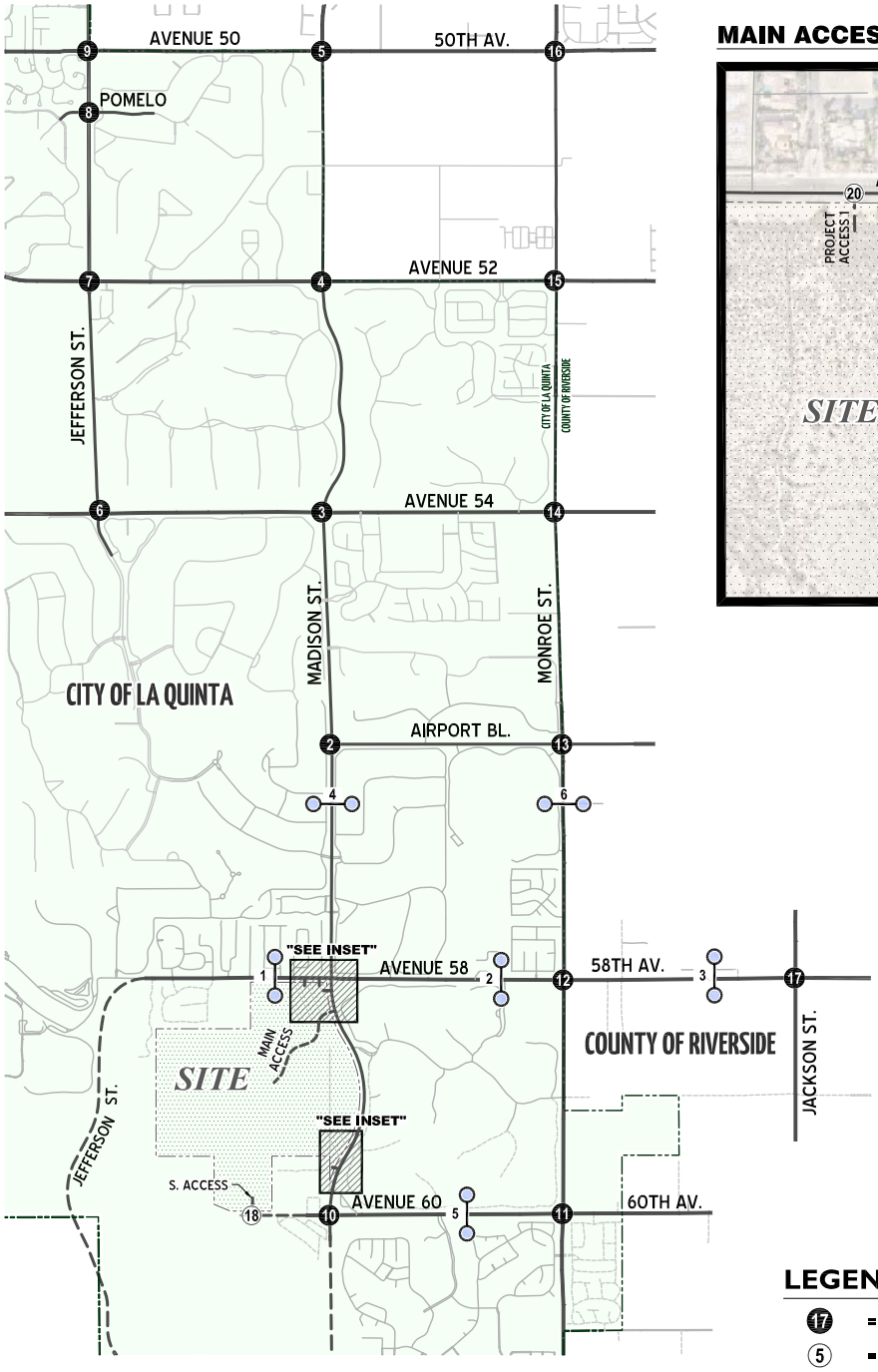


Residential Land Area :	± 193.7 Acres
Commercial Land Area :	± 7.7 Acres
Golf Course Area :	± 183.0 Acres
Total Project Area :	± 384.4 Acres

N

15455 - 01 - study area.dwg

EXHIBIT 2: STUDY AREA



MAIN ACCESS AREA

GOLF COURSE S. ACCESS AREA

LEGEND:

- = EXISTING ANALYSIS LOCATION
- = FUTURE ANALYSIS LOCATION
- = ROADWAY SEGMENT ANALYSIS LOCATION
- = FUTURE ROADWAY / DIRT
- = RIGHT-IN/RIGHT-OUT ONLY ACCESS

N

TABLE 1: SUMMARY OF INTERSECTION OPERATIONS

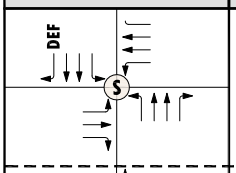
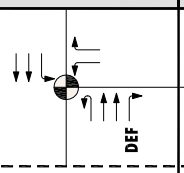
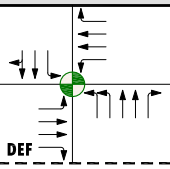
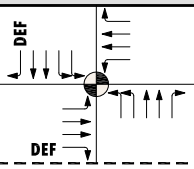
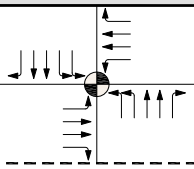
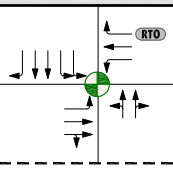
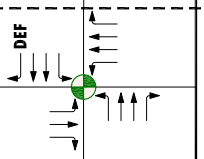
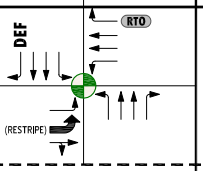
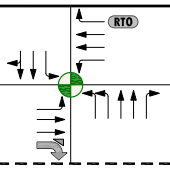
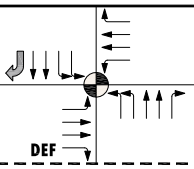
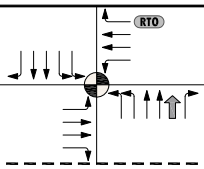
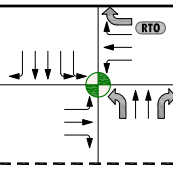
#	Intersection	2026								General Plan Buildout (2040)								
			Without Project				With Project				Without Project				With Project			
		Traffic	Delay (Secs)[1]		Level of Service[1]		Delay (Secs)[1]		Level of Service[1]		Traffic	Delay (Secs)[1]		Level of Service[1]		Delay (Secs)[1]		Level of Service[1]	
		Control[2]	AM	PM	AM	PM	AM	PM	AM	PM	Control[2]	AM	PM	AM	PM	AM	PM	AM	PM
1	Madison St. / Avenue 58	AWS	12.7	20.8	B	C	19.9	**>80**	C	**F**	--	--	--	--	--	--	--	--	--
	- With Improvements	**TS**	27.4	32.0	C	C	27.0	32.1	C	C	**TS**	40.1	**63.2**	D	**E**	41.7	**70.3**	D	**E**
	- With Modified GPCE Improvements	--	--	--	--	--	--	--	--	--	**TS**	34.5	45.5	C	D	35.3	54.9	D	D
2	Madison St. / Airport Blvd.	TS	9.6	10.9	A	B	9.5	10.7	A	B	TS	23.2	28.6	C	C	23.7	29.7	C	C
3	Madison St. / Avenue 54	AWS	**79.2**	**>80**	**F**	**F**	**>80**	**>80**	**F**	**F**	--	--	--	--	--	--	--	--	--
	- With Improvements	**TS**	41.2	43.6	D	D	42.3	52.8	D	D	**TS**	42.9	49.0	D	D	44.2	53.3	D	D
4	Madison St. / Avenue 52	TS	31.6	32.3	C	C	32.4	33.4	C	C	TS	38.8	52.0	D	D	39.5	53.7	D	D
5	Madison St. / Avenue 50	TS	31.9	33.4	C	C	32.3	33.7	C	C	TS	36.7	53.2	D	D	37.6	54.9	D	D
6	Jefferson St. / Avenue 54	AWS	**40.6**	**>80**	**E**	**F**	**57.6**	**>80**	**F**	**F**	--	--	--	--	--	--	--	--	--
	- With Improvements	**TS**	22.7	22.5	C	C	22.6	22.7	C	C	**TS**	24.0	43.5	C	D	24.2	48.4	C	D
7	Jefferson St. / Avenue 524	RDB	**>80**	**>80**	**F**	**F**	**>80**	**>80**	**F**	**F**	--	--	--	--	--	--	--	--	--
	- With Improvements	RDB	15.1	28.3	C	D	17.5	34.8	C	D	RDB	5.8	8.3	A	A	5.9	9.1	A	A
8	Jefferson St. / Pomelo	TS	19.4	35.4	B	D	19.5	35.9	B	D	TS	6.3	21.2	A	C	6.4	21.4	A	C
9	Jefferson St. / Avenue 50	TS	52.4	**58.8**	D	**E**	53.2	**60.3**	D	**E**	--	--	--	--	--	--	--	--	--
	- With Improvements	TS	51.4	51.0	D	D	52.0	51.7	D	D	TS	41.5	52.8	D	D	42.3	54.6	D	D
10	Madison St. / Avenue 60	AWS	9.4	12.8	A	B	10.5	15.4	B	C	--	--	--	--	--	--	--	--	--
	- With Improvements	--	--	--	--	--	--	--	--	--	**TS**	50.9	48.0	D	D	49.6	53.1	D	D
11	Monroe St. / Avenue 60	AWS	25.9	**76.4**	D	**F**	32.7	**>80**	D	**F**	--	--	--	--	--	--	--	--	--
	- With Improvements	**TS**	33.3	34.9	C	C	34.8	**38.3**	C	D	**TS**	45.1	**98.8**	D	**F**	45.7	**>80**	D	**F**
	- With Added GPCE Improvements	--	--	--	--	--	--	--	--	--	**TS**	36.7	50.3	D	D	37.2	53.0	D	D
12	Monroe St. / Avenue 58	AWS	**52.2**	**>80**	**F**	**F**	**>80**	**>80**	**F**	**F**	--	--	--	--	--	--	--	--	--
	- With Improvements	**TS**	23.2	33.3	C	C	26.6	41.1	C	D	**TS**	47.8	**72.0**	D	**E**	50.9	**76.4**	D	**E**
	- With Added GPCE Improvements	--	--	--	--	--	--	--	--	--	**TS**	38.0	48.6	D	D	39.5	52.2	D	D
13	Monroe St. / Airport Blvd.	AWS	47.3	>80	E	F	>80	>80	F	F	--	--	--	--	--	--	--	--	--
	- With Improvements	**TS**	24.0	24.9	C	C	24.5	26.3	C	C	**TS**	33.3	44.1	C	D	34.0	45.4	C	D
14	Monroe St. / Avenue 54	AWS	**>80**	**>80**	**F**	**F**	**>80**	**>80**	**F**	**F**	--	--	--	--	--	--	--	--	--
	- With Improvements	**TS**	34.7	37.0	C	D	**35.2**	38.0	D	D	**TS**	31.5	52.5	C	D	31.4	54.5	C	D
15	Monroe St. / Avenue 52	AWS	**>80**	**>80**	**F**	**F**	**>80**	**>80**	**F**	**F**	--	--	--	--	--	--	--	--	--
	- With Improvements	**TS**	33.7	41.2	C	D	34.2	45.3	C	D	**TS**	39.0	52.7	D	D	39.0	54.3	D	D
16	Monroe St. / 50th Avenue	TS	17.7	25.0	B	C	17.9	26.0	B	C	TS	34.5	53.3	C	D	34.7	54.5	C	D
17	Jackson St. / 58th Avenue	AWS	9.5	16.9	A	C	10.1	23.4	B	C	--	--	--	--	--	--	--	--	--
	- With Improvements	--	--	--	--	--	--	--	--	--	**TS**	29.7	36.7	C	D	30.7	38.0	C	D
18	S. Access / Avenue 60	**CSS**	Future Intersection				9.0	9.1	A	A	**CSS**	Future Intersection				34.6	34.3	D	D
19	Madison St. / Main Access	**TS**	Future Intersection				13.2	12.3	B	B	**TS**	Future Intersection				9.6	11.2	A	B
20	Project Access 1 / Avenue 58	**CSS**	Future Intersection				10.1	11.1	B	B	**CSS**	Future Intersection				12.7	14.4	B	B
21	Project Access 2 / Avenue 58	**CSS**	Future Intersection				9.4	10.0	A	A	**CSS**	Future Intersection				10.2	10.4	B	B
22	Madison St. / Project Access 3	**CSS**	Future Intersection				9.7	11.8	A	A	**CSS**	Future Intersection				13.7	14.6	B	B
23	Madison St. / Golf Course S. Access	**CSS**	Future Intersection				10.3	11.3	A	B	**CSS**	Future Intersection				25.1	32.9	B	B

[1] Per the Highway Capacity Manual 6th Edition (HCM6), overall average intersection delay and level of service are shown for intersections with a traffic signal or 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.
BOLD = LOS does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

[2] CSS = Cross-street Stop; TS = Traffic Signal; AWS = All-way Stop; RDB = Roundabout; **1** = Improvement

F:\UXRjobs_15100-15500_15400\15455\Excel\[15455 - Report.xlsx]1 - LOS Summary

EXHIBIT 3 (1 OF 2): SUMMARY OF RECOMMENDED IMPROVEMENTS

	1 MADISON ST. & AVENUE 58	2 MADISON ST. & AIRPORT BLVD.	3 MADISON ST. & AVENUE 54	4 MADISON ST. & AVENUE 52	5 MADISON ST. & AVENUE 50	6 JEFFERSON ST. & AVENUE 54	
2026 CONDITIONS							WITHOUT PROJECT
		NO IMPROVEMENTS	SAME AS 2026 WITHOUT PROJECT IMPROVEMENTS	NO IMPROVEMENTS	NO IMPROVEMENTS	SAME AS 2026 WITHOUT PROJECT IMPROVEMENTS	WITH PROJECT
2040 CONDITIONS		NO IMPROVEMENTS					WITHOUT PROJECT
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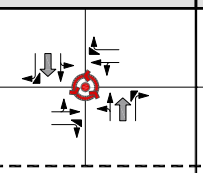
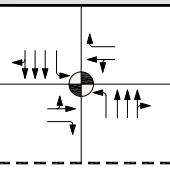
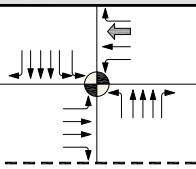
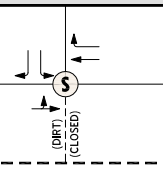
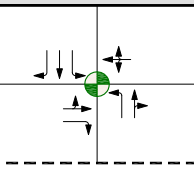
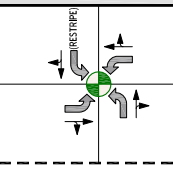
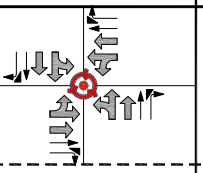
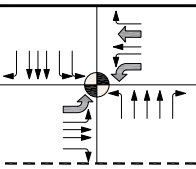
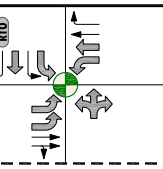
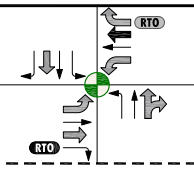
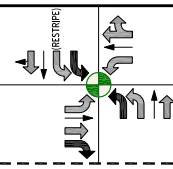
	7 JEFFERSON ST. & AVENUE 52	8 JEFFERSON ST. & POMELO	9 JEFFERSON ST. & AVENUE 50	10 MADISON & AVENUE 60	11 MONROE ST. & AVENUE 60	12 MONROE ST. & AVENUE 58	
2026 CONDITIONS							WITHOUT PROJECT
	SAME AS 2026 WITHOUT PROJECT IMPROVEMENTS	NO IMPROVEMENTS	SAME AS 2026 WITHOUT PROJECT IMPROVEMENTS	NO IMPROVEMENTS	SAME AS 2026 WITHOUT PROJECT IMPROVEMENTS	SAME AS 2026 WITHOUT PROJECT IMPROVEMENTS	WITH PROJECT
2040 CONDITIONS		NO IMPROVEMENTS					WITHOUT PROJECT
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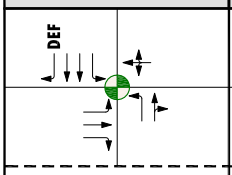
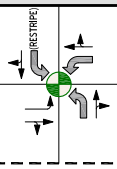
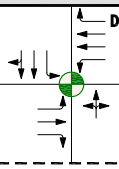
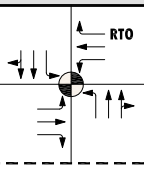
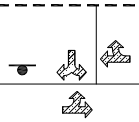
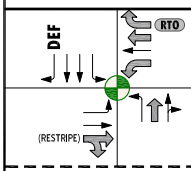
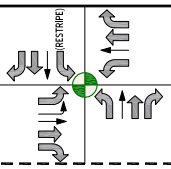
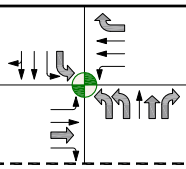
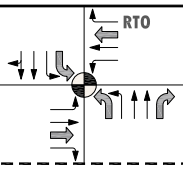
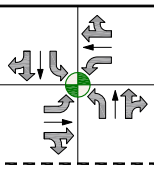
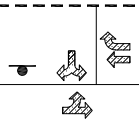
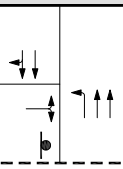
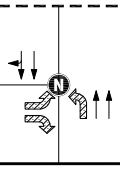
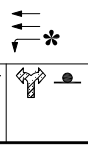
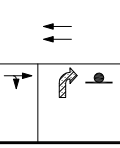
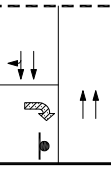
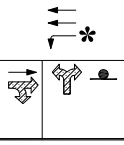
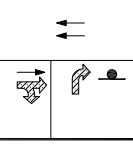
LEGEND:

- 23 = INTERSECTION ID
- = EXISTING TRAFFIC SIGNAL
- = CITY CIP TRAFFIC SIGNAL
- N = NEW PROJECT TRAFFIC SIGNAL
- = EXISTING ROUNDABOUT
- = PROJECT ROUNDABOUT
- = EXISTING LANE
- = LANE IMPROVEMENT (CONSISTENT WITH CITY OF LA QUINTA GENERAL PLAN CIRCULATION ELEMENT UPDATE TIA, MAY 2012)
- = ADDITIONAL LANE IMPROVEMENT
- = PROJECT ACCESS LANE IMPROVEMENT
- = FREE RIGHT TURN
- DEF = DEFACTO RIGHT TURN LANE
- RTO = EXISTING RIGHT TURN OVERLAP
- RTO = RIGHT TURN OVERLAP IMPROVEMENT (CONSISTENT WITH CITY OF LA QUINTA GENERAL PLAN CIRCULATION ELEMENT UPDATE TIA, MAY 2012)
- RTO = ADDITIONAL RIGHT TURN OVERLAP IMPROVEMENT (GPA OPTION 1)
- = LEFT TURN LANE ACCOMMODATED WITHIN TWO-WAY LEFT TURN LANE STRIPED MEDIAN

EXHIBIT 3 (2 OF 2): SUMMARY OF RECOMMENDED IMPROVEMENTS

	13 MONROE ST. & AIRPORT BLVD.	14 MONROE ST. & AVENUE 54	15 MONROE ST. & AVENUE 52	16 MONROE ST. & 50TH AVENUE	17 JACKSON ST. & 58TH AVENUE	18 S. ACCESS & AVENUE 60	
2026 CONDITIONS						FUTURE INTERSECTION	WITHOUT PROJECT
	SAME AS 2026 WITHOUT PROJECT IMPROVEMENTS	SAME AS 2026 WITHOUT PROJECT IMPROVEMENTS	SAME AS 2026 WITHOUT PROJECT IMPROVEMENTS	NO IMPROVEMENTS	NO IMPROVEMENTS		WITH PROJECT
2040 CONDITIONS						FUTURE INTERSECTION	WITHOUT PROJECT
	SAME AS 2040 WITHOUT PROJECT IMPROVEMENTS	SAME AS 2040 WITHOUT PROJECT IMPROVEMENTS	SAME AS 2040 WITHOUT PROJECT IMPROVEMENTS	SAME AS 2040 WITHOUT PROJECT IMPROVEMENTS	SAME AS 2040 WITHOUT PROJECT IMPROVEMENTS		WITH PROJECT

	19 MADISON ST. & MAIN ACCESS	20 PROJECT ACCESS 1 & AVENUE 58	21 PROJECT ACCESS 2 & AVENUE 58	22 MADISON ST. & PROJECT ACCESS 3	23 MADISON ST. & GOLF COURSE S. ACCESS	
2026 CONDITIONS	FUTURE INTERSECTION	FUTURE INTERSECTION	FUTURE INTERSECTION	FUTURE INTERSECTION		WITHOUT PROJECT
					NO IMPROVEMENTS	WITH PROJECT
2040 CONDITIONS	FUTURE INTERSECTION	FUTURE INTERSECTION	FUTURE INTERSECTION	FUTURE INTERSECTION	NO IMPROVEMENTS	WITHOUT PROJECT
	SAME AS 2026 WITH PROJECT IMPROVEMENTS			SAME AS 2026 WITH PROJECT IMPROVEMENTS	NO IMPROVEMENTS	WITH PROJECT

LEGEND:

- 23 = INTERSECTION ID
- = EXISTING TRAFFIC SIGNAL
- = CITY CIP TRAFFIC SIGNAL
- N = NEW PROJECT TRAFFIC SIGNAL
- = EXISTING ROUNDABOUT
- = PROJECT ROUNDABOUT
- = EXISTING LANE
- = LANE IMPROVEMENT (CONSISTENT WITH CITY OF LA QUINTA GENERAL PLAN CIRCULATION ELEMENT UPDATE TIA, MAY 2012)
- = ADDITIONAL LANE IMPROVEMENT
- = PROJECT ACCESS LANE IMPROVEMENT
- = FREE RIGHT TURN
- DEF = DEFACTO RIGHT TURN LANE
- RTO = EXISTING RIGHT TURN OVERLAP
- RTO = RIGHT TURN OVERLAP IMPROVEMENT (CONSISTENT WITH CITY OF LA QUINTA GENERAL PLAN CIRCULATION ELEMENT UPDATE TIA, MAY 2012)
- RTO = ADDITIONAL RIGHT TURN OVERLAP IMPROVEMENT (GPA OPTION 1)
- * = LEFT TURN LANE ACCOMMODATED WITHIN TWO-WAY LEFT TURN LANE STRIPED MEDIAN

TABLE 2: SUMMARY OF ROADWAY SEGMENT ANALYSIS

Roadway	Segment	Roadway Designation	# of Lanes[7]	Existing Capacity[1]	2026				Potentially Significant Cumulative Impact[3]	# of Lanes[7]	2040 Capacity[1]	GPBO (2040)			
					Without Project		With Project					Without Project		With Project	
					ADT[2]	V/C	ADT[2]	V/C				ADT[2]	V/C	ADT[2]	V/C
Avenue 58	West of Madison St.	Secondary	3	21,000 [4]	5,700	0.27	6,300	0.30	No	4	28,000	11,800	0.42	12,500	0.45
	West of Monroe St.	Secondary	4	28,000	5,800	0.21	8,300	0.30	No	4	28,000	11,600	0.41	14,000	0.50
	West of Jackson St.	Secondary	2	14,000 [4]	4,800	0.34	5,900	0.42	No	4	28,000	17,900	0.64	19,000	0.68
Madison St.	South of Airport Bl.	Primary	4	42,600	14,200	0.33	18,100	0.42	No	4	42,600	30,100	0.71	34,000	0.80
Avenue 60	West of Monroe St.	Secondary	3	21,000 [4]	6,900	0.33	8,500	0.40	No	4	28,000	22,400	0.80	24,000	0.86
Monroe St.	South of Airport Bl.	Primary	3	31,950 [5]	12,000	0.38	13,400	0.42	No	4	42,600	24,600	0.58	26,000	0.61

[1] These maximum roadway capacities have been extracted from the City of La Quinta Engineering Bulletin #06-13 (October 2017).
These roadway capacities are "rule of thumb" estimates for planning purposes. The LOS E service volumes are estimated maximum daily capacity for respective classifications.
Capacity is affected by such factors as intersections (spacing, configuration and control features), degree of access control, roadway grades, design geometrics (horizontal and vertical alignment standards), sight distance, vehicle mix (truck and bus traffic) and pedestrian and bicycle traffic.

[2] Average Daily Traffic (ADT) expressed in vehicles per day.

[3] A potentially significant cumulative traffic impact is defined to occur on any road segment if the project would cause the existing LOS to fall to worse than LOS D for EAPC (2026) With Project volumes.
A potentially significant cumulative traffic impact is also defined to occur if the segment is projected to be operating at LOS E or LOS F with project traffic included and the V/C is increased by 0.02 or more by addition of project traffic.

[4] Capacity was calculated as a ratio of 4-lane Secondary capacity.

[5] Capacity was calculated as a ratio of 4-lane Primary capacity.

[7] 1 = Existing number of lanes; **1** = City of La Quinta General Plan Buildout number of lanes

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For Madison Street & Project Access 3 (intersection 22), provide eastbound cross-street stop control. Construct west leg with one right turn outbound lane. Left turns shall not be accommodated at this intersection.

For Madison Street & Main Access (intersection 19), construct west leg with one left turn outbound and one right turn outbound lane. The main Project driveway is a full access location, serving left and right turns to and from Madison Street. A traffic signal will be warranted at this location with full occupancy of the Project. The northbound left turn lane serving the main Project driveway is recommended to provide 200 feet of vehicle queuing.

For South Access & Avenue 60 (intersection 18), provide southbound cross-street stop control and add access control to serve Project residents only. Construct north leg with one shared left-right outbound lane. Construct west leg with one shared left-through lane. Construct east leg with one through lane and a separate westbound right turn lane.

The Madison Street / Golf Course Service Access (intersection 23) is located at an existing partially improved driveway labeled Calle Conchita. Existing Madison Street improvements at this location include the median break and northbound left turn lane which accommodate buildout of the Project golf maintenance facility.

Exhibit 4 shows Project access and site-adjacent improvements to be constructed in conjunction with development.

PROJECT TRIP GENERTION, DISTRIBUTION AND ASSIGNMENT

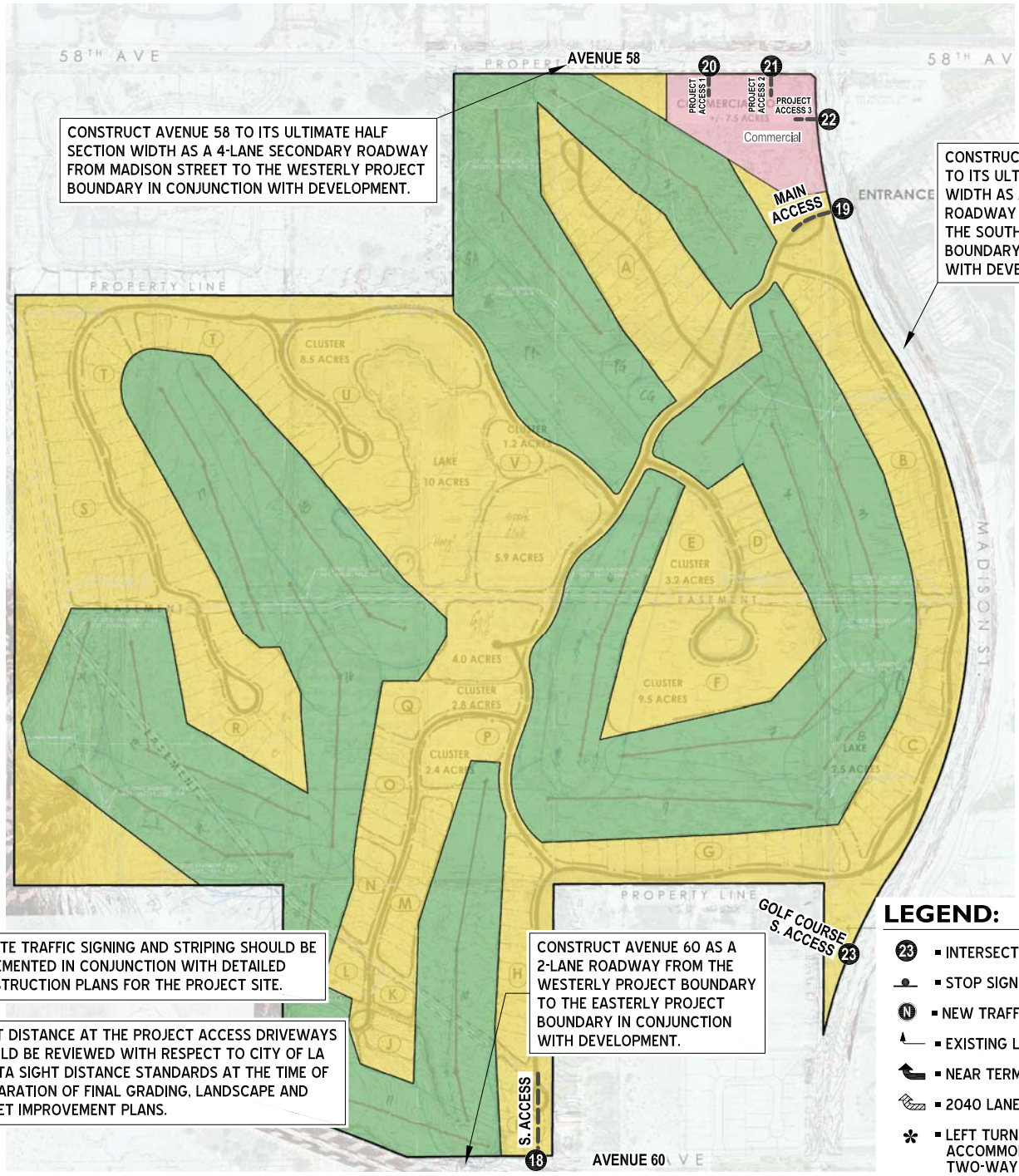
Trip generation rates are presented on Table 3 for Project buildout conditions based on the Institute of Transportation Engineers (ITE) Trip Generation manual, 11th Edition (2021). ITE trip generation rates for Single Family Detached Residential (Code 210), Golf Course (Code 430), and Shopping Center (Code 821) are used.

The Project land uses includes a mix of commercial retail, golf and residential uses, so reasonable assumptions regarding internal/pass-by interactions between these uses are included in the trip generation calculations. Residents and golf visitors will use the commercial retail area facilities (which typically include merchandise and restaurant land uses). The total internal/pass-by trip ends have been adjusted in a manner to ensure that no “double-counting” occurs before assigning the project trips to the roadway network.

As shown on Table 3, the site is anticipated to generate a net total of 8,762 external trip-ends per day on a typical weekday with 591 external vehicles per hour (VPH) during the weekday AM peak hour and 834 external VPH during the weekday PM peak hour.

The trip distribution patterns for the Project residential and golf components are graphically depicted on Exhibits 5 and 6, respectively. Exhibit 7 shows the trip distribution pattern for the Project commercial corner. The trip distributions have been developed based on RivTAM and local knowledge in the vicinity of the Project site and refined to reflect the roadway network and the surrounding uses in the vicinity.

EXHIBIT 4: SITE ADJACENT ROADWAY AND SITE ACCESS RECOMMENDATIONS



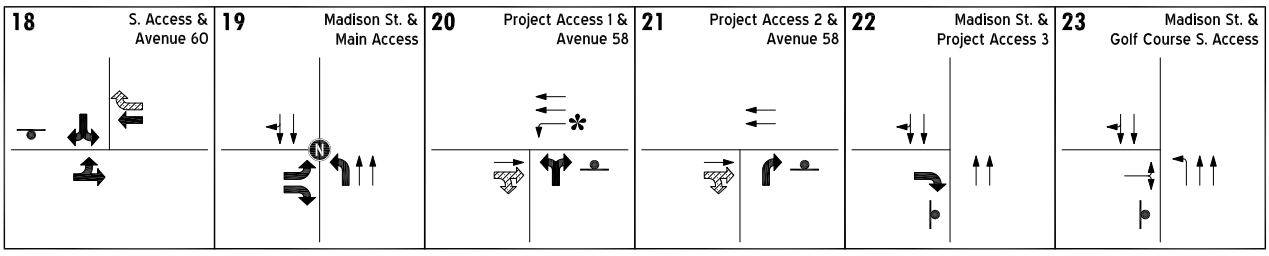


TABLE 3: PROJECT BUILDOUT, EXISTING ENTITLEMENTS TRIP GENERATION SUMMARY

Trip Generation Rates[1]

Land Use	ITE LU Code	Quantity[2]	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total	Daily
Single Family Detached	210	750 DU	0.18	0.52	0.70	0.59	0.35	0.94	9.43
Shopping Center (40-150k)	821	60 TSF	1.07	0.66	1.73	2.54	2.65	5.19	67.52
Golf Course	430	18 HOLES	1.39	0.37	1.76	1.54	1.37	2.91	30.38

Trip Generation Results

Land Use	ITE LU Code	Quantity[2]	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total	Daily
Single Family Detached	210	750 DU	135	390	525	443	263	706	7,073
Internal to Retail/Golf Course			*(5)*	*(11)*	*(16)*	*(28)*	*(27)*	*(55)*	*(662)*
Residential External Trips			130	379	509	415	236	651	6,411
Shopping Center (40-150k)	821	60 TSF	64	40	104	152	159	311	4,051
Pass-By (25%)			*(13)*	*(13)*	*(26)*	*(39)*	*(39)*	*(78)*	*(1,013)*
Internal to Residential/Golf Course			*(10)*	*(6)*	*(16)*	*(33)*	*(35)*	*(68)*	*(816)*
Shopping Center External Trips			41	21	62	80	85	165	2,222
Golf Course	430	18 HOLES	25	7	32	28	25	53	547
Internal to Residential/Retail			*(7)*	*(5)*	*(12)*	*(18)*	*(17)*	*(35)*	*(418)*
Golf Course External Trips			18	2	20	10	8	18	129
Project Subtotal			224	437	661	623	447	1,070	11,671
Internal Capture Subtotal			*(22)*	*(22)*	*(44)*	*(79)*	*(79)*	*(158)*	*(1,896)*
Pass-By (Shopping Center)			*(13)*	*(13)*	*(26)*	*(39)*	*(39)*	*(78)*	*(1,013)*
Project Total External Trips			**189**	**402**	**591**	**505**	**329**	**834**	**8,762**

[1] Trip Generation Source: Institute of Transportation Engineers (ITE), Trip Generation Manual, 11th Edition (2021).

[2] DU = Dwelling Unit; TSF = Thousand Square Feet

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EXHIBIT 5: PROJECT RESIDENTIAL EXTERNAL TRIP DISTRIBUTION

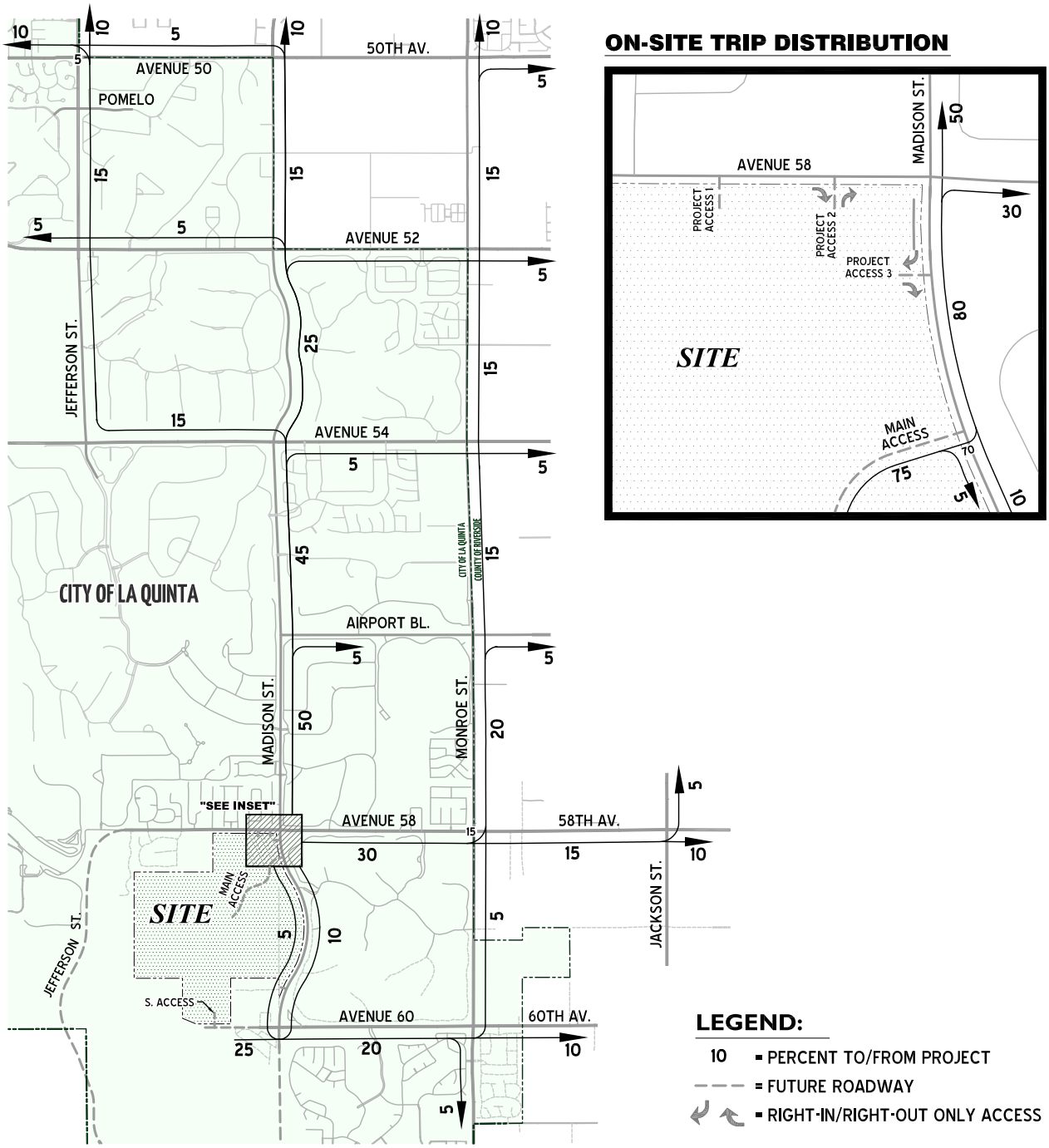


EXHIBIT 6: PROJECT GOLF COURSE EXTERNAL TRIP DISTRIBUTION

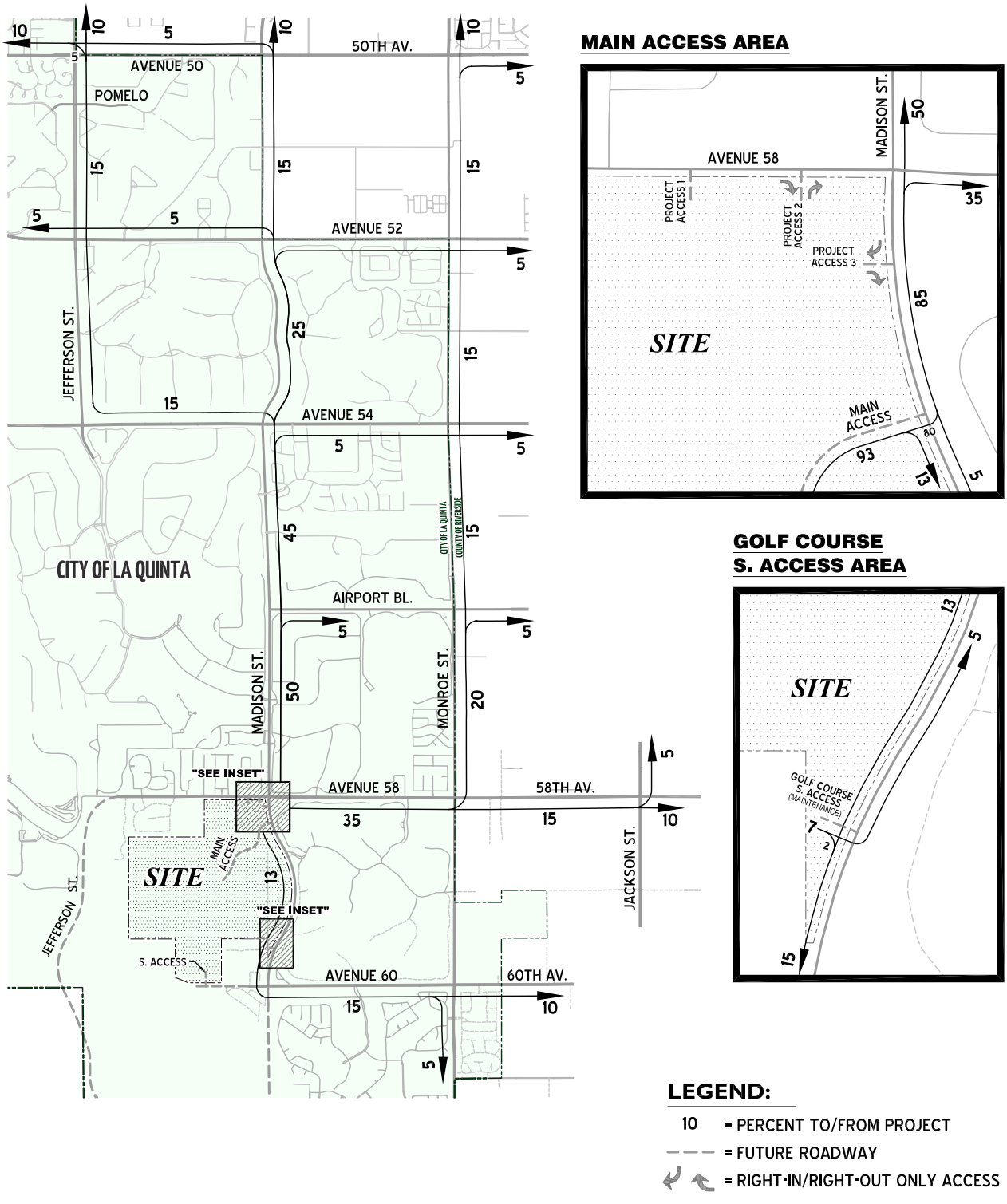
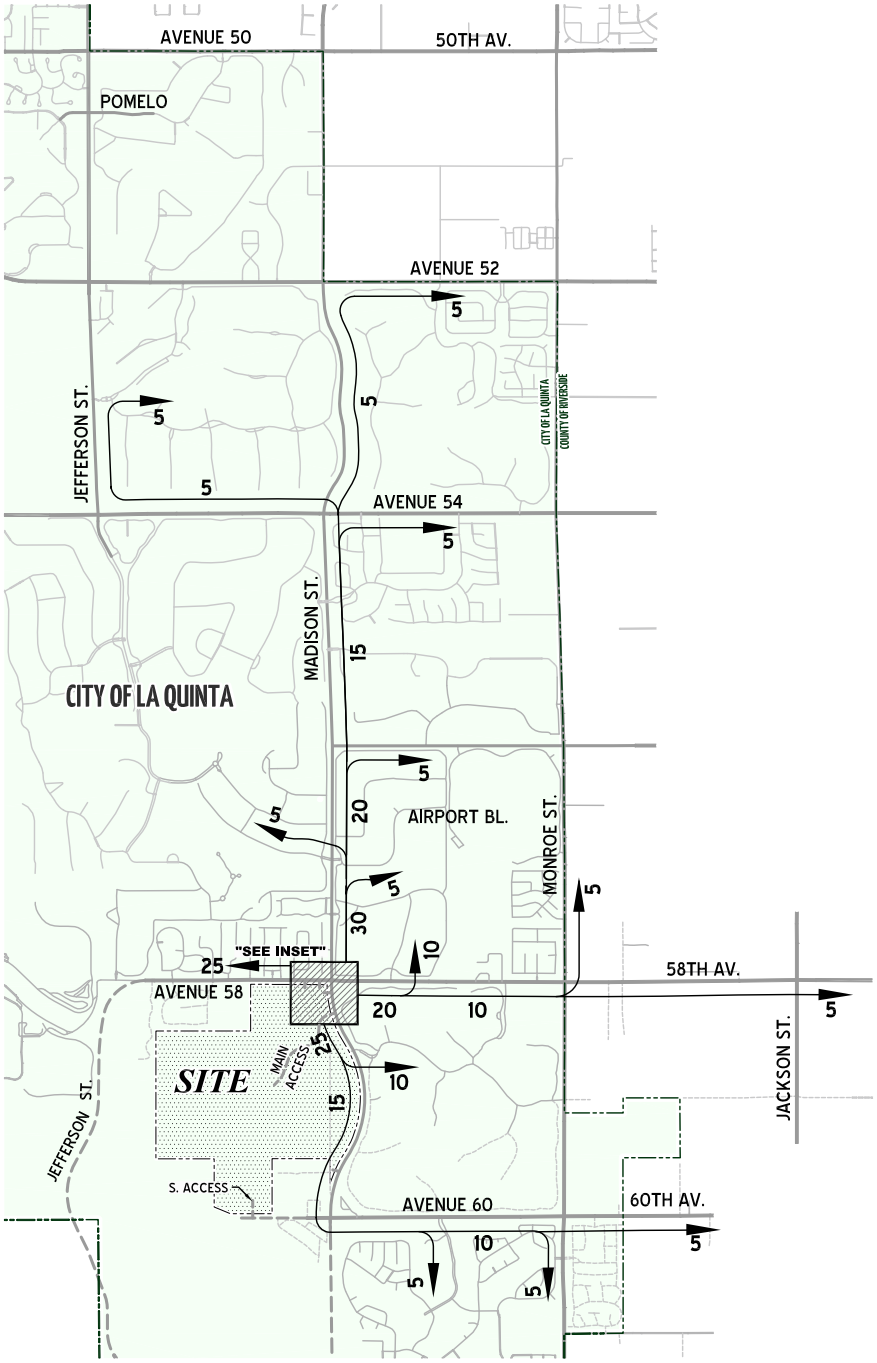
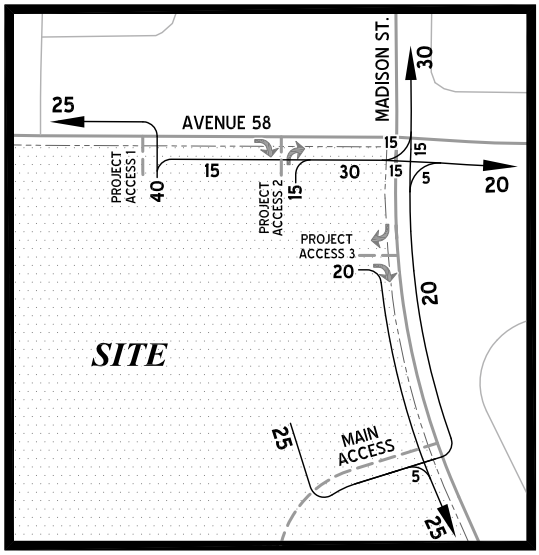


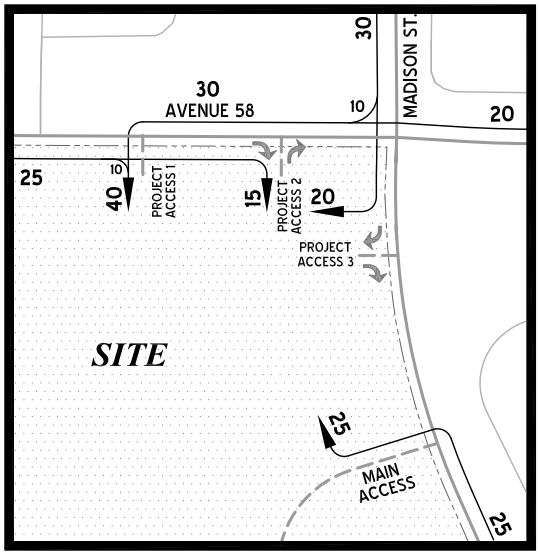
EXHIBIT 7: PROJECT SHOPPING CENTER
EXTERNAL TRIP DISTRIBUTION



ON-SITE OUTBOUND TRIP DISTRIBUTION



ON-SITE INBOUND TRIP DISTRIBUTION



LEGEND:

10 = PERCENT TO/FROM PROJECT

= FUTURE ROADWAY

= RIGHT-IN/RIGHT-OUT ONLY ACCESS

N

Based on the identified Project traffic generation and trip distribution patterns, Project ADT and weekday AM and PM peak hour intersection turning movement volumes are shown on Exhibits 8 through 10, respectively.

EAPC 2026 CONDITIONS

Estimates of Existing plus Ambient plus Project plus Cumulative (EAPC 2026) ADT, weekday AM, and weekday PM peak hour volumes are shown on Exhibits 11, 12 and 13, respectively.

LOS calculations were conducted for the study intersections to evaluate their operations under EAPC 2026 traffic conditions with roadway and intersection geometrics consistent with those described in the October 2021 Coral Mountain Specific Plan Traffic Impact Analysis. The intersection analysis results are summarized in Table 4, which indicates that the following eight study area intersections are anticipated to require installation of a traffic signal in order to maintain acceptable LOS under EAPC conditions:

- Madison Street at Avenue 58
- Madison Street at Project Main Access
- Madison Street at Avenue 54
- Jefferson Street at Avenue 54
- Monroe Street at Avenue 60
- Monroe Street at Avenue 58
- Monroe Street at Airport Boulevard
- Monroe Street at Avenue 54
- Monroe Street at Avenue 52

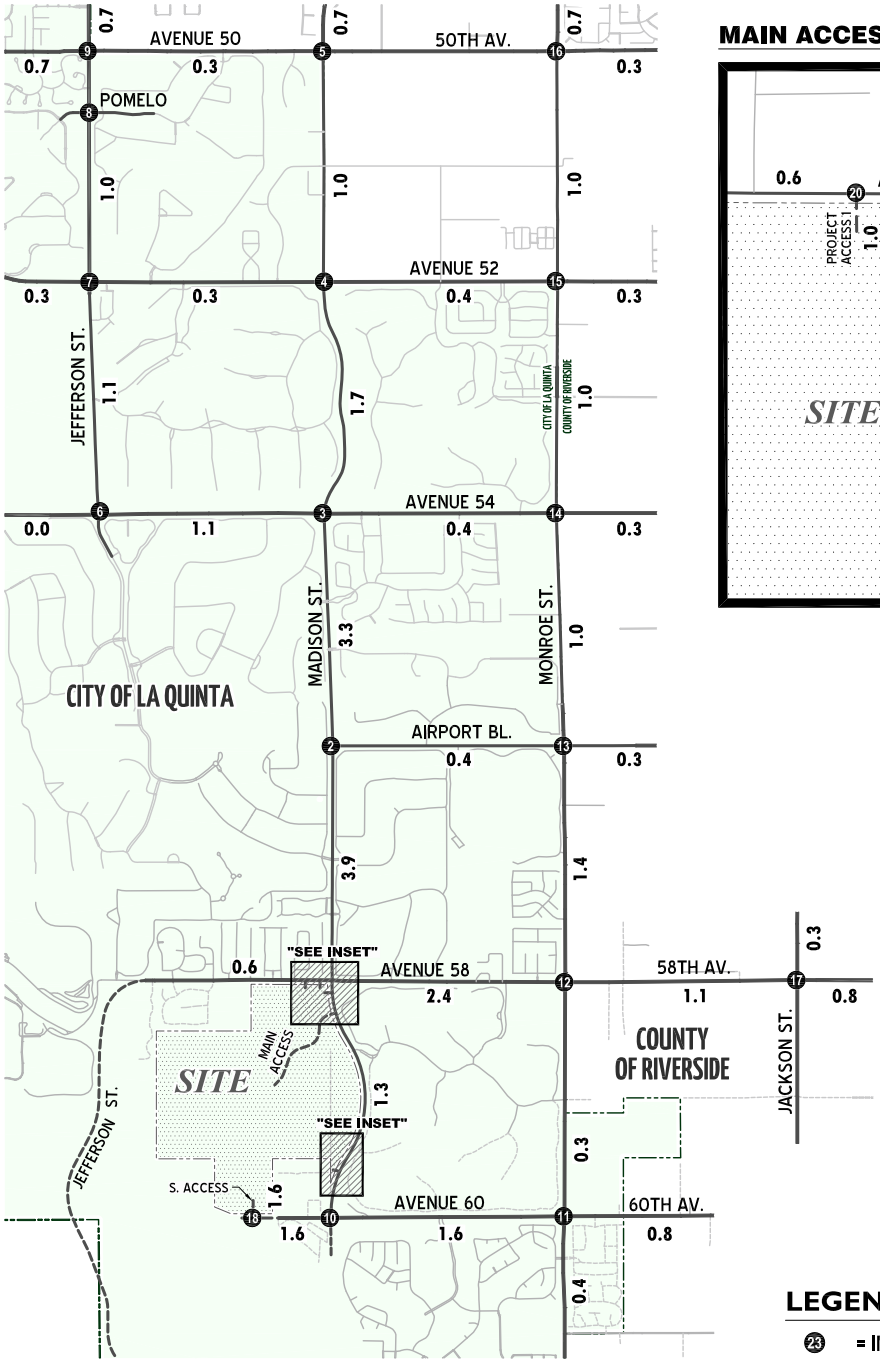
In addition, for Jefferson Street at Avenue 50, a second westbound through lane is necessary to maintain acceptable level of service. EAPC analysis results in one cumulatively impacted intersection (Jefferson Street at Avenue 52). The intersection operations analysis worksheets for EAPC 2026 traffic conditions are included in Attachment 1.

Table 4 also documents conditions with improvements to attain acceptable LOS. Jefferson Street at Avenue 52 requires reconstruction of the current roundabout design to incorporate 2 circulating lanes around the center island. This effectively accommodates an additional through lane in the northbound and southbound directions to provide acceptable LOS.

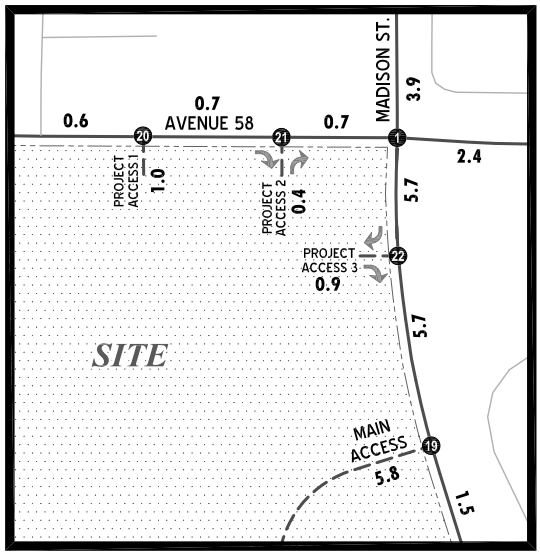
Table 5 provides a summary of the EAPC 2026 traffic conditions roadway segment capacity analysis based on the City of La Quinta roadway segment capacity thresholds. As shown on 4, all study roadway segments analyzed are anticipated to operate at acceptable LOS under EAPC 2026 traffic conditions.

A queuing analysis was performed for With Project Conditions to assess the adequacy of turn bay lengths to accommodate vehicle queues at the Project entries. Queuing analysis findings are presented in Table 6 for EAPC 2026 traffic conditions. Queueing analysis worksheets for EAPC 2026 are also provided in Attachment 1.

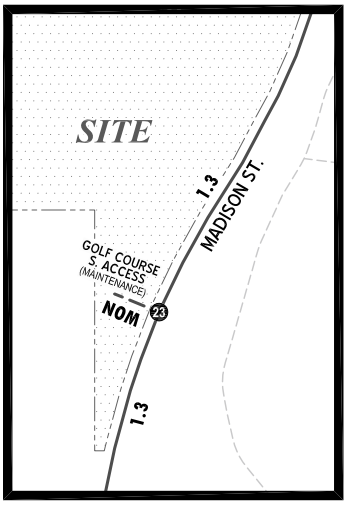
EXHIBIT 8: PROJECT BUILDOUT (2026)
AVERAGE DAILY TRAFFIC (ADT)



MAIN ACCESS AREA



GOLF COURSE S. ACCESS AREA

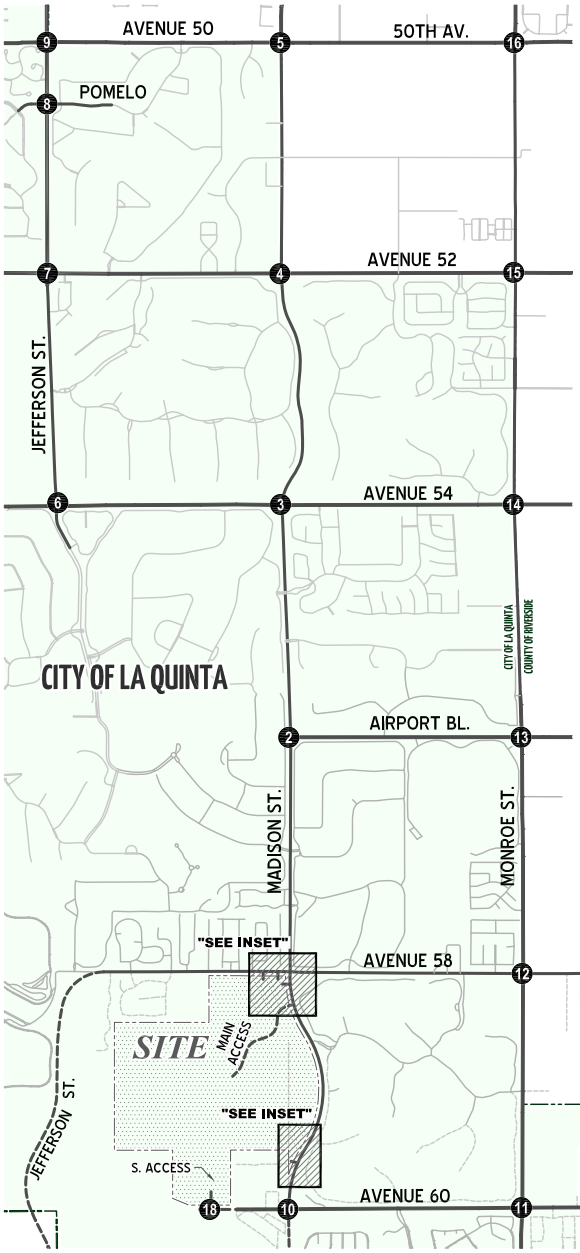


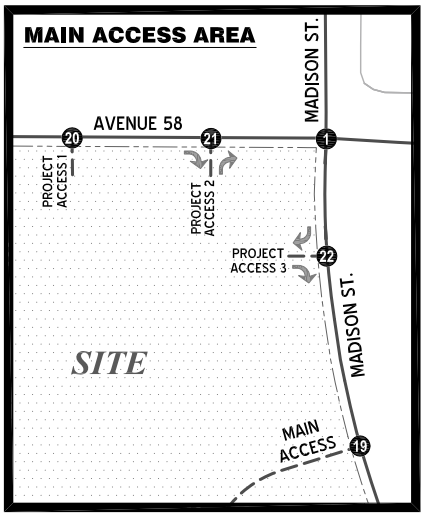
LEGEND:

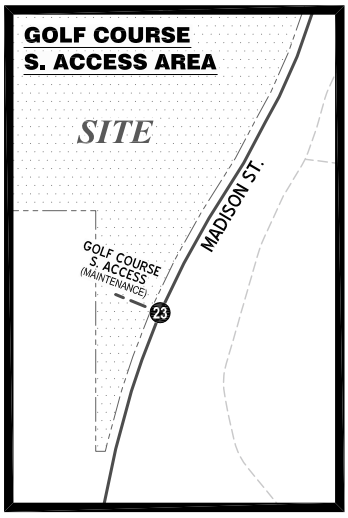
- (23) = INTERSECTION ID
- 10.0 = VEHICLES PER DAY (1000'S)
- NOM = NOMINAL, LESS THAN 50 VEHICLES PER DAY
- = FUTURE ROADWAY
- = RIGHT-IN/RIGHT-OUT ONLY ACCESS

N

EXHIBIT 9: PROJECT BUILDOUT (2026)
AM PEAK HOUR INTERSECTION VOLUMES







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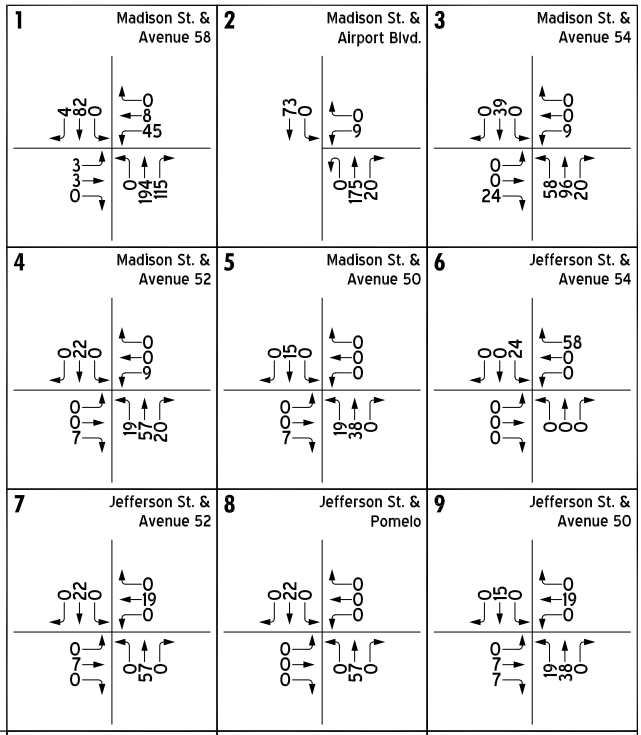
- = FUTURE ROADWAY
- = RIGHT-IN/RIGHT-OUT ONLY ACCESS



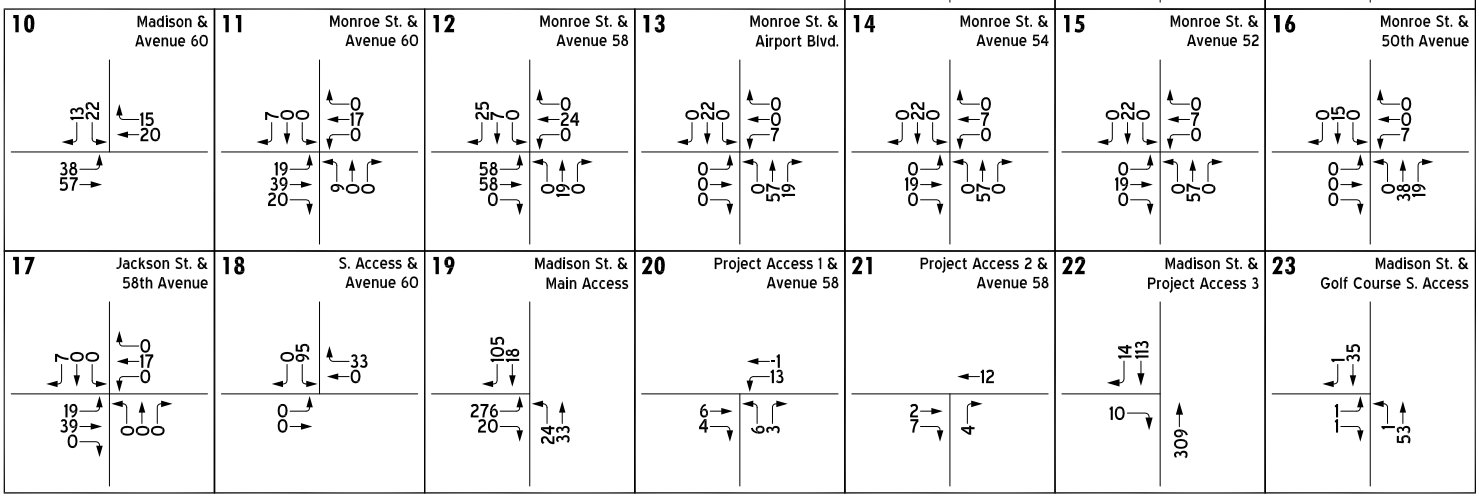
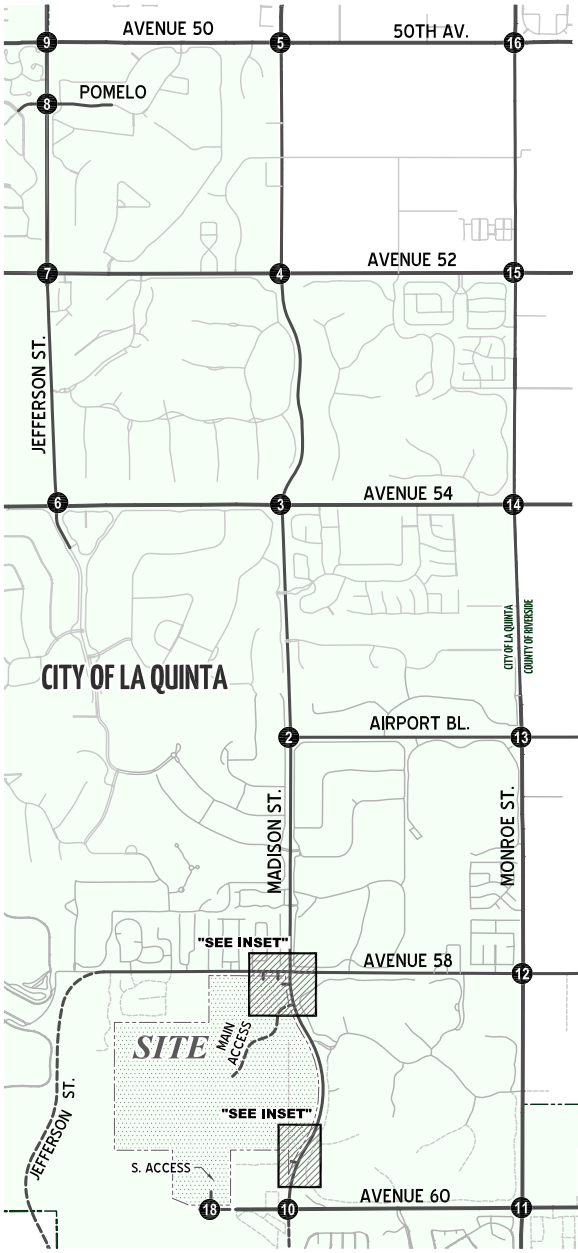
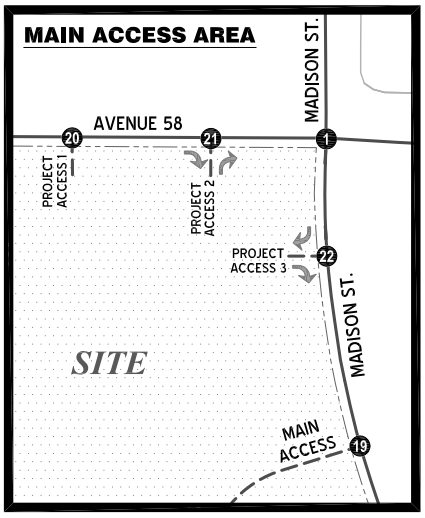
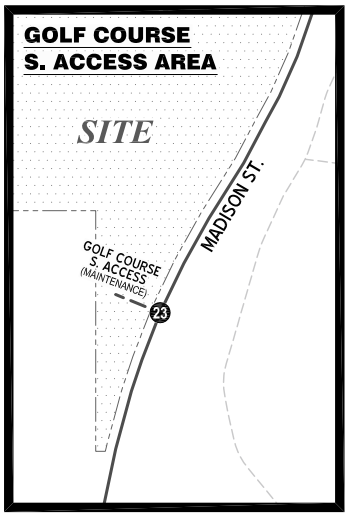


EXHIBIT 10: PROJECT BUILDOUT (2026)
PM PEAK HOUR INTERSECTION VOLUMES

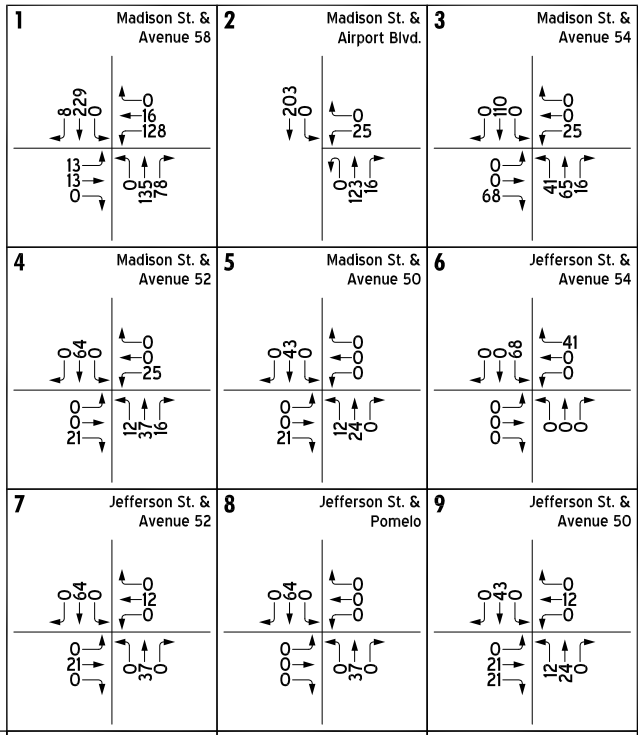






LEGEND:

- ▪ INTERSECTION ID
- ▪ FUTURE ROADWAY
- ▪ RIGHT-IN/RIGHT-OUT ONLY ACCESS



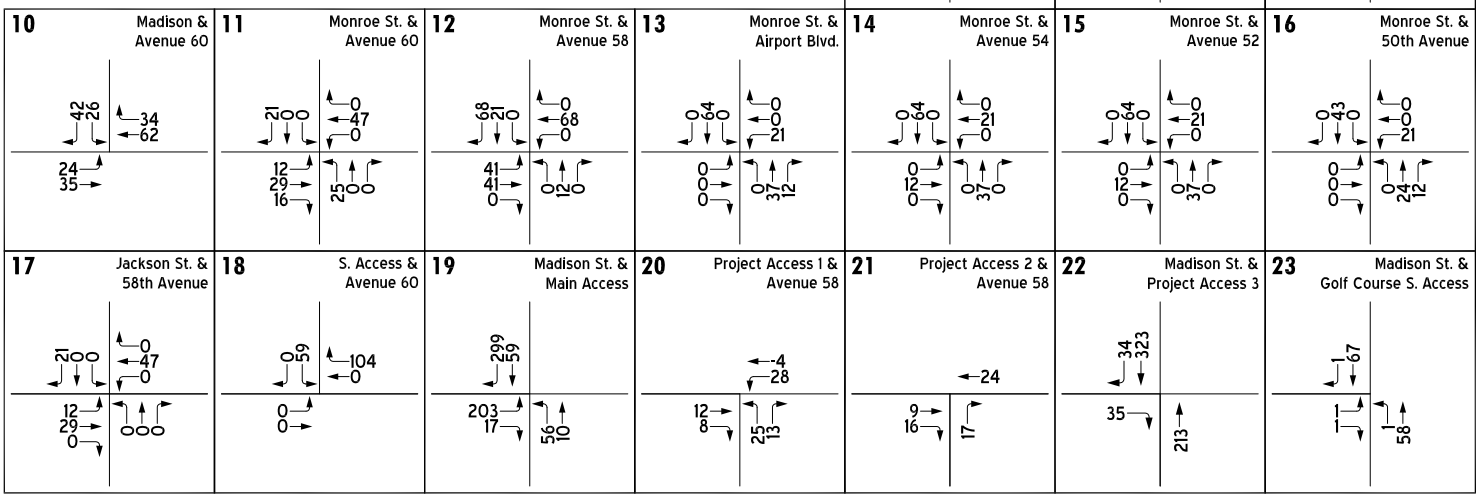
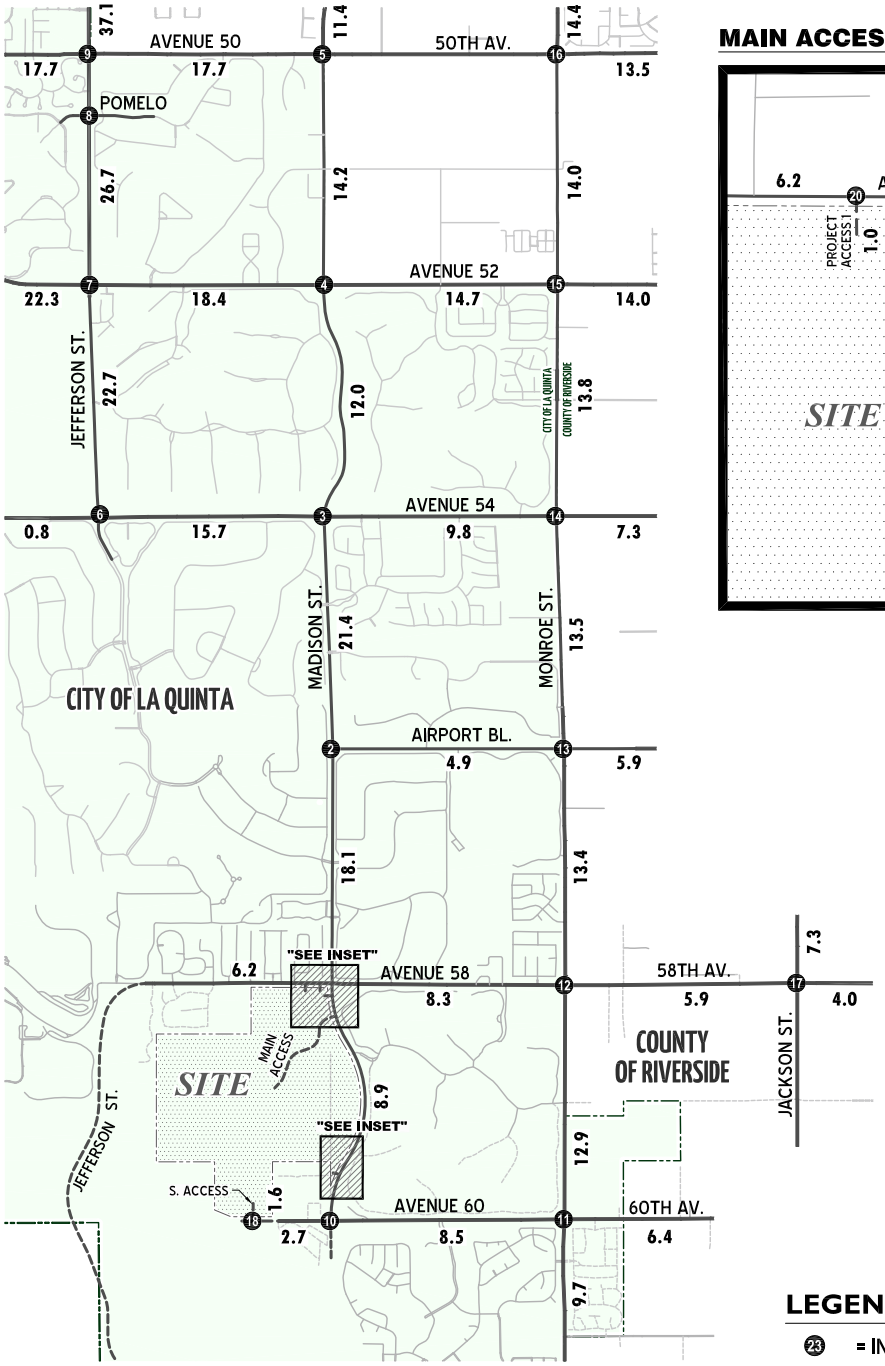
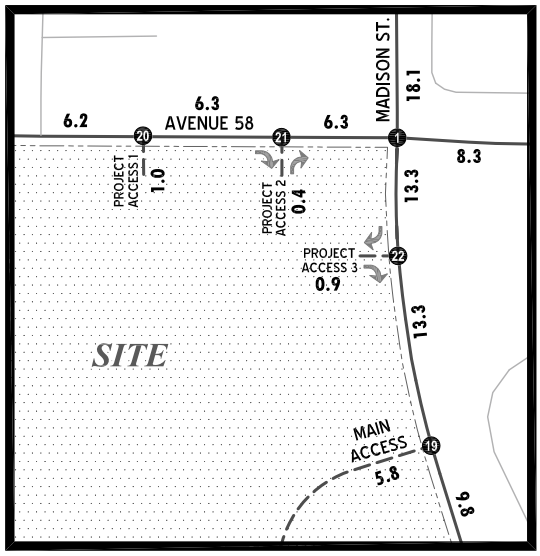


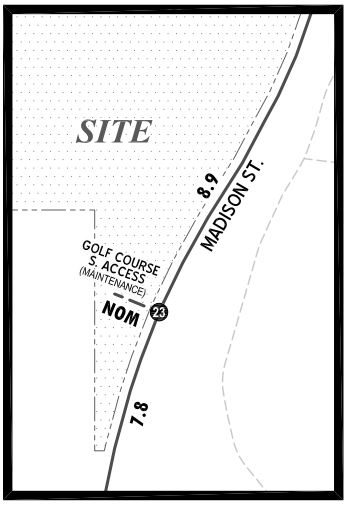
EXHIBIT 11: EAPC (2026)
AVERAGE DAILY TRAFFIC (ADT)



MAIN ACCESS AREA



GOLF COURSE S. ACCESS AREA



LEGEND:

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- = FUTURE ROADWAY
- = RIGHT-IN/RIGHT-OUT ONLY ACCESS

N

EXHIBIT 12: EAPC (2026)
AM PEAK HOUR INTERSECTION VOLUMES

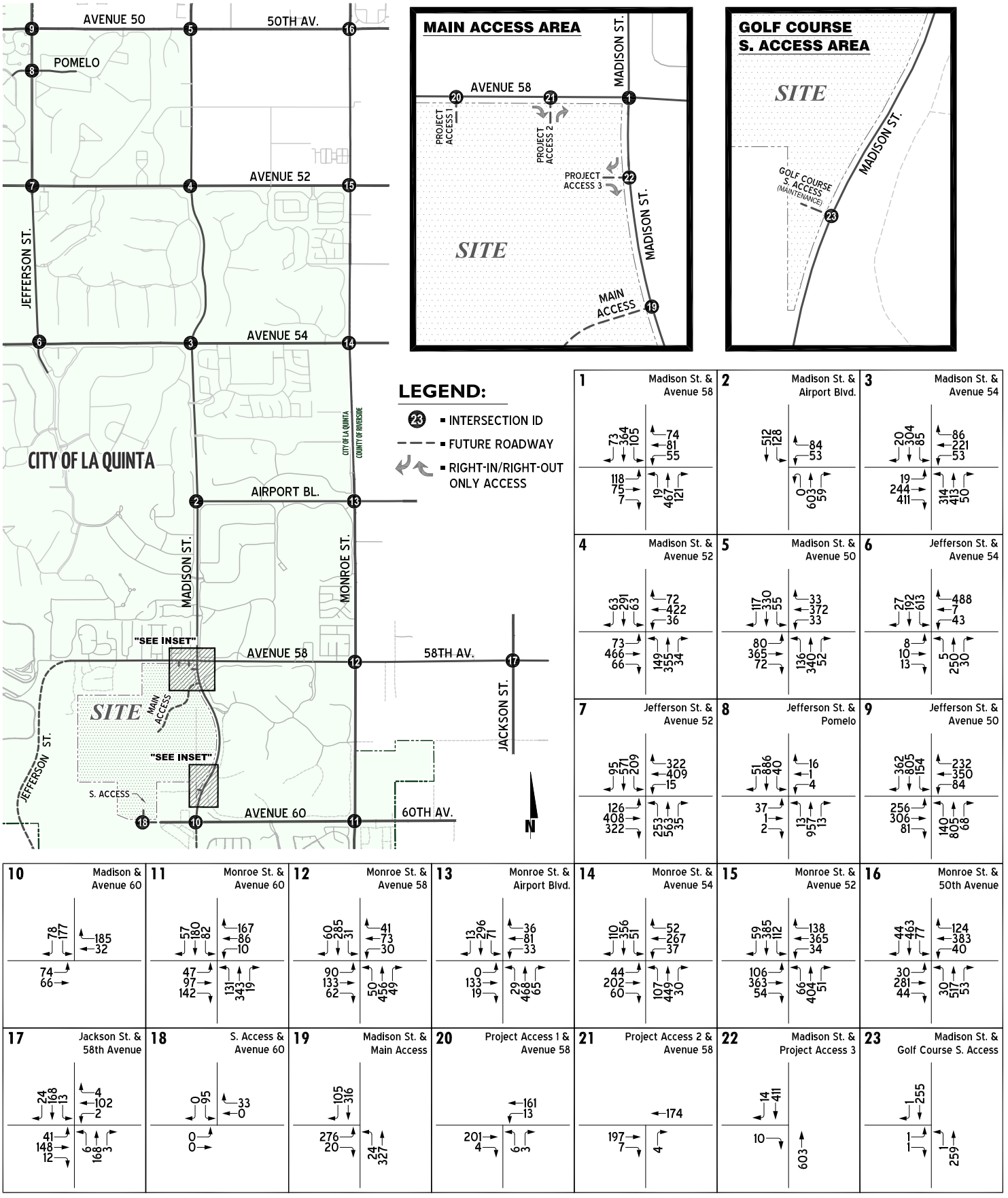
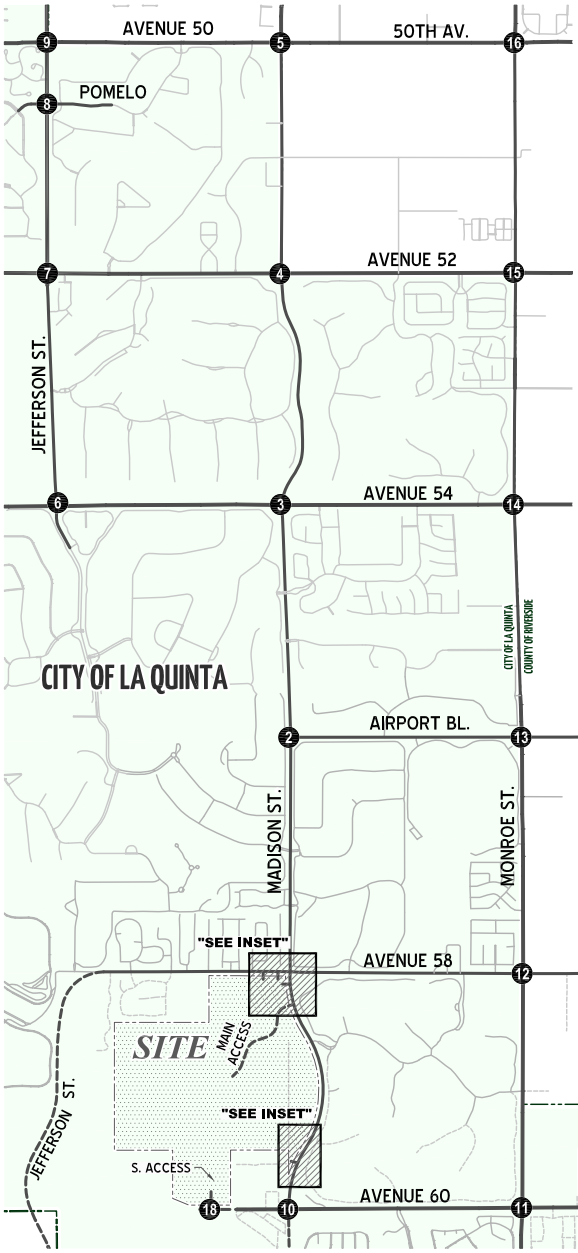
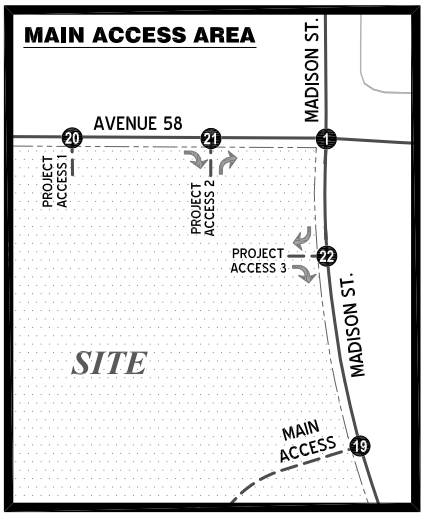
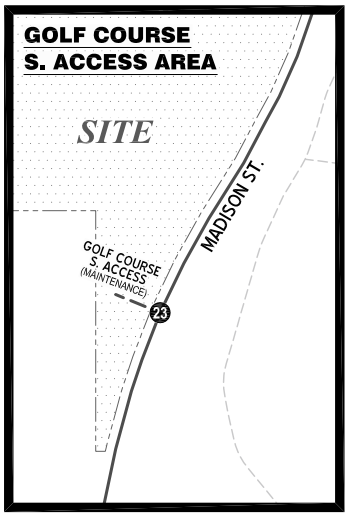


EXHIBIT 13: EAPC (2026)
PM PEAK HOUR INTERSECTION VOLUMES



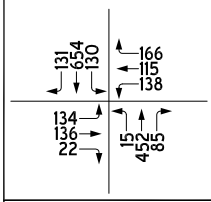




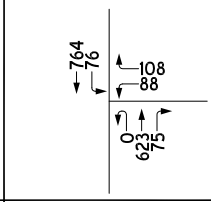
LEGEND:

- (23) = INTERSECTION ID
- = FUTURE ROADWAY
- = RIGHT-IN/RIGHT-OUT ONLY ACCESS

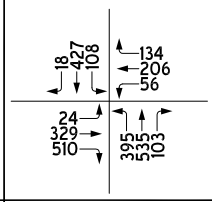
1 Madison St. & Avenue 58



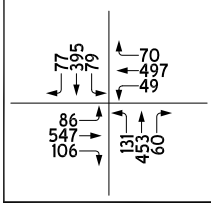
2 Madison St. & Airport Blvd.



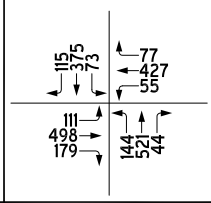
3 Madison St. & Avenue 54



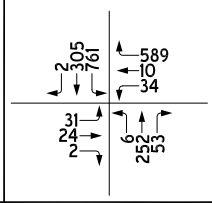
4 Madison St. & Avenue 52



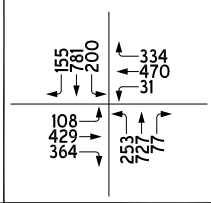
5 Madison St. & Avenue 50



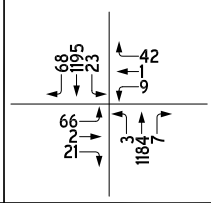
6 Jefferson St. & Avenue 54



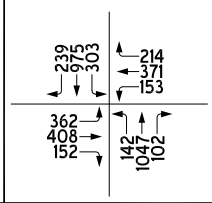
7 Jefferson St. & Avenue 52



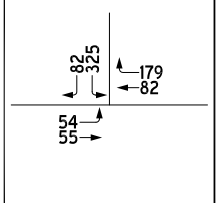
8 Jefferson St. & Pomelo



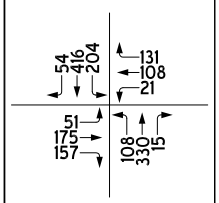
9 Jefferson St. & Avenue 50



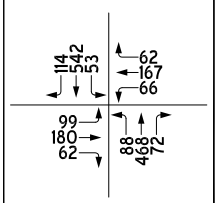
10 Madison & Avenue 60



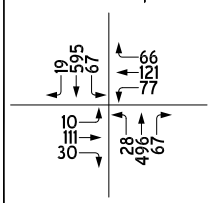
11 Monroe St. & Avenue 60



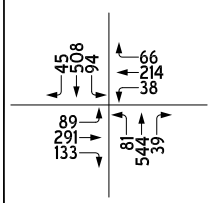
12 Monroe St. & Avenue 58



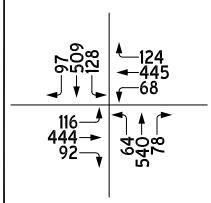
13 Monroe St. & Airport Blvd.



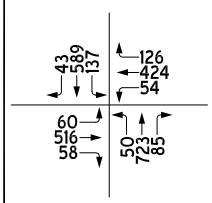
14 Monroe St. & Avenue 54



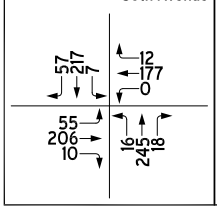
15 Monroe St. & Avenue 52



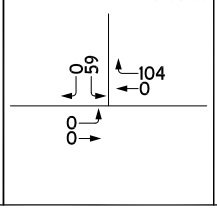
16 Monroe St. & 50th Avenue



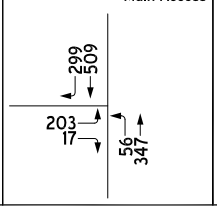
17 Jackson St. & 58th Avenue



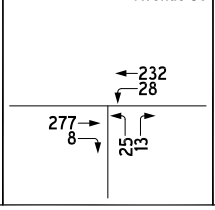
18 S. Access & Avenue 60



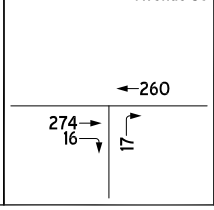
19 Madison St. & Main Access



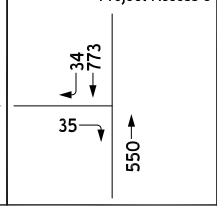
20 Project Access 1 & Avenue 58



21 Project Access 2 & Avenue 58



22 Madison St. & Project Access 3



23 Madison St. & Golf Course S. Access

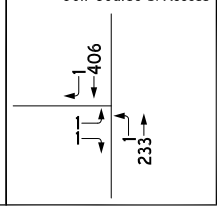


TABLE 4: INTERSECTION ANALYSIS
FOR OPENING YEAR (2026) WITHOUT AND WITH PROJECT CONDITIONS

#	Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												Without Project				With Project			
			Northbound			Southbound			Eastbound			Westbound			Delay[2] (Secs)		Level of Service[2]		Delay[2] (Secs)		Level of Service[2]	
			L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM	AM	PM	AM	PM
1	Madison St. / Avenue 58																					
	- Without Improvements	AWS	1	2	1	1	2	d	1	1	1	1	2	1	12.7	20.8	B	C	19.9	**>80**	C	**F**
	- With Improvements	**TS**	1	2	1	1	2	d	1	1	1	1	2	1	27.4	32.0	C	C	27.0	32.1	C	C
2	Madison St. / Airport Blvd.	TS	1	2	d	1	2	0	0	0	0	1	0	1	9.6	10.9	A	B	9.5	10.7	A	B
3	Madison St. / Avenue 54																					
	- Without Improvements	AWS	2	2	1	1	2	0	1	2	d	1	2	1	**79.2**	**>80**	**F**	**F**	**>80**	**>80**	**F**	**F**
	- With Improvements	**TS**	2	2	1	1	2	0	1	2	d	1	2	1	41.2	43.6	D	D	42.3	52.8	D	D
4	Madison St. / Avenue 52	TS	2	2	1	2	2	d	1	2	d	1	2	1	31.6	32.3	C	C	32.4	33.4	C	C
5	Madison St. / Avenue 50	TS	2	2	1	2	2	1	1	2	1	1	2	1	31.9	33.4	C	C	32.3	33.7	C	C
6	Jefferson St. / Avenue 54																					
	- Without Improvements	AWS	0.5	1	0.5	2	2	1	1	2	0	1	1	1	**40.6**	**>80**	**E**	**F**	**57.6**	**>80**	**F**	**F**
	- With Improvements	**TS**	0.5	1	0.5	2	2	1	1	2	0	1	1	**1>**	22.7	22.5	C	C	22.6	22.7	C	C
7	Jefferson St. / Avenue 52																					
	- Without Improvements	RDB	0.5	0.5	1>>	0.5	0.5	1>>	0.5	0.5	1>>	0.5	0.5	1>>	**>80**	**>80**	**F**	**F**	**>80**	**>80**	**F**	**F**
	- Without Improvements	RDB	0.5	**1.5**	1>>	0.5	**1.5**	1>>	0.5	0.5	1>>	0.5	0.5	1>>	15.1	28.3	C	D	17.5	34.8	C	D
8	Jefferson St. / Pomelo	TS	1	3	0	1	3	0	0.5	0.5	1	0.5	0.5	1	19.4	35.4	B	D	19.5	35.9	B	D
9	Jefferson St. / Avenue 50																					
	- Without Improvements	TS	1	3	1	2	3	1	1	2	1	1	1	1	52.4	**58.8**	D	**E**	53.2	**60.3**	D	**E**
	- With Improvements	TS	1	3	1	2	3	1	1	2	1	1	**2**	1	51.4	51.0	D	D	52.0	51.7	D	D
10	Madison St. / Avenue 60	AWS	0	0	0	1	0	1	0.5	0.5	0	0	1	1	9.4	12.8	A	B	10.5	15.4	B	C
11	Monroe St. / Avenue 60																					
	- Without Improvements	AWS	1	1	0	1	1	1	0.5	0.5	1	0	1!	0	25.9	**76.4**	D	**F**	32.7	**>80**	D	**F**
	- With Improvements	**TS**	1	1	0	1	1	1	0.5	0.5	1	0	1!	0	33.3	34.9	C	C	34.8	38.3	C	D
12	Monroe St. / Avenue 58																					
	- Without Improvements	AWS	0	1!	0	0.5	0.5	1	0	1!	0	0	1!	0	**52.2**	**>80**	**F**	**F**	**>80**	**>80**	**F**	**F**
	- With Improvements	**TS**	**1**	1	0	**1**	1	0	**1**	1	0	**1**	1	0	23.2	33.3	C	C	26.6	41.1	C	D
13	Monroe St. / Airport Blvd.																					
	- Without Improvements	AWS	1	1	0	1	2	d	1	1	1	0	1!	0	**47.3**	**>80**	**E**	**F**	**>80**	**>80**	**F**	**F**
	- With Improvements	**TS**	1	1	0	1	2	d	1	1	1	0	1!	0	24.0	24.9	C	C	24.5	26.3	C	C
14	Monroe St. / Avenue 54																					
	- Without Improvements	AWS	0	1!	0	0.5	0.5	1	1	1	0	0	1!	0	**>80**	**>80**	**F**	**F**	**>80**	**>80**	**F**	**F**
	- With Improvements	**TS**	**1**	1	0	**1**	1	0	1	1	0	**1**	1	0	34.7	37.0	C	D	35.2	38.0	D	D
15	Monroe St. / Avenue 52																					
	- Without Improvements	AWS	0	1!	0	1	2	0	1	1	1	1	2	d	**>80**	**>80**	**F**	**F**	**>80**	**>80**	**F**	**F**
	- With Improvements	**TS**	0	1!	0	1	2	0	1	1	1	1	2	d	33.7	41.2	C	D	34.2	45.3	C	D
16	Monroe St. / 50th Avenue	TS	1	2	0	1	2	0	1	1	1	1	1	1>	17.7	25.0	B	C	17.9	26.0	B	C
17	Jackson St. / 58th Avenue	AWS	0	1!	0	0	1!	0	0	1!	0	0	1!	0	9.5	16.9	A	C	10.1	23.4	B	C

TABLE 4: INTERSECTION ANALYSIS
FOR OPENING YEAR (2026) WITHOUT AND WITH PROJECT CONDITIONS

#	Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												Without Project				With Project			
			Northbound			Southbound			Eastbound			Westbound			Delay[2] (Secs)		Level of Service[2]		Delay[2] (Secs)		Level of Service[2]	
			L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM	AM	PM	AM	PM
18	S. Access / Avenue 60	**CSS**	0	0	0	0	**1!**	0	0	**1**	0	0	**1**	0	Future Intersection				9.0	9.1	A	A
19	Madison St. / Main Access	**TS**	**1**	2	0	0	2	0	**1**	0	**1**	0	0	0	Future Intersection				13.2	12.3	B	B
20	Project Access 1 / Avenue 58	**CSS**	0	**1!**	0	0	0	0	0	1	0	**1***	2	0	Future Intersection				10.1	11.1	B	B
21	Project Access 2 / Avenue 58	**CSS**	0	0	**1**	0	0	0	0	1	0	0	2	0	Future Intersection				9.4	10.0	A	A
22	Madison St. / Project Access 3	**CSS**	0	2	0	0	2	0	0	0	**1**	0	0	0	Future Intersection				9.7	11.8	A	B
23	Madison St. / Golf Course S. Access	CSS	1	2	0	0	2	0	0	1!	0	0	0	0	Future Intersection				10.3	11.3	B	B

[1] When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes.

L = Left; T = Through; R = Right; > = Right-Turn Overlap Phasing; >> = Free-Right Turn Lane; d= Defacto Right Turn Lane; **1** = Improvement

***** = Left turn lane accommodated within two-way left turn lane

[2] Per the Highway Capacity Manual 6th Edition (HCM6), overall average intersection delay and level of service are shown for intersections with a traffic signal or 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 is calculated using Synchro 10.1 analysis software.

BOLD = LOS does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

[3] TS = Traffic Signal; CSS = Cross-street Stop; AWS = All-Way Stop; RDB = Roundabout

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TABLE 5: ROADWAY VOLUME/CAPACITY ANALYSIS FOR OPENING YEAR (2026) WITHOUT AND WITH PROJECT CONDITIONS

Roadway	Segment	Roadway Designation	Through Travel Lanes[1]	Capacity[2]	Without Project		With Project	
					ADT[3]	Volume/ Capacity Ratio	ADT[3]	Volume/ Capacity Ratio
Avenue 58	West of Madison Street	Secondary	3	21,000 [4]	5,700	0.27	6,300	0.30
	West of Monroe Street	Secondary	4	28,000	5,800	0.21	8,300	0.30
	West of Jackson Street	Secondary	2	14,000 [4]	4,800	0.34	5,900	0.42
Madison Street	South of Airport Boulevard	Primary	4	42,600	14,200	0.33	18,100	0.42
Avenue 60	West of Monroe Street	Secondary	3	21,000 [4]	6,900	0.33	8,500	0.40
Monroe Street	South of Airport Boulevard	Primary	3	31,950 [5]	12,000	0.38	13,400	0.42

[1] Existing Number of Through lanes

[2] Source: City of La Quinta Engineering Bulletin #06-13 (Oct 2017)

[3] Average Daily Traffic (ADT) expressed in vehicles per day.

[4] Capacity was calculated as a ratio of 4-lane Secondary capacity.

[5] Capacity was calculated as a ratio of 4-lane Primary capacity.

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TABLE 6: PROJECT ACCESS TURN LANE STORAGE LENGTHS FOR EAPC PHASE 3 (2026) CONDITIONS

ID	Intersection	Movement	EAPC (2026) AM	EAPC (2026) PM	EAPC (2026) Hour	EAPC (2026) Volume	Storage Length[2] (ft.)	95th Percentile[1] Queue Length (ft.) AM	95th Percentile[1] Queue Length (ft.) PM
18	S. Access / Avenue 60								
		SBL/SBR	95	59	AM	95	**>300**	59	56
19	Madison St. / Main Access								
		NBL	24	56	PM	56	**150**	52	76
		EBL	276	203	AM	276	**200**	191	154
		EBR	20	17	AM	20	**>150**	130	86
20	Project Access 1 / Avenue 58								
		NBL/NBR	9	38	PM	38	**>50**	28	55
		WBL	13	28	PM	28	>50	15	30
21	Project Access 2 / Avenue 58								
		NBR	4	17	PM	17	**>50**	22	40
22	Madison St. / Project Access 3								
		EBR	10	35	PM	35	**>50**	28	46
23	Madison St. / Golf Course S. Access								
		NBL	1	1	AM	1	140	NOM	NOM
		EBL/EBR	2	2	AM	2	>50	15	13

[1] Queue length calculated using SimTraffic.

[2] Existing Storage Length = 100 ; Proposed Storage Length = **100**

[3] NOM = Nominal, less than 5 feet.

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GENERAL PLAN BUILDOUT 2040 CONDITIONS

Estimates of General Plan buildout with Project 2040 ADT, weekday AM, and weekday PM peak hour volumes are shown on Exhibits 14, 15 and 16, respectively. The lane configurations and traffic controls assumed to be in place for General Plan Buildout (Year 2040) conditions are consistent with the approved October 2021 Coral Mountain Specific Plan Traffic Impact Analysis.

LOS calculations were conducted for the study intersections to evaluate their operations under General Plan Buildout (Year 2040) traffic conditions. The intersection analysis results are summarized in Table 7.

The intersection operations analysis worksheets for General Plan Buildout (Year 2040) traffic conditions are included in Attachment 2. All intersections are anticipated to experience acceptable operations under General Plan Buildout (Year 2040) conditions with improvements.

Table 8 provides a summary of the General Plan Buildout (Year 2040) traffic conditions roadway segment capacity analysis based on the City of La Quinta roadway segment capacity thresholds. As shown on Table 8, the study roadway segments analyzed are anticipated to operate at acceptable LOS for General Plan Buildout (Year 2040) traffic conditions. However, one roadway segment along Madison Street, between Avenue 54 and Airport Boulevard (as shown on Exhibit 13) appears to exceed the theoretical daily segment LOS thresholds.

Where the peak hour roadway segment analysis indicates a deficiency (unacceptable LOS), a review of the more detailed peak hour intersection analysis is undertaken. Further review of the more detailed peak hour intersection analysis indicates that the recommended improvements at adjacent study area intersections provide an acceptable level of service. Therefore, roadway segment widening is not anticipated.

A queuing analysis was performed for With Project Conditions to assess the adequacy of turn bay lengths to accommodate vehicle queues at the Project entries. Queuing analysis findings are presented in Table 9 for General Plan Buildout (Year 2040) With Project traffic conditions. Queueing analysis worksheets are provided in Attachment 2.

FAIR SHARE CONTRIBUTION

Project mitigation may include a combination of fee payments to established programs, construction of specific improvements, payment of a fair share contribution toward future improvements or a combination of these approaches. Improvements constructed by development should be eligible for a fee credit or reimbursement through the program where appropriate (to be determined at the City's discretion).

Table 10 shows the project fair share percentages at cumulatively impacted intersections and CIP funded locations (for EAPC 2026 and 2040 conditions). However, these percentages are an approximation only as they are intended only for discussion purposes and do not imply any legal responsibility or formula for contributions or mitigation.

EXHIBIT 14: GENERAL PLAN BUILDOUT (YEAR 2040) WITH PROJECT AVERAGE DAILY TRAFFIC (ADT)

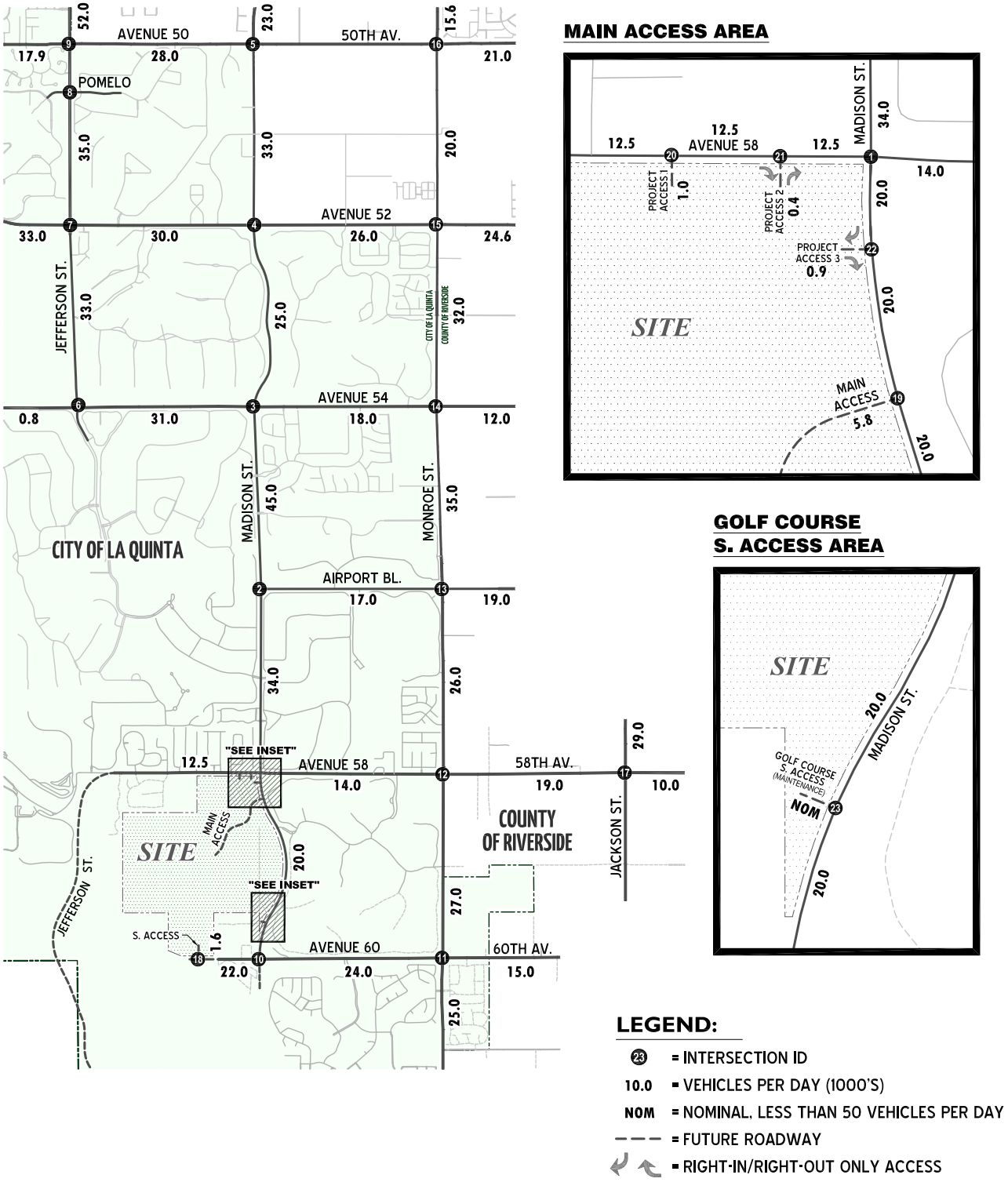

EXHIBIT 15: GENERAL PLAN BUILDOUT (YEAR 2040) WITH PROJECT
AM PEAK HOUR INTERSECTION VOLUMES

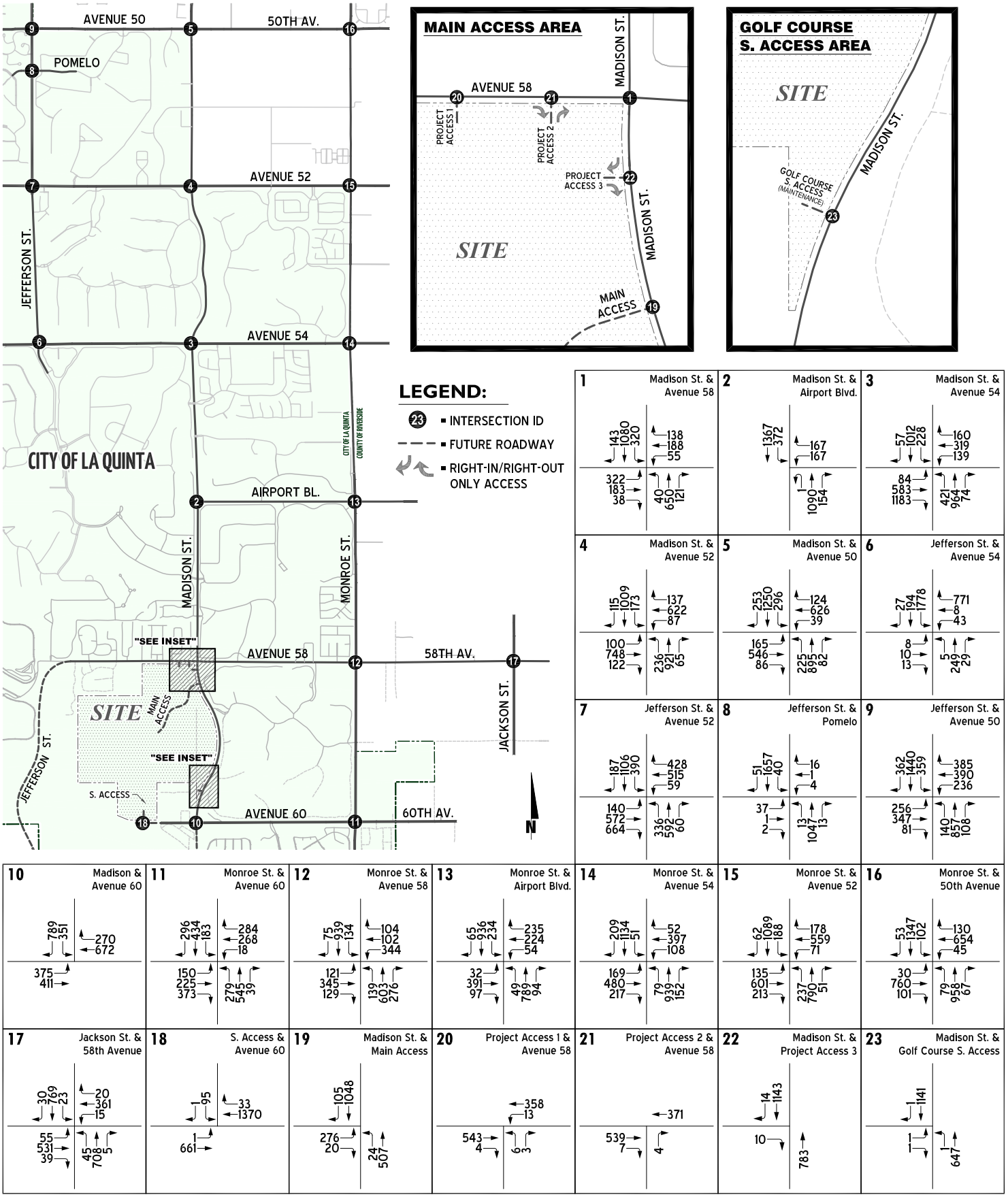

EXHIBIT 16: GENERAL PLAN BUILDOUT (YEAR 2040) WITH PROJECT
PM PEAK HOUR INTERSECTION VOLUMES

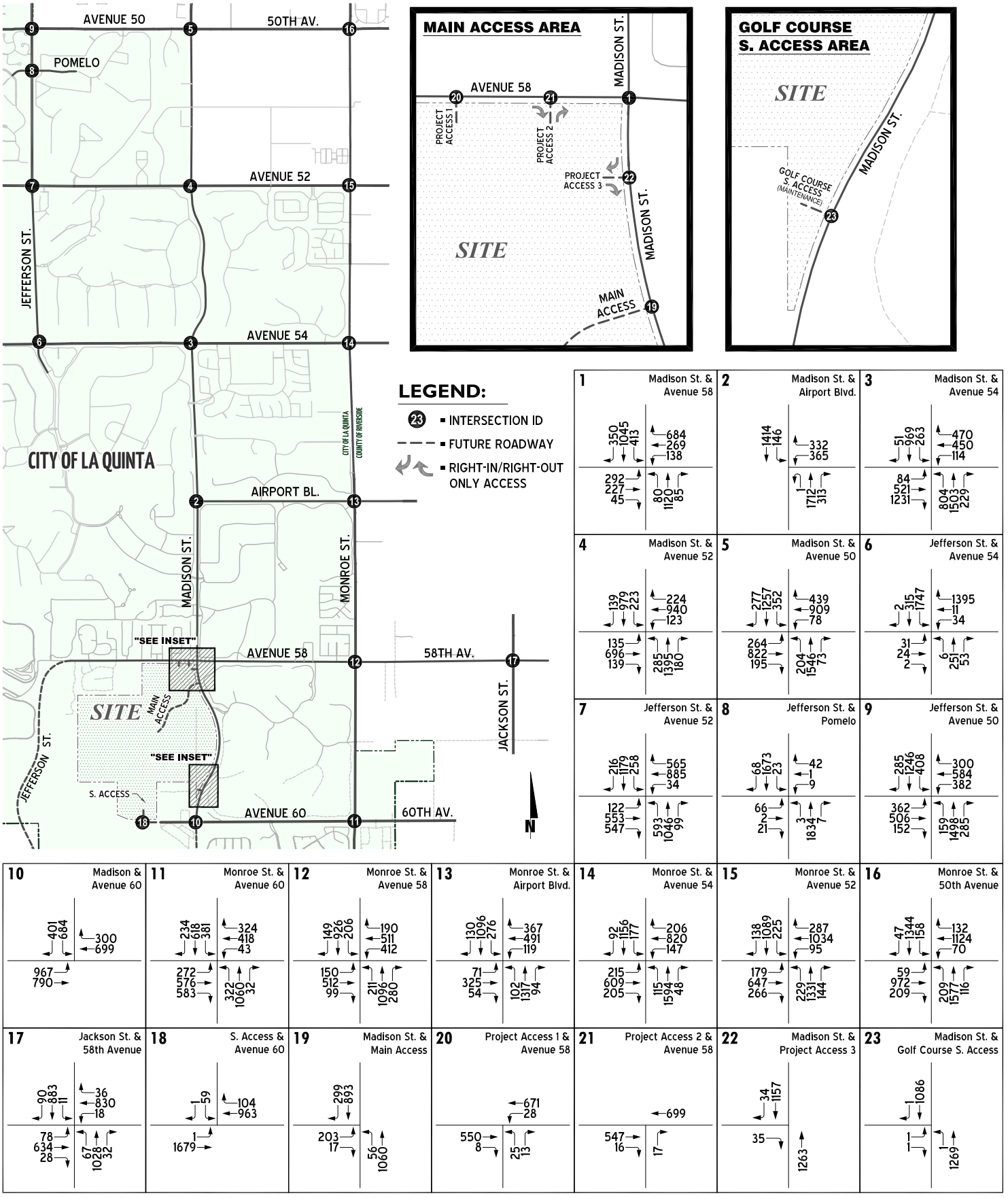

TABLE 7: INTERSECTION ANALYSIS
FOR GENERAL PLAN BUILDOUT (2040) WITH PROJECT CONDITIONS

#	Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												Delay[2] (Secs)		Level of Service[2]	
			Northbound			Southbound			Eastbound			Westbound						
			L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM
1	Madison St. / Avenue 58																	
	- With GPCE Update Improvements	TS	1	2	1	1	2	d	1	2	0	1	2	1>	41.7	**70.3**	D	**E**
	- With Modified GPCE Improvements	TS	1	2	1	1	2	d	2	1	0	1	2	1>	35.3	54.9	D	D
2	Madison St. / Airport Blvd.	TS	1	2	d	1	2	0	0	0	0	1	0	1	23.7	29.7	C	C
3	Madison St. / Avenue 54	TS	2	2	1	1	2	0	1	2	1>>	1	2	1>	44.2	53.3	D	D
4	Madison St. / Avenue 52	TS	2	2	1	2	2	1	1	2	d	1	2	1	39.5	53.7	D	D
5	Madison St. / Avenue 50	TS	2	3	1	2	2	1	1	2	1	1	2	1>	37.6	54.9	D	D
6	Jefferson St. / Avenue 54	TS	1	2	1	2	2	1	1	1	1	1	1	2>	24.2	48.4	C	D
7	Jefferson St. / Avenue 52[4]	RDB	0.5	2.5	1>>	0.5	2.5	1>>	0.5	2.5	1>>	0.5	2.5	1>>	5.9	9.1	A	A
8	Jefferson St. / Pomelo	TS	1	3	0	1	3	0	0.5	0.5	1	0.5	0.5	1	6.4	21.4	A	C
9	Jefferson St. / Avenue 50	TS	1	3	1	2	3	1	2	2	1	2	2	1	42.3	54.6	D	D
10	Madison St. / Avenue 60	TS	0	1!	0	2	1	1>	2	2	0	1	2	1	49.6	53.1	D	D
11	Monroe St. / Avenue 60																	
	- With GPCE Update Improvements	TS	1	2	0	1	2	1	1	2	1	1	1	1>	45.7	**>80**	D	**F**
	- With Added GPCE Improvements	TS	1	2	0	1	2	1	1	2	1>	1	2	1>	37.2	53.0	D	D
12	Monroe St. / Avenue 58																	
	- With GPCE Update Improvements	TS	1	2	1	1	2	0	1	2	0	1	2	0	50.9	**76.4**	D	**E**
	- With Added GPCE Improvements	TS	2	2	1>	2	2	0	1	2	1	1	2	0	39.5	52.2	D	D
13	Monroe St. / Airport Blvd.	TS	1	2	0	1	2	d	1	2	0	1	2	1>	34.0	45.4	C	D
14	Monroe St. / Avenue 54	TS	1	2	1	1	2	1	2	2	1	1	2	1	31.4	54.5	C	D
15	Monroe St. / Avenue 52	TS	2	2	1	2	2	0	1	2	1	1	2	1	39.0	54.3	D	D
16	Monroe St. / 50th Avenue	TS	2	2	1	2	2	0	1	2	1	1	2	1>	34.7	54.5	C	D
17	Jackson St. / 58th Avenue	TS	1	2	0	1	2	0	1	2	0	1	2	0	30.7	38.0	C	D
18	S. Access / Avenue 60	CSS	0	0	0	0	1!	0	0	1	0	0	1	1	34.6	34.3	D	D
19	Madison St. / Main Access	TS	1	2	0	0	2	0	1	0	1	0	0	0	9.6	11.2	A	B
20	Project Access 1 / Avenue 58	CSS	0	1!	0	0	0	0	0	2	0	1*	2	0	12.7	14.4	B	B
21	Project Access 2 / Avenue 58	CSS	0	0	1	0	0	0	0	2	0	0	2	0	10.2	10.4	B	B
22	Madison St. / Project Access 3	CSS	0	2	0	0	2	0	0	0	1	0	0	0	13.7	14.6	B	B
23	Madison St. / Golf Course S. Access	CSS	1	2	0	0	2	0	0	1!	0	0	0	0	25.1	32.9	D	D

[1] When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes.
L = Left; T = Through; R = Right; > = Right-Turn Overlap Phasing; >> = Free-Right Turn Lane; d = Defacto Right Turn Lane; **1** = Improvement
1 = Improvement per City of La Quinta General Plan Circulation Element Update Traffic Impact Analysis (May 2012)
* = Left turn lane accommodated within two-way left turn lane

[2] Per the Highway Capacity Manual 6th Edition (HCM6), overall average intersection delay and level of service are shown for intersections with a traffic signal or 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 is calculated using Synchro 10.1 analysis software.
BOLD = LOS does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

[3] TS = Traffic Signal; CSS = Cross-street Stop; AWS = All-Way Stop; RDB = Roundabout

[4] Since roundabout analysis in Synchro is limited to a maximum of 2 lanes per approach, traffix has been utilized at this location (similar to the City of La Quinta General Plan Buildout TIA worksheets).

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TABLE 8: ROADWAY VOLUME/CAPACITY ANALYSIS FOR GENERAL PLAN BUILDOUT (2040) WITH PROJECT CONDITIONS

Roadway	Segment	Roadway Designation	Through Travel Lanes[1]	Capacity[2]	ADT[3]	Volume/ Capacity Ratio
Avenue 58	West of Madison Street	Secondary	4	28,000	12,500	0.45
	West of Monroe Street	Secondary	4	28,000	14,000	0.50
	West of Jackson Street	Secondary	4	28,000	19,000	0.68
Madison Street	South of Airport Boulevard	Primary	4	42,600	34,000	0.80
Avenue 60	West of Monroe Street	Secondary	4	28,000	24,000	0.86
Monroe Street	South of Airport Boulevard	Primary	4	42,600	26,000	0.61

[1] Existing Number of Through lanes; 1 = City of La Quinta General Plan Buildout number of lanes

[2] Source: City of La Quinta Engineering Bulletin #06-13 (Oct 2017)

[3] Average Daily Traffic (ADT) expressed in vehicles per day.

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TABLE 9: PROJECT ACCESS TURN LANE STORAGE LENGTHS FOR GENERAL PLAN BUILDOUT (2040) WITH PROJECT CONDITIONS

ID	Intersection	Movement	2040 WITH PROJECT AM	2040 WITH PROJECT PM	Hour	Volume	Storage Length[2] (ft.)	95th Percentile[1] Queue Length (ft.) AM	95th Percentile[1] Queue Length (ft.) PM
18	S. Access / Avenue 60								
		SBL/SBR	96	60	AM	96	**>300**	217	400
		WBR	33	104	PM	104	**150**	NOM	NOM
19	Madison St. / Main Access								
		NBL	24	56	PM	56	**150**	49	126
		EBL	276	203	AM	276	**200**	185	172
		EBR	20	17	AM	20	**>150**	108	105
20	Project Access 1 / Avenue 58								
		NBL/NBR	9	38	PM	38	**>50**	30	51
		WBL	13	28	PM	28	>50	23	32
21	Project Access 2 / Avenue 58								
		NBR	4	17	PM	17	**>50**	18	48
22	Madison St. / Project Access 3								
		EBR	10	35	PM	35	**>50**	29	50
23	Madison St. / Golf Course S. Access								
		NBL	1	1	AM	1	140	8	NOM
		EBL/R	2	2	AM	2	>50	8	12

[1] Queue length calculated using SimTraffic.

[2] Existing Storage Length = 100 ; Proposed Storage Length = **100**

[3] NOM = Nominal, less than 5 feet.

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TABLE 10: PROJECT FAIR SHARE CALCULATIONS

#	Intersection	Project Only Traffic	EAPC (2026) Peak Hour Traffic	2040 With Project Peak Hour Traffic	Fair Share (%) EAPC (2026)[1]	Fair Share (%) 2040 With Project[2]
1	Madison St. / Avenue 58					
	• AM Peak Hour	454	1,559	3,278	**29%**	**14%**
	• PM Peak Hour	620	2,178	4,748	28%	13%
3	Madison St. / Avenue 54					
	• AM Peak Hour	246	2,220	5,224	**11%**	**5%**
	• PM Peak Hour	325	2,845	6,689	11%	5%
4	Madison St. / Avenue 52					
	• AM Peak Hour	134	N/A	4,335	N/A	**3%**
	• PM Peak Hour	175		5,458		3%
5	Madison St. / Avenue 50					
	• AM Peak Hour	79	1,985	4,587	N/A	**2%**
	• PM Peak Hour	100	2,619	6,416		2%
6	Jefferson St. / Avenue 54					
	• AM Peak Hour	82	1,686	3,135	**5%**	**3%**
	• PM Peak Hour	109	2,069	3,871	5%	3%
7	Jefferson St. / Avenue 52					
	• AM Peak Hour	105	3,328	5,049	**3%**	**2%**
	• PM Peak Hour	134	3,929	6,097	3%	2%
9	Jefferson St. / Avenue 50					
	• AM Peak Hour	105	3,643	4,961	**3%**	**2%**
	• PM Peak Hour	133	4,468	6,167	3%	2%
10	Madison St. / Avenue 60					
	• AM Peak Hour	165	N/A	2,875	N/A	**6%**
	• PM Peak Hour	223		3,853		6%
11	Monroe St. / Avenue 60					
	• AM Peak Hour	111	1,361	3,094	**8%**	**4%**
	• PM Peak Hour	150	1,770	4,863	8%	3%
12	Monroe St. / Avenue 58					
	• AM Peak Hour	191	1,360	3,311	**14%**	**6%**
	• PM Peak Hour	251	1,973	4,742	13%	5%
13	Monroe St. / Airport Blvd.					
	• AM Peak Hour	105	1,244	3,200	**8%**	**3%**
	• PM Peak Hour	134	1,687	4,442	8%	3%
14	Monroe St. / Avenue 54					
	• AM Peak Hour	105	1,765	3,987	**6%**	**3%**
	• PM Peak Hour	134	2,142	5,384	6%	2%
15	Monroe St. / Avenue 52					
	• AM Peak Hour	105	2,137	4,174	**5%**	**3%**
	• PM Peak Hour	134	2,705	5,664	5%	2%
16	Monroe St. / 50th Avenue					
	• AM Peak Hour	79	2,086	4,326	**4%**	**2%**
	• PM Peak Hour	100	2,865	6,017	3%	2%
17	Jackson St. / 58th Avenue					
	• AM Peak Hour	82	691	2,601	**12%**	**3%**
	• PM Peak Hour	109	1,020	3,735	11%	3%

[1] Project Fair Share % = ("Project Only Buildout (2026) Traffic" / "EAPC (2026) Peak Hour Traffic")

[2] Project Fair Share % = ("Project Only Buildout (2026) Traffic" / "2040 With Project Peak Hour Traffic")

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In addition, a summary of study area improvements needed to address intersection operational deficiencies and corresponding funding sources for EAPC 2026 and General Plan Buildout conditions are summarized in Table 11.

CONCLUSION

The Project evaluated in this supplemental assessment does not change existing General Plan land use or zoning designations for the site, consistent with the approved Andalusia Specific Plan and Alternative 2 analyzed in the Final Environmental Impact Report Coral Mountain Resort (SCH #2021020310). It consists of a commercial corner (60,000 square feet of retail), an 18-hole golf course, and up to 750 residential units.

EAPC 2026 intersection analysis results indicate that eight off-site study area intersections (as previously identified in the approved October 2021 Coral Mountain Specific Plan Traffic Impact Analysis) will require installation of a traffic signal in order to maintain acceptable LOS. In addition, for Jefferson Street at Avenue 50, a second westbound through lane is necessary to maintain an acceptable level of service. EAPC analysis results in one cumulatively impacted intersection (Jefferson Street at Avenue 52). Jefferson Street at Avenue 52 requires reconstruction of the current roundabout design to incorporate 2 circulating lanes around the center island to provide acceptable LOS. The improvements are needed with or without the Project, so a fair share contribution is appropriate.

The main Project driveway is located on Madison Street south of Avenue 58. It is a full access location, serving left and right turns to and from Madison Street with traffic signal control. With the Project, the northbound left turn lane serving the main Project driveway is recommended to provide 200 feet of vehicle queuing.

All intersections are anticipated to experience acceptable operations under General Plan Buildout (Year 2040), based upon improvements previously indicated in the City of La Quinta General Plan Circulation Element Update Traffic Impact Analysis.

If you have any questions, please contact John Kain at (949) 375-2435 or Marlie Whiteman (714) 585-0574.

Respectfully submitted,

URBAN CROSSROADS, INC.

John Kain, AICP
Principal

Marlie Whiteman, PE
Senior Associate

TABLE 11: SUMMARY OF PHASED INTERSECTION IMPROVEMENTS

ID	Intersection	Jurisdiction	Project Buildout (2026)[1]		Funding Source?	2040 Conditions[1]	
			Without Project	With Project		Without Project	With Project
1	Madison St. / Avenue 58	City of La Quinta	None	• Install TS	DIF / CIP[2]	• Same • 2nd EBL, WBR Ovl	• Same • Same
3	Madison St. / Avenue 54	City of La Quinta	• Install TS	• Same	DIF / CIP	• Same • 1 EB free RT • WBR OVL	• Same • Same • Same
4	Madison St. / Avenue 52	City of La Quinta/ City of Indio	None	None	DIF / CIP	• 1 SBR	• Same
5	Madison St. / Avenue 50	City of La Quinta/ City of Indio	None	None	DIF / CIP	• 3rd NBT • WBR OVL	• Same • Same
6	Jefferson St. / Avenue 54	City of La Quinta	• Install TS • WBR OVL	• Same • Same	DIF / CIP	• Same • Same, 2nd WBR • 1 NBL, 1 NBR	• Same • Same • Same
7	Jefferson St. / Avenue 52	City of La Quinta	• 2 lane RDB • 2nd NBT • 2nd SBT	• Same • Same • Same	DIF / CIP	• 3 lane RDB • Same, 3rd NBT • Same, 3rd SBT • 2nd EBT, 3rd EBT • 2nd WBT, 3rd WBT	• Same • Same • Same • Same • Same
9	Jefferson St. / Avenue 50	City of La Quinta/ City of Indio	• 2nd WBT	• Same	La Quinta CIP	• Same, 2nd WBL • 2nd EBL	• Same • Same
10	Madison St. / Avenue 60	City of La Quinta	None	None	--	• Install TS • 1 Shared NB L/T/R • 2nd SBL, 1 SBT, SBR OVL • 2 EBL • 1 WBL, 2nd WBT	• Same • Same • Same • Same • Same
11	Monroe St. / Avenue 60	City of La Quinta/ County of Riverside	• Install TS	• Same	La Quinta CIP	• Same • 2nd NBT • 2nd SBT • 1 EBL, 2nd EBT, EBR OVL • 1 WBL, 2nd WBT 1 WBR w/ OVL	• Same • Same • Same • Same • Same
12	Monroe St. / Avenue 58	City of La Quinta/ County of Riverside	• Install TS • 1 NBL, 1 SBL, • 1 EBL, 1 WBL	• Same • Same • Same	DIF / CIP	• Same • Same • Same • 2nd NBL, 2nd NBT, 1 NBR w/ OVL • 2nd SBL, 2nd SBT • 2nd EBT, 2nd EBR • 2nd WBT	• Same • Same • Same • Same • Same • Same • Same
13	Monroe St. / Airport Blvd.	City of La Quinta/ County of Riverside	• Install TS	• Same	DIF / CIP	• Same • 2nd NBT • 2nd EBT • 1 WBL, 2nd WBT, 1 WBR w/ OVL	• Same • Same • Same • Same
14	Monroe St. / Avenue 54	City of La Quinta/ County of Riverside	• Install TS • 1 NBL, 1 SBL, 1 WBL	• Same • Same	DIF / CIP	• Same • Same • 2nd NBT, 1 NBR • 2nd SBT, 1 SBR • 2nd EBL, 2nd EBT, 1 EBR • 1 WBL, 2nd WBT, 1 WBR	• Same • Same • Same • Same • Same • Same

TABLE 11: SUMMARY OF PHASED INTERSECTION IMPROVEMENTS *(Page 2 of 2)*

ID	Intersection	Jurisdiction	Project Buildout (2026)[1]		Funding Source?	2040 Conditions[1]	
			Without Project	With Project		Without Project	With Project
15	Monroe St. / Avenue 52	City of La Quinta/ City of Indio/ County of Riverside	• Install TS	• Same	DIF / CIP	• Same • 2 NBL, 1NBT, 1 NBR • 2nd SBL • 2nd EBT • 2nd WBR	• Same • Same • Same • Same • Same
16	Monroe St. / 50th Avenue	City of Indio	None	None	--	• 2nd NBL, 1 NBR • 2nd SBL • 2nd EBT • 2nd WBT	• Same • Same • Same • Same
17	Jackson St. / 58th Avenue	County of Riverside	None	None	--	• Install TS • 1 NBL, 2nd NBT • 1 SBL, 2nd SBT • 1 EBL, 2nd EBT • 1 WBL, 2nd WBT	• Same • Same • Same • Same • Same
18	S. Access / Avenue 60	City of La Quinta	N/A	• Install SB CSS • 1 shared SBL/R • 1 shared EBL/T • 1 shared WBT/R	Project	N/A	• Same • Same • Same • 1 WBT & 1 WBR
19	Madison St. / Main Access	City of La Quinta	N/A	• Install TS • 1 NBL • 1 EBL & 1 EBR	Project	N/A	• Install TS • Same • Same
20	Project Access 1 / Avenue 58	City of La Quinta	N/A	• Install NB CSS • 1 shared NBL/R	Project	N/A	• Same • Same • 2nd EBT
21	Project Access 2 / Avenue 58	City of La Quinta	N/A	• Install NB CSS • 1 NBR	Project	N/A	• Same • Same • 2nd EBT
22	Madison St. / Project Access 3	City of La Quinta	N/A	• Install EB CSS • 1 shared EBR	Project	N/A	• Same • Same • 2nd EBT

1 TS = Traffic Signal; RDB = Roundabout; CSS = Cross-Street Stop Control; OVL = Overlap Phase

2 The required signal will be installed by the Project, and reimbursement may be provided for all but the Project's fair share by future developments, or CIP, or DIF.

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ATTACHMENT 1:

EAPC (2026) INTERSECTION OPERATIONS ANALYSIS WORKSHEETS AND QUEUEING ANALYSIS WORKSHEETS

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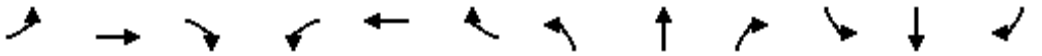


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	118	75	7	55	81	74	19	467	121	105	364	73
Future Volume (vph)	118	75	7	55	81	74	19	467	121	105	364	73
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	100		100	180		180	330		160	160		50
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	90			90			90			90		
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		276			988			288			752	
Travel Time (s)		3.8			13.5			3.9			10.3	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Intersection Delay, s/veh	19.9
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	118	75	7	55	81	74	19	467	121	105	364	73
Future Vol, veh/h	118	75	7	55	81	74	19	467	121	105	364	73
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	126	80	7	59	86	79	20	497	129	112	387	78
Number of Lanes	1	1	1	1	2	0	1	2	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	3	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	3	3	3
HCM Control Delay	15.6	13.9	25	18.1
HCM LOS	C	B	C	C

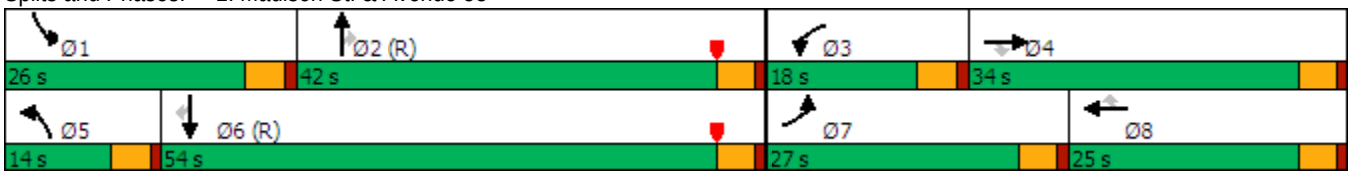
Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Thru, %	0%	100%	56%	0%	100%	0%	0%	100%	27%	0%	100%
Vol Right, %	0%	0%	44%	0%	0%	100%	0%	0%	73%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	19	311	277	118	75	7	55	54	101	105	243
LT Vol	19	0	0	118	0	0	55	0	0	105	0
Through Vol	0	311	156	0	75	0	0	54	27	0	243
RT Vol	0	0	121	0	0	7	0	0	74	0	0
Lane Flow Rate	20	331	294	126	80	7	59	57	107	112	258
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.047	0.723	0.617	0.33	0.199	0.017	0.154	0.143	0.253	0.263	0.572
Departure Headway (Hd)	8.357	7.857	7.551	9.467	8.967	8.267	9.475	8.975	8.462	8.482	7.982
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	427	457	477	378	398	431	377	398	422	422	452
Service Time	6.134	5.634	5.328	7.261	6.761	6.061	7.267	6.767	6.254	6.26	5.76
HCM Lane V/C Ratio	0.047	0.724	0.616	0.333	0.201	0.016	0.156	0.143	0.254	0.265	0.571
HCM Control Delay	11.5	28.7	21.8	16.9	14	11.2	14	13.3	14.1	14.3	21
HCM Lane LOS	B	D	C	C	B	B	B	B	B	B	C
HCM 95th-tile Q	0.1	5.7	4.1	1.4	0.7	0.1	0.5	0.5	1	1	3.5

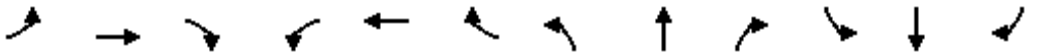
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	118	75	7	55	81	74	19	467	121	105	364	73
Future Volume (vph)	118	75	7	55	81	74	19	467	121	105	364	73
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	100		100	180		180	330		160	160		50
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)		50			50			50			50	
Link Distance (ft)		276			988			288			752	
Travel Time (s)		3.8			13.5			3.9			10.3	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	22.5	22.5	11.5	22.5	22.5	11.5	22.5	22.5	11.5	22.5	22.5
Total Split (s)	27.0	34.0	34.0	18.0	25.0	25.0	14.0	42.0	42.0	26.0	54.0	54.0
Total Split (%)	22.5%	28.3%	28.3%	15.0%	20.8%	20.8%	11.7%	35.0%	35.0%	21.7%	45.0%	45.0%
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	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	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 Yellow
Natural Cycle: 70
Control Type: Actuated-Coordinated

Splits and Phases: 1: Madison St. & Avenue 58





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	118	75	7	55	81	74	19	467	121	105	364	73
Future Volume (veh/h)	118	75	7	55	81	74	19	467	121	105	364	73
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	126	80	7	59	86	79	20	497	129	112	387	78
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	153	199	168	87	245	109	49	2114	943	138	2292	1022
Arrive On Green	0.09	0.11	0.11	0.05	0.07	0.07	0.03	0.61	0.61	0.08	0.66	0.66
Sat Flow, veh/h	1734	1821	1543	1734	3460	1543	1734	3460	1543	1734	3460	1543
Grp Volume(v), veh/h	126	80	7	59	86	79	20	497	129	112	387	78
Grp Sat Flow(s),veh/h/ln	1734	1821	1543	1734	1730	1543	1734	1730	1543	1734	1730	1543
Q Serve(g_s), s	8.6	4.9	0.5	4.0	2.8	6.0	1.4	7.8	4.3	7.6	5.1	2.2
Cycle Q Clear(g_c), s	8.6	4.9	0.5	4.0	2.8	6.0	1.4	7.8	4.3	7.6	5.1	2.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	153	199	168	87	245	109	49	2114	943	138	2292	1022
V/C Ratio(X)	0.82	0.40	0.04	0.68	0.35	0.72	0.41	0.24	0.14	0.81	0.17	0.08
Avail Cap(c_a), veh/h	325	448	379	195	591	264	137	2114	943	311	2292	1022
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	1.00
Uniform Delay (d), s/veh	53.8	49.8	47.8	56.0	53.1	54.6	57.3	10.6	9.9	54.3	7.7	7.2
Incr Delay (d2), s/veh	10.3	1.3	0.1	8.9	0.9	8.7	5.3	0.3	0.3	10.7	0.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.1	2.2	0.2	1.9	1.2	2.5	0.7	2.7	1.4	3.6	1.7	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	64.1	51.1	47.9	64.9	54.0	63.3	62.6	10.9	10.2	65.0	7.9	7.3
LnGrp LOS	E	D	D	E	D	E	E	B	B	E	A	A
Approach Vol, veh/h		213			224			646			577	
Approach Delay, s/veh		58.7			60.2			12.3			18.9	
Approach LOS		E			E			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.1	77.8	10.5	17.6	7.9	84.0	15.1	13.0
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	21.5	37.5	13.5	29.5	9.5	49.5	22.5	20.5
Max Q Clear Time (g_c+I1), s	9.6	9.8	6.0	6.9	3.4	7.1	10.6	8.0
Green Ext Time (p_c), s	0.2	3.4	0.0	0.3	0.0	2.6	0.2	0.5

Intersection Summary	
HCM 6th Ctrl Delay	27.0
HCM 6th LOS	C

Lane Group	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	53	84	1	603	59	128	512
Future Volume (vph)	53	84	1	603	59	128	512
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150	150	150		50	150	
Storage Lanes	0	0	1		1	1	
Taper Length (ft)	25		140			90	
Right Turn on Red		Yes			Yes		
Link Speed (mph)	50			50			50
Link Distance (ft)	5252			767			818
Travel Time (s)	71.6			10.5			11.2
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Shared Lane Traffic (%)							
Turn Type	Prot	Perm	Prot	NA	Perm	Prot	NA
Protected Phases	3		5	2		1	6
Permitted Phases		3			2		
Detector Phase	3	3	5	2	2	1	6
Switch Phase							
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	11.5	11.5	20.5	20.5	11.5	20.5
Total Split (s)	13.0	13.0	12.0	29.0	29.0	18.0	35.0
Total Split (%)	21.7%	21.7%	20.0%	48.3%	48.3%	30.0%	58.3%
Yellow Time (s)	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
Lost Time Adjust (s)	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag			Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?			Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	C-Max	C-Max	None	C-Max

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 60
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
Natural Cycle: 45
Control Type: Actuated-Coordinated

Splits and Phases: 2: Madison St. & Airport Bl.

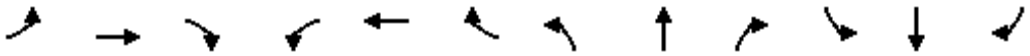
Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (veh/h)	53	84	1	603	59	128	512
Future Volume (veh/h)	53	84	1	603	59	128	512
Initial Q (Qb), veh	0	0		0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00			1.00	1.00	
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No
Adj Sat Flow, veh/h/ln	1821	1821		1821	1821	1821	1821
Adj Flow Rate, veh/h	61	97		693	68	147	589
Peak Hour Factor	0.87	0.87		0.87	0.87	0.87	0.87
Percent Heavy Veh, %	2	2		2	2	2	2
Cap, veh/h	202	180		1962	875	202	2595
Arrive On Green	0.12	0.12		0.57	0.57	0.12	0.75
Sat Flow, veh/h	1734	1543		3551	1543	1734	3551
Grp Volume(v), veh/h	61	97		693	68	147	589
Grp Sat Flow(s),veh/h/ln	1734	1543		1730	1543	1734	1730
Q Serve(g_s), s	1.9	3.6		6.5	1.2	4.9	3.1
Cycle Q Clear(g_c), s	1.9	3.6		6.5	1.2	4.9	3.1
Prop In Lane	1.00	1.00			1.00	1.00	
Lane Grp Cap(c), veh/h	202	180		1962	875	202	2595
V/C Ratio(X)	0.30	0.54		0.35	0.08	0.73	0.23
Avail Cap(c_a), veh/h	260	232		1962	875	405	2595
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	24.3	25.0		7.0	5.9	25.6	2.3
Incr Delay (d2), s/veh	0.8	2.5		0.5	0.2	5.0	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	0.7	1.3		1.6	0.3	2.0	0.2
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	25.1	27.5		7.5	6.1	30.6	2.5
LnGrp LOS	C	C		A	A	C	A
Approach Vol, veh/h	158			761			736
Approach Delay, s/veh	26.6			7.4			8.1
Approach LOS	C			A			A

Timer - Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	11.0	38.0				49.0		11.0
Change Period (Y+Rc), s	4.5	4.5				4.5		4.5
Max Green Setting (Gmax), s	13.5	24.5				30.5		8.5
Max Q Clear Time (g_c+I1), s	6.9	8.5				5.1		5.6
Green Ext Time (p_c), s	0.2	4.0				3.6		0.1

Intersection Summary	
HCM 6th Ctrl Delay	9.5
HCM 6th LOS	A

Notes

User approved pedestrian interval to be less than phase max green.
User approved ignoring U-Turning movement.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	244	411	53	221	86	314	413	50	85	304	20
Future Volume (vph)	19	244	411	53	221	86	314	413	50	85	304	20
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	160		150	910		150	160		120	305		150
Storage Lanes	1		0	1		1	2		1	1		0
Taper Length (ft)	80			120			120			100		
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		5080			840			924			2398	
Travel Time (s)		63.0			10.4			12.6			32.7	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Intersection Delay, s/veh	114
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	19	244	411	53	221	86	314	413	50	85	304	20
Future Vol, veh/h	19	244	411	53	221	86	314	413	50	85	304	20
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	21	274	462	60	248	97	353	464	56	96	342	22
Number of Lanes	1	2	0	1	2	0	1	2	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	3	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	3	3	3
HCM Control Delay	253.2	28.5	75	33.9
HCM LOS	F	D	F	D

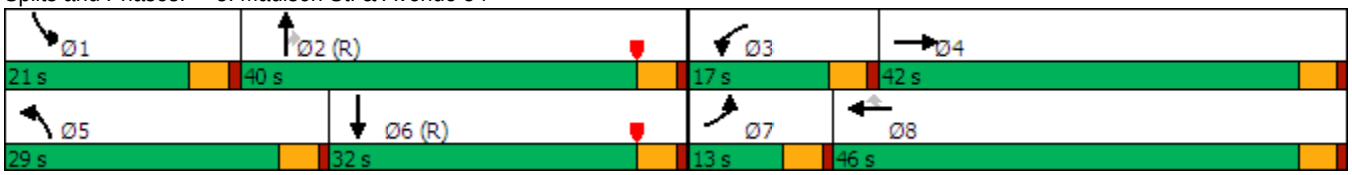
Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%
Vol Thru, %	0%	100%	73%	0%	100%	17%	0%	100%	46%	0%	100%	84%
Vol Right, %	0%	0%	27%	0%	0%	83%	0%	0%	54%	0%	0%	16%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	314	275	188	19	163	492	53	147	160	85	203	121
LT Vol	314	0	0	19	0	0	53	0	0	85	0	0
Through Vol	0	275	138	0	163	81	0	147	74	0	203	101
RT Vol	0	0	50	0	0	411	0	0	86	0	0	20
Lane Flow Rate	353	309	211	21	183	553	60	166	179	96	228	136
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	1.081	0.907	0.608	0.07	0.577	1.661	0.206	0.55	0.578	0.326	0.746	0.442
Departure Headway (Hd)	11.919	11.419	11.232	12.038	11.538	10.953	13.12	12.62	12.243	13.038	12.538	12.423
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	307	319	325	299	314	337	275	288	296	278	291	292
Service Time	9.619	9.119	8.932	9.738	9.238	8.653	10.82	10.32	9.943	10.738	10.238	10.123
HCM Lane V/C Ratio	1.15	0.969	0.649	0.07	0.583	1.641	0.218	0.576	0.605	0.345	0.784	0.466
HCM Control Delay	111.1	64.6	29.9	15.6	28.9	336.5	19.2	29.7	30.4	21.9	44.5	24.6
HCM Lane LOS	F	F	D	C	D	F	C	D	D	C	E	C
HCM 95th-tile Q	12.7	8.7	3.8	0.2	3.4	33.3	0.8	3.1	3.4	1.4	5.5	2.1

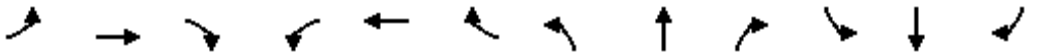
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	244	411	53	221	86	314	413	50	85	304	20
Future Volume (vph)	19	244	411	53	221	86	314	413	50	85	304	20
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	160		150	910		150	160		120	305		150
Storage Lanes	1		0	1		1	2		1	1		0
Taper Length (ft)	80			120			120			100		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		5080			840			924			2398	
Travel Time (s)		63.0			10.4			12.6			32.7	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Shared Lane Traffic (%)												
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8			2			
Detector Phase	7	4		3	8	8	5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	
Minimum Split (s)	11.5	22.5		11.5	22.5	22.5	11.5	22.5	22.5	11.5	22.5	
Total Split (s)	13.0	42.0		17.0	46.0	46.0	29.0	40.0	40.0	21.0	32.0	
Total Split (%)	10.8%	35.0%		14.2%	38.3%	38.3%	24.2%	33.3%	33.3%	17.5%	26.7%	
Yellow Time (s)	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	
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)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	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 Yellow
Natural Cycle: 70
Control Type: Actuated-Coordinated

Splits and Phases: 3: Madison St. & Avenue 54





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	19	244	411	53	221	86	314	413	50	85	304	20
Future Volume (veh/h)	19	244	411	53	221	86	314	413	50	85	304	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	21	274	462	60	248	97	353	464	56	96	342	22
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	51	539	481	87	1151	513	425	1449	646	120	1194	76
Arrive On Green	0.03	0.31	0.31	0.05	0.33	0.33	0.13	0.42	0.42	0.07	0.36	0.36
Sat Flow, veh/h	1734	1730	1543	1734	3460	1543	3365	3460	1543	1734	3302	211
Grp Volume(v), veh/h	21	274	462	60	248	97	353	464	56	96	179	185
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1730	1543	1682	1730	1543	1734	1730	1783
Q Serve(g_s), s	1.4	15.5	35.3	4.1	6.2	5.4	12.3	10.8	2.6	6.5	8.8	8.9
Cycle Q Clear(g_c), s	1.4	15.5	35.3	4.1	6.2	5.4	12.3	10.8	2.6	6.5	8.8	8.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.12
Lane Grp Cap(c), veh/h	51	539	481	87	1151	513	425	1449	646	120	626	645
V/C Ratio(X)	0.41	0.51	0.96	0.69	0.22	0.19	0.83	0.32	0.09	0.80	0.29	0.29
Avail Cap(c_a), veh/h	123	541	482	181	1197	534	687	1449	646	238	626	645
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)	0.91	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	57.2	33.8	40.6	56.0	28.8	28.5	51.2	23.4	21.0	55.0	27.3	27.3
Incr Delay (d2), s/veh	4.8	0.7	29.3	9.1	0.1	0.2	4.7	0.6	0.3	11.5	1.1	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	6.3	16.4	1.9	2.4	1.9	5.3	4.3	0.9	3.2	3.7	3.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	62.0	34.5	69.9	65.2	28.9	28.7	55.8	24.0	21.3	66.5	28.4	28.4
LnGrp LOS	E	C	E	E	C	C	E	C	C	E	C	C
Approach Vol, veh/h		757			405			873			460	
Approach Delay, s/veh		56.8			34.2			36.7			36.4	
Approach LOS		E			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.8	54.8	10.6	41.9	19.7	47.9	8.0	44.4
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	16.5	35.5	12.5	37.5	24.5	27.5	8.5	41.5
Max Q Clear Time (g_c+I1), s	8.5	12.8	6.1	37.3	14.3	10.9	3.4	8.2
Green Ext Time (p_c), s	0.1	2.8	0.0	0.1	0.9	1.6	0.0	1.7

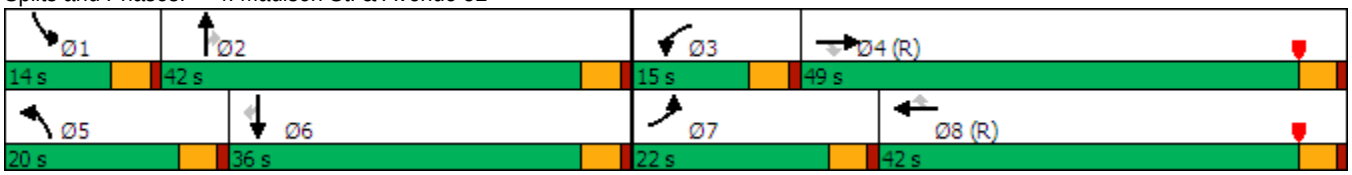
Intersection Summary	
HCM 6th Ctrl Delay	42.3
HCM 6th LOS	D

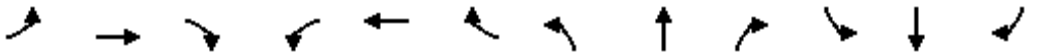
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	73	466	66	36	422	72	149	355	34	63	291	63
Future Volume (vph)	73	466	66	36	422	72	149	355	34	63	291	63
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	435		50	200		325	160		160	255		50
Storage Lanes	1		1	1		1	2		1	2		1
Taper Length (ft)	105			120			140			160		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			55			50			50	
Link Distance (ft)		1169			798			1237			1379	
Travel Time (s)		17.7			9.9			16.9			18.8	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	30.5	30.5	11.5	30.5	30.5	11.5	31.5	31.5	11.5	30.5	30.5
Total Split (s)	22.0	49.0	49.0	15.0	42.0	42.0	20.0	42.0	42.0	14.0	36.0	36.0
Total Split (%)	18.3%	40.8%	40.8%	12.5%	35.0%	35.0%	16.7%	35.0%	35.0%	11.7%	30.0%	30.0%
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	Max	Max

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 65.5 (55%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow
Natural Cycle: 85
Control Type: Actuated-Coordinated

Splits and Phases: 4: Madison St. & Avenue 52





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	73	466	66	36	422	72	149	355	34	63	291	63
Future Volume (veh/h)	73	466	66	36	422	72	149	355	34	63	291	63
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	84	536	76	41	485	83	171	408	39	72	334	72
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	106	1526	681	75	1464	653	231	1081	482	178	1027	458
Arrive On Green	0.06	0.44	0.44	0.04	0.42	0.42	0.07	0.31	0.31	0.05	0.30	0.30
Sat Flow, veh/h	1734	3460	1543	1734	3460	1543	3365	3460	1543	3365	3460	1543
Grp Volume(v), veh/h	84	536	76	41	485	83	171	408	39	72	334	72
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1730	1543	1682	1730	1543	1682	1730	1543
Q Serve(g_s), s	5.7	12.3	3.5	2.8	11.3	3.9	6.0	11.0	2.1	2.5	9.0	4.1
Cycle Q Clear(g_c), s	5.7	12.3	3.5	2.8	11.3	3.9	6.0	11.0	2.1	2.5	9.0	4.1
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	106	1526	681	75	1464	653	231	1081	482	178	1027	458
V/C Ratio(X)	0.79	0.35	0.11	0.54	0.33	0.13	0.74	0.38	0.08	0.40	0.33	0.16
Avail Cap(c_a), veh/h	253	1526	681	152	1464	653	435	1081	482	266	1027	458
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	1.00
Uniform Delay (d), s/veh	55.6	22.2	19.7	56.2	23.2	21.1	54.8	32.2	29.1	55.0	32.8	31.1
Incr Delay (d2), s/veh	12.2	0.6	0.3	6.0	0.6	0.4	4.6	1.0	0.3	1.5	0.8	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	4.9	1.2	1.3	4.4	1.4	2.6	4.6	0.8	1.1	3.7	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	67.7	22.8	20.1	62.2	23.8	21.5	59.5	33.2	29.4	56.4	33.7	31.8
LnGrp LOS	E	C	C	E	C	C	E	C	C	E	C	C
Approach Vol, veh/h		696			609			618			478	
Approach Delay, s/veh		27.9			26.1			40.2			36.8	
Approach LOS		C			C			D			D	

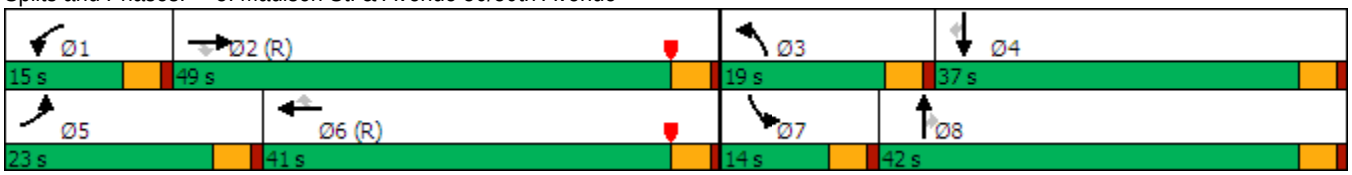
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.9	42.0	9.7	57.4	12.7	40.1	11.9	55.3
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	9.5	37.5	10.5	44.5	15.5	31.5	17.5	37.5
Max Q Clear Time (g_c+I1), s	4.5	13.0	4.8	14.3	8.0	11.0	7.7	13.3
Green Ext Time (p_c), s	0.1	2.5	0.0	3.7	0.3	2.0	0.1	3.0

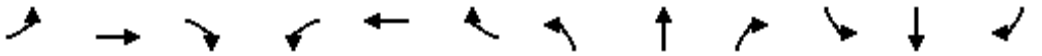
Intersection Summary	
HCM 6th Ctrl Delay	32.4
HCM 6th LOS	C

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	80	365	72	33	372	33	136	340	52	55	330	117
Future Volume (vph)	80	365	72	33	372	33	136	340	52	55	330	117
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	305		210	300		240	290		220	200		200
Storage Lanes	1		1	1		1	2		1	2		1
Taper Length (ft)	120			90			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			50			50			50	
Link Distance (ft)		579			1049			1270			550	
Travel Time (s)		8.8			14.3			17.3			7.5	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
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)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	30.5	30.5	11.5	30.5	30.5	11.5	30.5	30.5	11.5	30.5	30.5
Total Split (s)	23.0	49.0	49.0	15.0	41.0	41.0	19.0	42.0	42.0	14.0	37.0	37.0
Total Split (%)	19.2%	40.8%	40.8%	12.5%	34.2%	34.2%	15.8%	35.0%	35.0%	11.7%	30.8%	30.8%
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	Max	Max

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 64.5 (54%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 85	
Control Type: Actuated-Coordinated	

Splits and Phases: 5: Madison St. & Avenue 50/50th Avenue

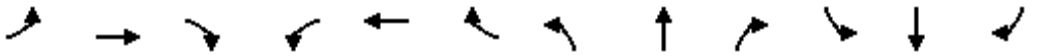




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	80	365	72	33	372	33	136	340	52	55	330	117
Future Volume (veh/h)	80	365	72	33	372	33	136	340	52	55	330	117
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	82	372	73	34	380	34	139	347	53	56	337	119
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	104	1552	692	69	1481	661	197	1081	482	166	1050	468
Arrive On Green	0.06	0.45	0.45	0.04	0.43	0.43	0.06	0.31	0.31	0.05	0.30	0.30
Sat Flow, veh/h	1734	3460	1543	1734	3460	1543	3365	3460	1543	3365	3460	1543
Grp Volume(v), veh/h	82	372	73	34	380	34	139	347	53	56	337	119
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1730	1543	1682	1730	1543	1682	1730	1543
Q Serve(g_s), s	5.6	8.0	3.3	2.3	8.5	1.5	4.9	9.2	2.9	1.9	9.0	7.0
Cycle Q Clear(g_c), s	5.6	8.0	3.3	2.3	8.5	1.5	4.9	9.2	2.9	1.9	9.0	7.0
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	104	1552	692	69	1481	661	197	1081	482	166	1050	468
V/C Ratio(X)	0.79	0.24	0.11	0.50	0.26	0.05	0.71	0.32	0.11	0.34	0.32	0.25
Avail Cap(c_a), veh/h	267	1552	692	152	1481	661	407	1081	482	266	1050	468
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	1.00
Uniform Delay (d), s/veh	55.6	20.4	19.1	56.5	22.0	20.1	55.5	31.5	29.4	55.1	32.3	31.5
Incr Delay (d2), s/veh	12.3	0.4	0.3	5.4	0.4	0.1	4.6	0.8	0.5	1.2	0.8	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	3.2	1.2	1.1	3.3	0.6	2.1	3.8	1.1	0.8	3.7	2.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	67.9	20.8	19.5	61.9	22.5	20.2	60.1	32.3	29.8	56.3	33.1	32.9
LnGrp LOS	E	C	B	E	C	C	E	C	C	E	C	C
Approach Vol, veh/h		527			448			539			512	
Approach Delay, s/veh		27.9			25.3			39.2			35.6	
Approach LOS		C			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.2	58.3	11.5	40.9	11.7	55.9	10.4	42.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	10.5	44.5	14.5	32.5	18.5	36.5	9.5	37.5
Max Q Clear Time (g_c+I1), s	4.3	10.0	6.9	11.0	7.6	10.5	3.9	11.2
Green Ext Time (p_c), s	0.0	2.6	0.2	2.2	0.1	2.3	0.0	2.1

Intersection Summary	
HCM 6th Ctrl Delay	32.3
HCM 6th LOS	C



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	10	13	43	7	488	5	250	30	613	192	27
Future Volume (vph)	8	10	13	43	7	488	5	250	30	613	192	27
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	110		110	140		140	150		150	240		0
Storage Lanes	0		2	1		0	0		0	2		1
Taper Length (ft)	0			110			25			140		
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		531			5080			436			1277	
Travel Time (s)		6.6			63.0			5.4			15.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Intersection Delay, s/veh	57.6
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	8	10	13	43	7	488	5	250	30	613	192	27
Future Vol, veh/h	8	10	13	43	7	488	5	250	30	613	192	27
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	9	11	14	48	8	542	6	278	33	681	213	30
Number of Lanes	1	2	0	1	1	1	0	2	0	2	1	0

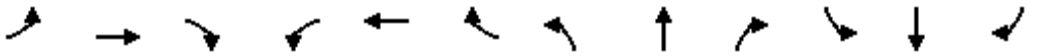
Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	2	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	3	3	3
HCM Control Delay	13.8	121.4	18	31.5
HCM LOS	B	F	C	D

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	4%	0%	100%	0%	0%	100%	0%	0%	100%	100%	0%
Vol Thru, %	96%	81%	0%	100%	20%	0%	100%	0%	0%	0%	88%
Vol Right, %	0%	19%	0%	0%	80%	0%	0%	100%	0%	0%	12%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	130	155	8	7	16	43	7	488	307	307	219
LT Vol	5	0	8	0	0	43	0	0	307	307	0
Through Vol	125	125	0	7	3	0	7	0	0	0	192
RT Vol	0	30	0	0	13	0	0	488	0	0	27
Lane Flow Rate	144	172	9	7	18	48	8	542	341	341	243
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.362	0.424	0.027	0.021	0.049	0.121	0.019	1.193	0.778	0.778	0.517
Departure Headway (Hd)	9.345	9.19	11.347	10.827	10.248	9.145	8.636	7.924	8.713	8.713	8.122
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	387	394	317	333	352	394	416	461	419	419	448
Service Time	7.045	6.89	9.047	8.527	7.948	6.865	6.357	5.644	6.413	6.413	5.822
HCM Lane V/C Ratio	0.372	0.437	0.028	0.021	0.051	0.122	0.019	1.176	0.814	0.814	0.542
HCM Control Delay	17.3	18.5	14.4	13.8	13.5	13.1	11.5	132.5	35.9	35.9	19.2
HCM Lane LOS	C	C	B	B	B	B	B	F	E	E	C
HCM 95th-tile Q	1.6	2.1	0.1	0.1	0.2	0.4	0.1	20.7	6.7	6.7	2.9

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	10	13	43	7	488	5	250	30	613	192	27
Future Volume (vph)	8	10	13	43	7	488	5	250	30	613	192	27
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	110		110	140		140	150		150	240		0
Storage Lanes	0		2	1		0	0		0	2		1
Taper Length (ft)	0			110			25			140		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		531			5080			436			1277	
Travel Time (s)		6.6			63.0			5.4			15.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA	pm+ov	Split	NA		Split	NA	Perm
Protected Phases		2			6	4	8	8		4	4	
Permitted Phases	2			6		6						4
Detector Phase	2	2		6	6	4	8	8		4	4	4
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	22.5	22.5		22.5	22.5	22.5	22.5	22.5		22.5	22.5	22.5
Total Split (s)	29.0	29.0		29.0	29.0	61.0	30.0	30.0		61.0	61.0	61.0
Total Split (%)	24.2%	24.2%		24.2%	24.2%	50.8%	25.0%	25.0%		50.8%	50.8%	50.8%
Yellow Time (s)	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
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)	4.5	4.5		4.5	4.5	4.5		4.5		4.5	4.5	4.5
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max		None	None	Max	Max	Max		Max	Max	Max

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 87 (73%), Referenced to phase 2:EBTL, Start of Yellow	
Natural Cycle: 70	
Control Type: Actuated-Coordinated	

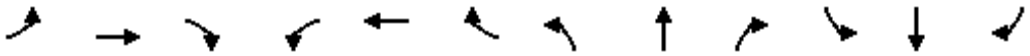
Splits and Phases: 6: Jefferson St. & Avenue 54



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	10	13	43	7	488	5	250	30	613	192	27
Future Volume (veh/h)	8	10	13	43	7	488	5	250	30	613	192	27
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	9	11	14	48	8	542	6	278	33	681	213	30
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	232	353	315	333	372	1042	14	662	82	1584	1629	727
Arrive On Green	0.20	0.20	0.20	0.20	0.20	0.20	0.21	0.21	0.21	0.47	0.47	0.47
Sat Flow, veh/h	858	1730	1543	1386	1821	1543	65	3117	387	3365	3460	1543
Grp Volume(v), veh/h	9	11	14	48	8	542	168	0	149	681	213	30
Grp Sat Flow(s),veh/h/ln	858	1730	1543	1386	1821	1543	1818	0	1752	1682	1730	1543
Q Serve(g_s), s	1.0	0.6	0.9	3.5	0.4	21.1	9.6	0.0	8.8	16.1	4.2	1.3
Cycle Q Clear(g_c), s	1.4	0.6	0.9	4.3	0.4	21.1	9.6	0.0	8.8	16.1	4.2	1.3
Prop In Lane	1.00		1.00	1.00		1.00	0.04		0.22	1.00		1.00
Lane Grp Cap(c), veh/h	232	353	315	333	372	1042	386	0	372	1584	1629	727
V/C Ratio(X)	0.04	0.03	0.04	0.14	0.02	0.52	0.43	0.00	0.40	0.43	0.13	0.04
Avail Cap(c_a), veh/h	232	353	315	333	372	1042	386	0	372	1584	1629	727
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.83	0.83	0.83	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.7	38.2	38.3	40.1	38.2	9.8	41.0	0.0	40.7	21.1	17.9	17.1
Incr Delay (d2), s/veh	0.3	0.2	0.3	0.2	0.0	0.4	3.5	0.0	3.2	0.9	0.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.3	0.3	1.1	0.2	16.0	4.5	0.0	4.0	6.0	1.6	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.1	38.4	38.6	40.3	38.2	10.2	44.5	0.0	43.9	21.9	18.1	17.2
LnGrp LOS	D	D	D	D	D	B	D	A	D	C	B	B
Approach Vol, veh/h		34			598			317			924	
Approach Delay, s/veh		38.7			12.9			44.2			20.9	
Approach LOS		D			B			D			C	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		29.0		61.0		29.0		30.0				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		24.5		56.5		24.5		25.5				
Max Q Clear Time (g_c+I1), s		3.4		18.1		23.1		11.6				
Green Ext Time (p_c), s		0.1		3.9		0.4		1.2				

Intersection Summary												
HCM 6th Ctrl Delay			22.6									
HCM 6th LOS			C									



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	126	408	322	15	409	322	253	563	35	209	571	95
Future Volume (vph)	126	408	322	15	409	322	253	563	35	209	571	95
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Link Speed (mph)		50			50			50			55	
Link Distance (ft)		709			813			334			462	
Travel Time (s)		9.7			11.1			4.6			5.7	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)												
Sign Control		Yield			Yield			Yield			Yield	

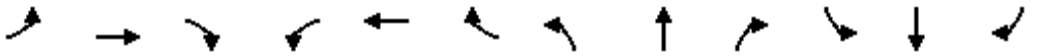
Intersection Summary	
Area Type:	Other

Control Type: Roundabout

Intersection	
Intersection Delay, s/veh	121.9
Intersection LOS	F

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	920	802	915	941
Demand Flow Rate, veh/h	939	818	933	960
Vehicles Circulating, veh/h	871	1032	815	742
Vehicles Exiting, veh/h	726	677	642	755
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	46.2	35.7	237.5	157.0
Approach LOS	E	E	F	F

Lane	Left	Bypass	Left	Bypass	Left	Bypass	Left	Bypass
Designated Moves	LT	R	LT	R	LT	R	LT	R
Assumed Moves	LT	R	LT	R	LT	R	LT	R
RT Channelized		Free		Free		Free		Free
Lane Util	1.000		1.000		1.000		1.000	
Follow-Up Headway, s	2.609		2.609		2.609		2.609	
Critical Headway, s	4.976	353	4.976	353	4.976	39	4.976	104
Entry Flow, veh/h	586	1887	465	1887	894	1887	856	1887
Cap Entry Lane, veh/h	568	0.980	482	0.980	601	0.980	647	0.980
Entry HV Adj Factor	0.980	346	0.981	346	0.981	38	0.980	102
Flow Entry, veh/h	574	1850	456	1850	877	1850	839	1850
Cap Entry, veh/h	556	0.187	473	0.187	589	0.021	634	0.055
V/C Ratio	1.032	0.0	0.965	0.0	1.488	0.0	1.322	0.0
Control Delay, s/veh	74.1	A	62.7	A	247.8	A	176.1	A
LOS	F	1	F	1	F	0	F	0
95th %tile Queue, veh	16		12		43		35	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	126	408	322	15	409	322	253	563	35	209	571	95
Future Volume (vph)	126	408	322	15	409	322	253	563	35	209	571	95
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	0		100	0		100	0		0	0		0
Storage Lanes	0		1	0		1	0		1	0		1
Taper Length (ft)	60			60			60			60		
Link Speed (mph)		50			50			50			55	
Link Distance (ft)		709			813			334			462	
Travel Time (s)		9.7			11.1			4.6			5.7	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)												
Sign Control		Yield			Yield			Yield			Yield	

Intersection Summary	
Area Type:	Other
Control Type: Roundabout	

Intersection	
Intersection Delay, s/veh	17.5
Intersection LOS	C

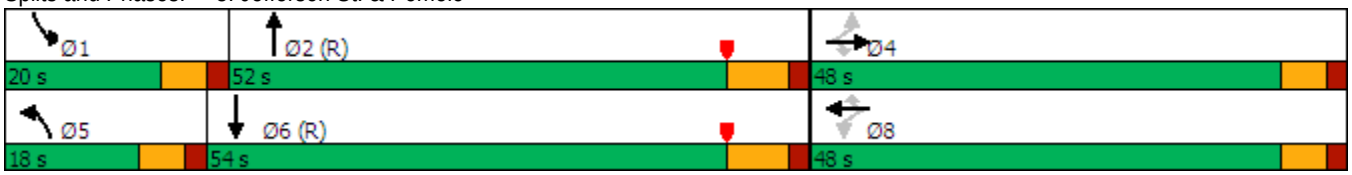
Approach	EB	WB	NB	SB
Entry Lanes	1	1	2	2
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	920	802	915	941
Demand Flow Rate, veh/h	939	818	933	960
Vehicles Circulating, veh/h	871	1032	815	742
Vehicles Exiting, veh/h	726	677	642	755
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	21.5	16.7	18.0	13.6
Approach LOS	C	C	C	B

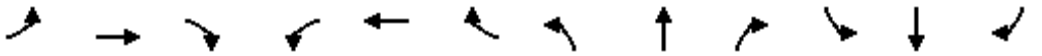
Lane	Left	Bypass	Left	Bypass	Left	Right	Bypass	Left	Right	Bypass
Designated Moves	LT	R	LT	R	LT	TR	R	LT	TR	R
Assumed Moves	LT	R	LT	R	LT	TR	R	LT	TR	R
RT Channelized		Free		Free			Free			Free
Lane Util	1.000		1.000		0.470	0.530		0.470	0.530	
Follow-Up Headway, s	2.535		2.535		2.667	2.535		2.667	2.535	
Critical Headway, s	4.328	353	4.328	353	4.645	4.328	39	4.645	4.328	104
Entry Flow, veh/h	586	1887	465	1887	420	474	1887	402	454	1887
Cap Entry Lane, veh/h	677	0.980	591	0.980	638	710	0.980	682	756	0.980
Entry HV Adj Factor	0.980	346	0.981	346	0.981	0.981	38	0.981	0.979	102
Flow Entry, veh/h	574	1850	456	1850	412	465	1850	394	445	1850
Cap Entry, veh/h	664	0.187	579	0.187	626	696	0.021	669	740	0.055
V/C Ratio	0.865	0.0	0.787	0.0	0.658	0.667	0.0	0.589	0.601	0.0
Control Delay, s/veh	34.5	A	29.3	A	19.4	18.2	A	15.8	14.9	A
LOS	D	1	D	1	C	C	0	C	B	0
95th %tile Queue, veh	10		7		5	5		4	4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	37	1	2	4	1	16	13	957	13	40	886	51
Future Volume (vph)	37	1	2	4	1	16	13	957	13	40	886	51
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	0		0	0		0	160		0	180		0
Storage Lanes	0		1	0		1	1		0	1		0
Taper Length (ft)	60			60			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			55			55	
Link Distance (ft)		509			561			1820			1343	
Travel Time (s)		13.9			15.3			22.6			16.6	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						
Detector Phase	4	4	4	8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	
Minimum Split (s)	48.0	48.0	48.0	48.0	48.0	48.0	18.0	40.5		18.0	39.5	
Total Split (s)	48.0	48.0	48.0	48.0	48.0	48.0	18.0	52.0		20.0	54.0	
Total Split (%)	40.0%	40.0%	40.0%	40.0%	40.0%	40.0%	15.0%	43.3%		16.7%	45.0%	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	5.5		4.0	5.5	
All-Red Time (s)	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	
Total Lost Time (s)		6.0	6.0		6.0	6.0	6.0	7.5		6.0	7.5	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Min		None	C-Min	

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 10 (8%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 110	
Control Type: Actuated-Coordinated	

Splits and Phases: 8: Jefferson St. & Pomelo





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	37	1	2	4	1	16	13	957	13	40	886	51
Future Volume (veh/h)	37	1	2	4	1	16	13	957	13	40	886	51
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	40	1	2	4	1	17	14	1029	14	43	953	55
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	62	1	199	55	8	199	65	3198	43	132	3229	186
Arrive On Green	0.13	0.13	0.13	0.13	0.13	0.13	0.04	0.63	0.63	0.03	0.22	0.22
Sat Flow, veh/h	24	6	1543	11	62	1543	1734	5054	69	1734	4809	277
Grp Volume(v), veh/h	41	0	2	5	0	17	14	675	368	43	656	352
Grp Sat Flow(s),veh/h/ln	30	0	1543	73	0	1543	1734	1657	1809	1734	1657	1771
Q Serve(g_s), s	0.3	0.0	0.1	0.1	0.0	1.2	0.9	11.3	11.3	2.9	19.8	19.8
Cycle Q Clear(g_c), s	15.4	0.0	0.1	15.3	0.0	1.2	0.9	11.3	11.3	2.9	19.8	19.8
Prop In Lane	0.98		1.00	0.80		1.00	1.00		0.04	1.00		0.16
Lane Grp Cap(c), veh/h	63	0	199	63	0	199	65	2097	1144	132	2226	1189
V/C Ratio(X)	0.65	0.00	0.01	0.08	0.00	0.09	0.22	0.32	0.32	0.33	0.29	0.30
Avail Cap(c_a), veh/h	374	0	540	391	0	540	173	2097	1144	202	2226	1189
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.71	0.71	0.71
Uniform Delay (d), s/veh	59.7	0.0	45.6	46.6	0.0	46.1	56.1	10.2	10.2	55.5	23.0	23.1
Incr Delay (d2), s/veh	21.5	0.0	0.0	1.1	0.0	0.4	3.5	0.4	0.7	2.1	0.2	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	0.0	0.1	0.2	0.0	0.5	0.5	3.6	4.0	1.3	8.7	9.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	81.2	0.0	45.7	47.7	0.0	46.5	59.6	10.6	10.9	57.6	23.3	23.5
LnGrp LOS	F	A	D	D	A	D	E	B	B	E	C	C
Approach Vol, veh/h		43			22			1057			1051	
Approach Delay, s/veh		79.5			46.7			11.3			24.8	
Approach LOS		E			D			B			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	15.1	83.3		21.6	10.5	88.0		21.6				
Change Period (Y+Rc), s	6.0	7.5		6.0	6.0	7.5		6.0				
Max Green Setting (Gmax), s	14.0	44.5		42.0	12.0	46.5		42.0				
Max Q Clear Time (g_c+I1), s	4.9	13.3		17.4	2.9	21.8		17.3				
Green Ext Time (p_c), s	0.1	13.3		0.3	0.0	11.5		0.1				

Intersection Summary			
HCM 6th Ctrl Delay		19.5	
HCM 6th LOS		B	

Notes

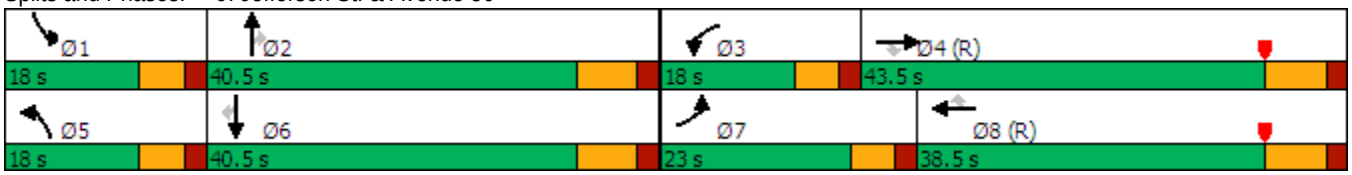
User approved pedestrian interval to be less than phase max green.

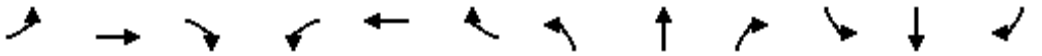
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	256	306	81	84	350	232	140	805	68	154	805	362
Future Volume (vph)	256	306	81	84	350	232	140	805	68	154	805	362
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	245		100	105		0	360		220	280		230
Storage Lanes	1		1	1		1	1		1	2		1
Taper Length (ft)	120			60			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			45			55			55	
Link Distance (ft)		693			995			1343			697	
Travel Time (s)		9.5			15.1			16.6			8.6	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Minimum Split (s)	18.0	31.5	31.5	18.0	38.5	38.5	18.0	40.5	40.5	18.0	40.5	40.5
Total Split (s)	23.0	43.5	43.5	18.0	38.5	38.5	18.0	40.5	40.5	18.0	40.5	40.5
Total Split (%)	19.2%	36.3%	36.3%	15.0%	32.1%	32.1%	15.0%	33.8%	33.8%	15.0%	33.8%	33.8%
Yellow Time (s)	4.0	5.5	5.5	4.0	5.5	5.5	4.0	5.5	5.5	4.0	5.5	5.5
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	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	0.0
Total Lost Time (s)	6.0	7.5	7.5	6.0	7.5	7.5	6.0	7.5	7.5	6.0	7.5	7.5
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	Min	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow
Natural Cycle: 115
Control Type: Actuated-Coordinated

Splits and Phases: 9: Jefferson St. & Avenue 50





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	256	306	81	84	350	232	140	805	68	154	805	362
Future Volume (veh/h)	256	306	81	84	350	232	140	805	68	154	805	362
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	261	312	83	86	357	237	143	821	69	157	821	369
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	246	1091	487	164	488	413	172	1322	411	335	1324	411
Arrive On Green	0.14	0.32	0.32	0.09	0.27	0.27	0.03	0.09	0.09	0.10	0.27	0.27
Sat Flow, veh/h	1734	3460	1543	1734	1821	1543	1734	4972	1543	3365	4972	1543
Grp Volume(v), veh/h	261	312	83	86	357	237	143	821	69	157	821	369
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1821	1543	1734	1657	1543	1682	1657	1543
Q Serve(g_s), s	17.0	8.1	4.7	5.7	21.4	15.9	9.8	19.1	5.0	5.3	17.4	27.7
Cycle Q Clear(g_c), s	17.0	8.1	4.7	5.7	21.4	15.9	9.8	19.1	5.0	5.3	17.4	27.7
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	246	1091	487	164	488	413	172	1322	411	335	1324	411
V/C Ratio(X)	1.06	0.29	0.17	0.53	0.73	0.57	0.83	0.62	0.17	0.47	0.62	0.90
Avail Cap(c_a), veh/h	246	1091	487	173	488	413	173	1367	424	336	1367	424
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.96	0.96	0.96	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.5	30.9	29.7	51.8	40.0	38.0	57.0	48.9	42.4	51.0	38.7	42.4
Incr Delay (d2), s/veh	74.8	0.7	0.8	1.0	9.3	5.7	25.2	1.0	0.3	0.4	1.0	21.5
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	12.2	3.4	1.8	2.5	10.5	6.5	5.6	8.5	1.9	2.2	6.8	12.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	126.3	31.6	30.5	52.8	49.3	43.7	82.2	49.8	42.7	51.4	39.7	63.9
LnGrp LOS	F	C	C	D	D	D	F	D	D	D	D	E
Approach Vol, veh/h		656			680			1033			1347	
Approach Delay, s/veh		69.1			47.8			53.9			47.7	
Approach LOS		E			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.9	39.4	17.3	45.3	17.9	39.5	23.0	39.6
Change Period (Y+Rc), s	6.0	7.5	6.0	7.5	6.0	7.5	6.0	7.5
Max Green Setting (Gmax), s	12.0	33.0	12.0	36.0	12.0	33.0	17.0	31.0
Max Q Clear Time (g_c+I1), s	7.3	21.1	7.7	10.1	11.8	29.7	19.0	23.4
Green Ext Time (p_c), s	0.1	5.3	0.0	4.0	0.0	2.3	0.0	3.0

Intersection Summary	
HCM 6th Ctrl Delay	53.2
HCM 6th LOS	D

Notes

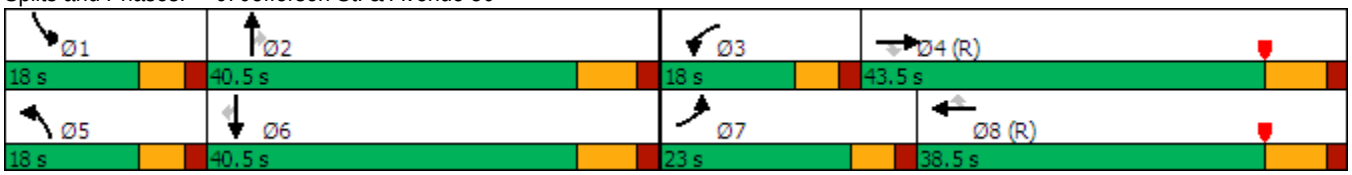
User approved pedestrian interval to be less than phase max green.

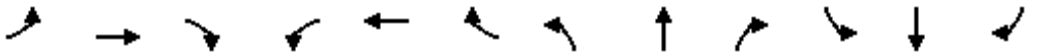
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	256	306	81	84	350	232	140	805	68	154	805	362
Future Volume (vph)	256	306	81	84	350	232	140	805	68	154	805	362
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	245		100	105		0	360		220	280		230
Storage Lanes	1		1	1		1	1		1	2		1
Taper Length (ft)	120			60			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			45			55			55	
Link Distance (ft)		693			995			1343			697	
Travel Time (s)		9.5			15.1			16.6			8.6	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Minimum Split (s)	18.0	31.5	31.5	18.0	38.5	38.5	18.0	40.5	40.5	18.0	40.5	40.5
Total Split (s)	23.0	43.5	43.5	18.0	38.5	38.5	18.0	40.5	40.5	18.0	40.5	40.5
Total Split (%)	19.2%	36.3%	36.3%	15.0%	32.1%	32.1%	15.0%	33.8%	33.8%	15.0%	33.8%	33.8%
Yellow Time (s)	4.0	5.5	5.5	4.0	5.5	5.5	4.0	5.5	5.5	4.0	5.5	5.5
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	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	0.0
Total Lost Time (s)	6.0	7.5	7.5	6.0	7.5	7.5	6.0	7.5	7.5	6.0	7.5	7.5
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	Min	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow
Natural Cycle: 115
Control Type: Actuated-Coordinated

Splits and Phases: 9: Jefferson St. & Avenue 50





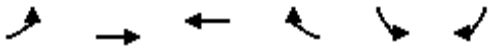
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	256	306	81	84	350	232	140	805	68	154	805	362
Future Volume (veh/h)	256	306	81	84	350	232	140	805	68	154	805	362
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	261	312	83	86	357	237	143	821	69	157	821	369
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	246	1091	487	164	927	413	172	1322	411	335	1324	411
Arrive On Green	0.14	0.32	0.32	0.09	0.27	0.27	0.03	0.09	0.09	0.10	0.27	0.27
Sat Flow, veh/h	1734	3460	1543	1734	3460	1543	1734	4972	1543	3365	4972	1543
Grp Volume(v), veh/h	261	312	83	86	357	237	143	821	69	157	821	369
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1730	1543	1734	1657	1543	1682	1657	1543
Q Serve(g_s), s	17.0	8.1	4.7	5.7	10.1	15.9	9.8	19.1	5.0	5.3	17.4	27.7
Cycle Q Clear(g_c), s	17.0	8.1	4.7	5.7	10.1	15.9	9.8	19.1	5.0	5.3	17.4	27.7
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	246	1091	487	164	927	413	172	1322	411	335	1324	411
V/C Ratio(X)	1.06	0.29	0.17	0.53	0.39	0.57	0.83	0.62	0.17	0.47	0.62	0.90
Avail Cap(c_a), veh/h	246	1091	487	173	927	413	173	1367	424	336	1367	424
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.96	0.96	0.96	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.5	30.9	29.7	51.8	35.9	38.0	57.0	48.9	42.4	51.0	38.7	42.4
Incr Delay (d2), s/veh	74.8	0.7	0.8	1.0	1.2	5.7	25.2	1.0	0.3	0.4	1.0	21.5
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	12.2	3.4	1.8	2.5	4.3	6.5	5.6	8.5	1.9	2.2	6.8	12.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	126.3	31.6	30.5	52.8	37.1	43.7	82.2	49.8	42.7	51.4	39.7	63.9
LnGrp LOS	F	C	C	D	D	D	F	D	D	D	D	E
Approach Vol, veh/h		656			680			1033			1347	
Approach Delay, s/veh		69.1			41.4			53.9			47.7	
Approach LOS		E			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.9	39.4	17.3	45.3	17.9	39.5	23.0	39.6
Change Period (Y+Rc), s	6.0	7.5	6.0	7.5	6.0	7.5	6.0	7.5
Max Green Setting (Gmax), s	12.0	33.0	12.0	36.0	12.0	33.0	17.0	31.0
Max Q Clear Time (g_c+I1), s	7.3	21.1	7.7	10.1	11.8	29.7	19.0	17.9
Green Ext Time (p_c), s	0.1	5.3	0.0	2.8	0.0	2.3	0.0	4.4

Intersection Summary	
HCM 6th Ctrl Delay	52.0
HCM 6th LOS	D

Notes

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



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	74	66	32	185	177	78
Future Volume (vph)	74	66	32	185	177	78
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Link Speed (mph)		40	40		40	
Link Distance (ft)		1772	661		437	
Travel Time (s)		30.2	11.3		7.4	
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83
Shared Lane Traffic (%)						
Sign Control		Stop	Stop		Stop	

Intersection Summary	
Area Type:	Other

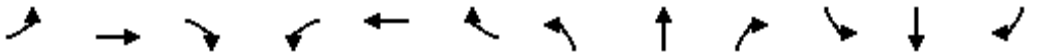
Control Type: Unsignalized

Intersection	
Intersection Delay, s/veh	10.5
Intersection LOS	B

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	74	66	32	185	177	78
Future Vol, veh/h	74	66	32	185	177	78
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	89	80	39	223	213	94
Number of Lanes	0	1	1	1	1	1

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	2	1	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	2	0	2
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	2	1
HCM Control Delay	10.7	9.6	11.1
HCM LOS	B	A	B

Lane	EBLn1	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	53%	0%	0%	100%	0%
Vol Thru, %	47%	100%	0%	0%	0%
Vol Right, %	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	140	32	185	177	78
LT Vol	74	0	0	177	0
Through Vol	66	32	0	0	0
RT Vol	0	0	185	0	78
Lane Flow Rate	169	39	223	213	94
Geometry Grp	4	7	7	7	7
Degree of Util (X)	0.262	0.06	0.302	0.36	0.127
Departure Headway (Hd)	5.586	5.586	4.88	6.079	4.87
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	638	637	731	586	727
Service Time	3.663	3.355	2.648	3.865	2.656
HCM Lane V/C Ratio	0.265	0.061	0.305	0.363	0.129
HCM Control Delay	10.7	8.7	9.8	12.3	8.4
HCM Lane LOS	B	A	A	B	A
HCM 95th-tile Q	1	0.2	1.3	1.6	0.4



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	47	97	142	10	86	167	131	343	19	82	180	57
Future Volume (vph)	47	97	142	10	86	167	131	343	19	82	180	57
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		0	150		150	100		150	320		150
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	90			90			90			90		
Link Speed (mph)		45			45			50			50	
Link Distance (ft)		598			1045			1022			1291	
Travel Time (s)		9.1			15.8			13.9			17.6	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Intersection Delay, s/veh	32.7
Intersection LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	47	97	142	10	86	167	131	343	19	82	180	57
Future Vol, veh/h	47	97	142	10	86	167	131	343	19	82	180	57
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	52	107	156	11	95	184	144	377	21	90	198	63
Number of Lanes	0	1	1	0	1	0	1	1	0	1	1	1

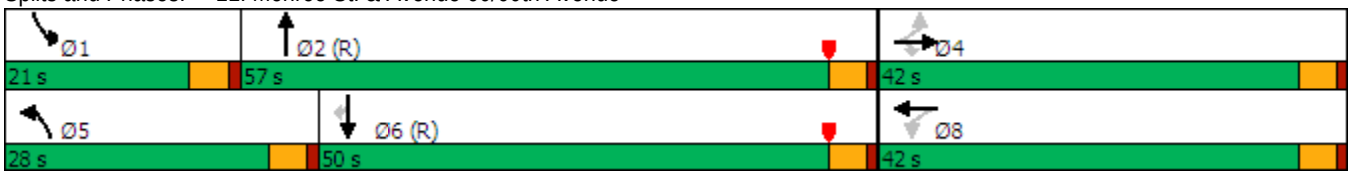
Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	3	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	2	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	3	1	2
HCM Control Delay	18	31.3	51.3	18.4
HCM LOS	C	D	F	C

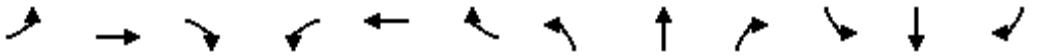
Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	33%	0%	4%	100%	0%	0%
Vol Thru, %	0%	95%	67%	0%	33%	0%	100%	0%
Vol Right, %	0%	5%	0%	100%	63%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	131	362	144	142	263	82	180	57
LT Vol	131	0	47	0	10	82	0	0
Through Vol	0	343	97	0	86	0	180	0
RT Vol	0	19	0	142	167	0	0	57
Lane Flow Rate	144	398	158	156	289	90	198	63
Geometry Grp	8	8	8	8	8	8	8	8
Degree of Util (X)	0.368	0.956	0.421	0.377	0.715	0.245	0.509	0.149
Departure Headway (Hd)	9.208	8.649	9.588	8.694	8.912	9.792	9.271	8.543
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	390	418	375	412	405	366	388	418
Service Time	6.989	6.429	7.379	6.483	6.696	7.58	7.059	6.33
HCM Lane V/C Ratio	0.369	0.952	0.421	0.379	0.714	0.246	0.51	0.151
HCM Control Delay	17.3	63.6	19.2	16.7	31.3	15.8	21.4	12.8
HCM Lane LOS	C	F	C	C	D	C	C	B
HCM 95th-tile Q	1.7	11.1	2	1.7	5.4	0.9	2.8	0.5

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	47	97	142	10	86	167	131	343	19	82	180	57
Future Volume (vph)	47	97	142	10	86	167	131	343	19	82	180	57
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		0	150		150	100		150	320		150
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			50			50	
Link Distance (ft)		598			1045			1022			1291	
Travel Time (s)		9.1			15.8			13.9			17.6	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8								6
Detector Phase	4	4	4	8	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0		7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5		11.5	22.5		11.5	22.5	22.5
Total Split (s)	42.0	42.0	42.0	42.0	42.0		28.0	57.0		21.0	50.0	50.0
Total Split (%)	35.0%	35.0%	35.0%	35.0%	35.0%		23.3%	47.5%		17.5%	41.7%	41.7%
Yellow Time (s)	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
Lost Time Adjust (s)		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
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None		None	C-Max		None	C-Max	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 Yellow	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	

Splits and Phases: 11: Monroe St. & Avenue 60/60th Avenue

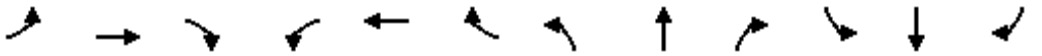




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	47	97	142	10	86	167	131	343	19	82	180	57
Future Volume (veh/h)	47	97	142	10	86	167	131	343	19	82	180	57
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	52	107	156	11	95	184	144	377	21	90	198	63
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	95	175	336	36	114	207	172	1033	58	113	1038	880
Arrive On Green	0.22	0.22	0.22	0.22	0.22	0.22	0.10	0.60	0.60	0.07	0.57	0.57
Sat Flow, veh/h	252	803	1543	22	524	949	1734	1709	95	1734	1821	1543
Grp Volume(v), veh/h	159	0	156	290	0	0	144	0	398	90	198	63
Grp Sat Flow(s),veh/h/ln	1055	0	1543	1495	0	0	1734	0	1804	1734	1821	1543
Q Serve(g_s), s	0.0	0.0	10.6	6.3	0.0	0.0	9.8	0.0	13.4	6.1	6.3	2.2
Cycle Q Clear(g_c), s	16.6	0.0	10.6	22.9	0.0	0.0	9.8	0.0	13.4	6.1	6.3	2.2
Prop In Lane	0.33		1.00	0.04		0.63	1.00		0.05	1.00		1.00
Lane Grp Cap(c), veh/h	270	0	336	357	0	0	172	0	1090	113	1038	880
V/C Ratio(X)	0.59	0.00	0.46	0.81	0.00	0.00	0.83	0.00	0.37	0.80	0.19	0.07
Avail Cap(c_a), veh/h	412	0	482	508	0	0	340	0	1090	238	1038	880
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.8	0.0	40.8	45.2	0.0	0.0	53.1	0.0	12.0	55.3	12.4	11.6
Incr Delay (d2), s/veh	2.1	0.0	1.0	6.6	0.0	0.0	10.0	0.0	0.9	11.8	0.4	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.3	0.0	4.0	8.8	0.0	0.0	4.6	0.0	5.1	3.0	2.5	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.9	0.0	41.8	51.8	0.0	0.0	63.1	0.0	13.0	67.1	12.8	11.7
LnGrp LOS	D	A	D	D	A	A	E	A	B	E	B	B
Approach Vol, veh/h		315			290			542			351	
Approach Delay, s/veh		42.9			51.8			26.3			26.6	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.3	77.0		30.6	16.4	72.9		30.6				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	16.5	52.5		37.5	23.5	45.5		37.5				
Max Q Clear Time (g_c+I1), s	8.1	15.4		18.6	11.8	8.3		24.9				
Green Ext Time (p_c), s	0.1	2.2		1.2	0.2	1.2		1.3				

Intersection Summary			
HCM 6th Ctrl Delay		34.8	
HCM 6th LOS		C	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	90	133	62	30	73	41	50	456	49	31	285	60
Future Volume (vph)	90	133	62	30	73	41	50	456	49	31	285	60
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		150	0		0	150		150	150		150
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		50			30			50			50	
Link Distance (ft)		670			5266			913			1519	
Travel Time (s)		9.1			119.7			12.5			20.7	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Intersection Delay, s/veh	94.9
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	90	133	62	30	73	41	50	456	49	31	285	60
Future Vol, veh/h	90	133	62	30	73	41	50	456	49	31	285	60
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	107	158	74	36	87	49	60	543	58	37	339	71
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	1	1
HCM Control Delay	30.8	18.5	188.3	35
HCM LOS	D	C	F	D

Lane	NBLn1	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	9%	32%	21%	10%	0%
Vol Thru, %	82%	47%	51%	90%	0%
Vol Right, %	9%	22%	28%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	555	285	144	316	60
LT Vol	50	90	30	31	0
Through Vol	456	133	73	285	0
RT Vol	49	62	41	0	60
Lane Flow Rate	661	339	171	376	71
Geometry Grp	5	2	2	7	7
Degree of Util (X)	1.34	0.724	0.399	0.817	0.14
Departure Headway (Hd)	7.301	8.512	9.383	8.493	7.715
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	496	428	386	429	468
Service Time	5.368	6.512	7.383	6.193	5.415
HCM Lane V/C Ratio	1.333	0.792	0.443	0.876	0.152
HCM Control Delay	188.3	30.8	18.5	39.4	11.7
HCM Lane LOS	F	D	C	E	B
HCM 95th-tile Q	29.2	5.7	1.9	7.5	0.5

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	90	133	62	30	73	41	50	456	49	31	285	60
Future Volume (vph)	90	133	62	30	73	41	50	456	49	31	285	60
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		150	150		0	150		150	150		150
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			30			50			50	
Link Distance (ft)		670			5266			913			1519	
Travel Time (s)		9.1			119.7			12.5			20.7	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		11.5	22.5		11.5	22.5	
Total Split (s)	35.0	35.0		35.0	35.0		16.0	72.0		13.0	69.0	
Total Split (%)	29.2%	29.2%		29.2%	29.2%		13.3%	60.0%		10.8%	57.5%	
Yellow Time (s)	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	
Lost Time Adjust (s)	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	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	

Intersection Summary

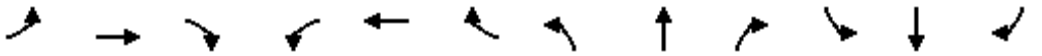
Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
Natural Cycle: 65
Control Type: Actuated-Coordinated

Splits and Phases: 12: Monroe St. & Avenue 58

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	90	133	62	30	73	41	50	456	49	31	285	60
Future Volume (veh/h)	90	133	62	30	73	41	50	456	49	31	285	60
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	107	158	74	36	87	49	60	543	58	37	339	71
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	196	211	99	120	197	111	87	1078	115	72	960	201
Arrive On Green	0.18	0.18	0.18	0.18	0.18	0.18	0.05	0.67	0.67	0.04	0.66	0.66
Sat Flow, veh/h	1253	1173	549	1148	1094	616	1734	1617	173	1734	1460	306
Grp Volume(v), veh/h	107	0	232	36	0	136	60	0	601	37	0	410
Grp Sat Flow(s),veh/h/ln	1253	0	1722	1148	0	1710	1734	0	1790	1734	0	1766
Q Serve(g_s), s	10.0	0.0	15.3	3.7	0.0	8.5	4.1	0.0	20.2	2.5	0.0	12.4
Cycle Q Clear(g_c), s	18.5	0.0	15.3	19.0	0.0	8.5	4.1	0.0	20.2	2.5	0.0	12.4
Prop In Lane	1.00		0.32	1.00		0.36	1.00		0.10	1.00		0.17
Lane Grp Cap(c), veh/h	196	0	309	120	0	307	87	0	1193	72	0	1161
V/C Ratio(X)	0.55	0.00	0.75	0.30	0.00	0.44	0.69	0.00	0.50	0.52	0.00	0.35
Avail Cap(c_a), veh/h	290	0	438	205	0	435	166	0	1193	123	0	1161
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	52.1	0.0	46.7	55.7	0.0	43.9	56.0	0.0	10.0	56.3	0.0	9.2
Incr Delay (d2), s/veh	2.3	0.0	4.4	1.4	0.0	1.0	9.1	0.0	1.5	5.6	0.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	0.0	6.7	1.1	0.0	3.7	2.0	0.0	7.1	1.2	0.0	4.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	54.5	0.0	51.1	57.1	0.0	44.9	65.2	0.0	11.6	62.0	0.0	10.0
LnGrp LOS	D	A	D	E	A	D	E	A	B	E	A	B
Approach Vol, veh/h		339			172			661			447	
Approach Delay, s/veh		52.1			47.4			16.4			14.3	
Approach LOS		D			D			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.5	84.5		26.1	10.6	83.4		26.1				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	8.5	67.5		30.5	11.5	64.5		30.5				
Max Q Clear Time (g_c+I1), s	4.5	22.2		20.5	6.1	14.4		21.0				
Green Ext Time (p_c), s	0.0	3.9		1.1	0.0	2.4		0.5				

Intersection Summary			
HCM 6th Ctrl Delay		26.6	
HCM 6th LOS		C	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	133	19	33	81	36	29	468	65	71	296	13
Future Volume (vph)	0	133	19	33	81	36	29	468	65	71	296	13
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	280		150	150		150	105		150	160		50
Storage Lanes	1		0	0		0	1		0	1		1
Taper Length (ft)	60			25			90			90		
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		5252			1251			918			726	
Travel Time (s)		71.6			17.1			12.5			9.9	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Intersection Delay, s/veh	80.2
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	133	19	33	81	36	29	468	65	71	296	13
Future Vol, veh/h	0	133	19	33	81	36	29	468	65	71	296	13
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	156	22	39	95	42	34	551	76	84	348	15
Number of Lanes	1	1	1	0	1	0	1	1	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	3	3	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	2	3	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	3	1	3
HCM Control Delay	15.4	18.2	157.3	16.5
HCM LOS	C	C	F	C

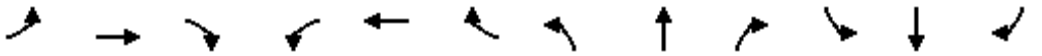
Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	0%	0%	22%	100%	0%	0%
Vol Thru, %	0%	88%	100%	100%	0%	54%	0%	100%	88%
Vol Right, %	0%	12%	0%	0%	100%	24%	0%	0%	12%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	29	533	0	133	19	150	71	197	112
LT Vol	29	0	0	0	0	33	71	0	0
Through Vol	0	468	0	133	0	81	0	197	99
RT Vol	0	65	0	0	19	36	0	0	13
Lane Flow Rate	34	627	0	156	22	176	84	232	131
Geometry Grp	8	8	7	7	7	8	8	8	8
Degree of Util (X)	0.076	1.283	0	0.35	0.046	0.415	0.19	0.496	0.278
Departure Headway (Hd)	7.967	7.366	8.712	8.712	7.986	9.166	8.829	8.313	8.229
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	448	495	0	416	451	395	409	436	440
Service Time	5.747	5.146	6.412	6.412	5.686	6.866	6.529	6.013	5.929
HCM Lane V/C Ratio	0.076	1.267	0	0.375	0.049	0.446	0.205	0.532	0.298
HCM Control Delay	11.4	165.2	11.4	16	11.1	18.2	13.6	18.9	14.1
HCM Lane LOS	B	F	N	C	B	C	B	C	B
HCM 95th-tile Q	0.2	26	0	1.5	0.1	2	0.7	2.7	1.1

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	133	19	33	81	36	29	468	65	71	296	13
Future Volume (vph)	0	133	19	33	81	36	29	468	65	71	296	13
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	280		150	150		150	105		150	160		50
Storage Lanes	1		0	0		0	1		0	1		1
Taper Length (ft)	60			25			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		5252			1251			918			726	
Travel Time (s)		71.6			17.1			12.5			9.9	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8								6
Detector Phase	4	4	4	8	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0		7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5		11.5	22.5		11.5	22.5	22.5
Total Split (s)	30.0	30.0	30.0	30.0	30.0		12.0	71.0		19.0	78.0	78.0
Total Split (%)	25.0%	25.0%	25.0%	25.0%	25.0%		10.0%	59.2%		15.8%	65.0%	65.0%
Yellow Time (s)	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
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)	4.5	4.5	4.5		4.5		4.5	4.5		4.5	4.5	4.5
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None		None	C-Max		None	C-Max	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 Yellow
Natural Cycle: 65
Control Type: Actuated-Coordinated

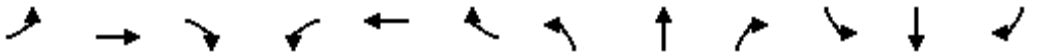
Splits and Phases: 13: Monroe St. & Airport Bl.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	133	19	33	81	36	29	468	65	71	296	13
Future Volume (veh/h)	0	133	19	33	81	36	29	468	65	71	296	13
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	0	156	22	39	95	42	34	551	76	84	348	15
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	60	294	249	66	126	49	69	1041	144	106	2375	1059
Arrive On Green	0.00	0.16	0.16	0.16	0.16	0.16	0.04	0.66	0.66	0.06	0.69	0.69
Sat Flow, veh/h	1252	1821	1543	179	782	301	1734	1566	216	1734	3460	1543
Grp Volume(v), veh/h	0	156	22	176	0	0	34	0	627	84	348	15
Grp Sat Flow(s),veh/h/ln	1252	1821	1543	1263	0	0	1734	0	1782	1734	1730	1543
Q Serve(g_s), s	0.0	9.4	1.5	7.6	0.0	0.0	2.3	0.0	21.8	5.7	4.2	0.4
Cycle Q Clear(g_c), s	0.0	9.4	1.5	17.0	0.0	0.0	2.3	0.0	21.8	5.7	4.2	0.4
Prop In Lane	1.00		1.00	0.22		0.24	1.00		0.12	1.00		1.00
Lane Grp Cap(c), veh/h	60	294	249	241	0	0	69	0	1185	106	2375	1059
V/C Ratio(X)	0.00	0.53	0.09	0.73	0.00	0.00	0.50	0.00	0.53	0.79	0.15	0.01
Avail Cap(c_a), veh/h	124	387	328	321	0	0	108	0	1185	210	2375	1059
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)	0.00	0.95	0.95	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	46.1	42.8	49.5	0.0	0.0	56.5	0.0	10.4	55.6	6.6	6.0
Incr Delay (d2), s/veh	0.0	1.4	0.1	5.7	0.0	0.0	5.4	0.0	1.7	12.3	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	4.2	0.5	5.4	0.0	0.0	1.1	0.0	7.7	2.8	1.3	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	47.5	42.9	55.1	0.0	0.0	61.9	0.0	12.1	67.9	6.7	6.0
LnGrp LOS	A	D	D	E	A	A	E	A	B	E	A	A
Approach Vol, veh/h		178			176			661			447	
Approach Delay, s/veh		47.0			55.1			14.7			18.2	
Approach LOS		D			E			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.8	84.3		23.9	9.2	86.9		23.9				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	14.5	66.5		25.5	7.5	73.5		25.5				
Max Q Clear Time (g_c+I1), s	7.7	23.8		11.4	4.3	6.2		19.0				
Green Ext Time (p_c), s	0.1	4.2		0.6	0.0	2.2		0.4				

Intersection Summary			
HCM 6th Ctrl Delay		24.5	
HCM 6th LOS		C	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	44	202	60	37	267	52	107	449	30	51	356	110
Future Volume (vph)	44	202	60	37	267	52	107	449	30	51	356	110
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	305		150	150		150	150		150	150		700
Storage Lanes	1		0	0		0	0		0	0		0
Taper Length (ft)	100			25			25			25		
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		672			623			677			775	
Travel Time (s)		8.3			7.7			9.2			10.6	
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Intersection Delay, s/veh	245.8
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	44	202	60	37	267	52	107	449	30	51	356	110
Future Vol, veh/h	44	202	60	37	267	52	107	449	30	51	356	110
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	54	249	74	46	330	64	132	554	37	63	440	136
Number of Lanes	1	1	0	0	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	1	2
HCM Control Delay	55.2	153.9	475.3	161.6
HCM LOS	F	F	F	F

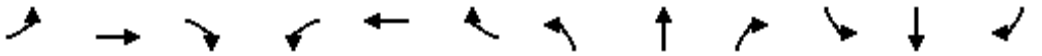
Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	18%	100%	0%	10%	13%	0%
Vol Thru, %	77%	0%	77%	75%	87%	0%
Vol Right, %	5%	0%	23%	15%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	586	44	262	356	407	110
LT Vol	107	44	0	37	51	0
Through Vol	449	0	202	267	356	0
RT Vol	30	0	60	52	0	110
Lane Flow Rate	723	54	323	440	502	136
Geometry Grp	6	7	7	6	7	7
Degree of Util (X)	1.976	0.154	0.86	1.192	1.322	0.329
Departure Headway (Hd)	11.305	13.562	12.855	13.179	12.386	11.571
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	333	266	285	281	296	314
Service Time	9.305	11.262	10.555	11.179	10.086	9.271
HCM Lane V/C Ratio	2.171	0.203	1.133	1.566	1.696	0.433
HCM Control Delay	475.3	18.7	61.3	153.9	199.9	19.8
HCM Lane LOS	F	C	F	F	F	C
HCM 95th-tile Q	44.2	0.5	7.4	14.8	19.2	1.4

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	44	202	60	37	267	52	107	449	30	51	356	110
Future Volume (vph)	44	202	60	37	267	52	107	449	30	51	356	110
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	305		150	150		150	150		150	150		700
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	100			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		672			623			677			775	
Travel Time (s)		8.3			7.7			9.2			10.6	
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		11.5	22.5		11.5	22.5	
Total Split (s)	41.0	41.0		41.0	41.0		20.0	64.0		15.0	59.0	
Total Split (%)	34.2%	34.2%		34.2%	34.2%		16.7%	53.3%		12.5%	49.2%	
Yellow Time (s)	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	
Lost Time Adjust (s)	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	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	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 Yellow
Natural Cycle: 65
Control Type: Actuated-Coordinated

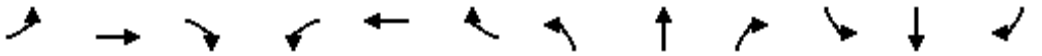
Splits and Phases: 14: Monroe St. & Avenue 54



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	44	202	60	37	267	52	107	449	30	51	356	110
Future Volume (veh/h)	44	202	60	37	267	52	107	449	30	51	356	110
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	54	249	74	46	330	64	132	554	37	63	440	136
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	134	379	113	185	417	81	158	937	63	89	687	212
Arrive On Green	0.28	0.28	0.28	0.28	0.28	0.28	0.09	0.56	0.56	0.05	0.52	0.52
Sat Flow, veh/h	990	1348	401	1057	1482	287	1734	1688	113	1734	1334	412
Grp Volume(v), veh/h	54	0	323	46	0	394	132	0	591	63	0	576
Grp Sat Flow(s),veh/h/ln	990	0	1749	1057	0	1769	1734	0	1801	1734	0	1747
Q Serve(g_s), s	6.4	0.0	19.5	4.8	0.0	24.7	9.0	0.0	26.1	4.3	0.0	28.6
Cycle Q Clear(g_c), s	31.1	0.0	19.5	24.4	0.0	24.7	9.0	0.0	26.1	4.3	0.0	28.6
Prop In Lane	1.00		0.23	1.00		0.16	1.00		0.06	1.00		0.24
Lane Grp Cap(c), veh/h	134	0	492	185	0	497	158	0	1000	89	0	900
V/C Ratio(X)	0.40	0.00	0.66	0.25	0.00	0.79	0.83	0.00	0.59	0.71	0.00	0.64
Avail Cap(c_a), veh/h	157	0	532	209	0	538	224	0	1000	152	0	900
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	54.3	0.0	38.0	48.8	0.0	39.9	53.6	0.0	17.7	56.1	0.0	21.0
Incr Delay (d2), s/veh	1.9	0.0	2.6	0.7	0.0	7.4	16.6	0.0	2.6	9.9	0.0	3.5
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	0.0	8.3	1.3	0.0	11.1	4.5	0.0	10.4	2.1	0.0	11.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.2	0.0	40.7	49.5	0.0	47.3	70.2	0.0	20.2	66.0	0.0	24.5
LnGrp LOS	E	A	D	D	A	D	E	A	C	E	A	C
Approach Vol, veh/h		377			440			723			639	
Approach Delay, s/veh		42.9			47.5			29.4			28.6	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.6	71.1		38.2	15.5	66.3		38.2				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	10.5	59.5		36.5	15.5	54.5		36.5				
Max Q Clear Time (g_c+I1), s	6.3	28.1		33.1	11.0	30.6		26.7				
Green Ext Time (p_c), s	0.0	3.7		0.6	0.1	3.5		1.6				

Intersection Summary												
HCM 6th Ctrl Delay			35.2									
HCM 6th LOS			D									



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	106	363	54	34	365	138	66	404	51	112	385	59
Future Volume (vph)	106	363	54	34	365	138	66	404	51	112	385	59
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	190		200	100		50	150		150	195		150
Storage Lanes	1		0	1		1	0		0	1		0
Taper Length (ft)	90			90			25			90		
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		817			587			676			1348	
Travel Time (s)		10.1			7.3			9.2			18.4	
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Intersection Delay, s/veh	186.8
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	106	363	54	34	365	138	66	404	51	112	385	59
Future Vol, veh/h	106	363	54	34	365	138	66	404	51	112	385	59
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	128	437	65	41	440	166	80	487	61	135	464	71
Number of Lanes	1	1	1	0	2	1	0	1	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	1	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	3	3	3
HCM Control Delay	170.5	53.2	492.5	44.8
HCM LOS	F	F	F	E

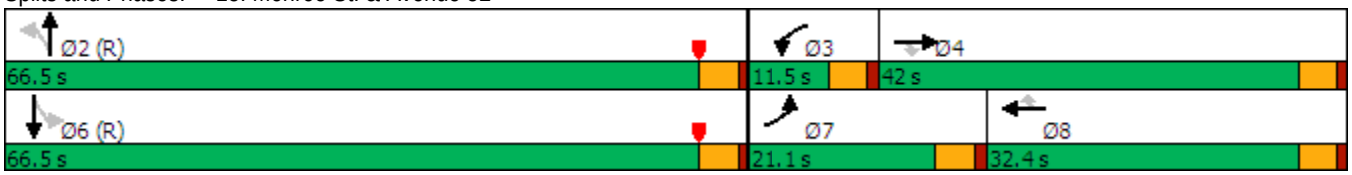
Lane	NBLn1	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	13%	100%	0%	0%	22%	0%	0%	100%	0%	0%
Vol Thru, %	78%	0%	100%	0%	78%	100%	0%	0%	100%	69%
Vol Right, %	10%	0%	0%	100%	0%	0%	100%	0%	0%	31%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	521	106	363	54	156	243	138	112	257	187
LT Vol	66	106	0	0	34	0	0	112	0	0
Through Vol	404	0	363	0	122	243	0	0	257	128
RT Vol	51	0	0	54	0	0	138	0	0	59
Lane Flow Rate	628	128	437	65	188	293	166	135	309	226
Geometry Grp	8	8	8	8	8	8	8	7	7	7
Degree of Util (X)	2.011	0.425	1.395	0.195	0.59	0.914	0.486	0.394	0.861	0.615
Departure Headway (Hd)	12.057	14.562	14.007	13.23	14.686	14.563	13.776	13.462	12.912	12.67
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	308	249	262	273	248	252	264	270	284	287
Service Time	9.757	12.262	11.707	10.93	12.386	12.263	11.476	11.162	10.612	10.37
HCM Lane V/C Ratio	2.039	0.514	1.668	0.238	0.758	1.163	0.629	0.5	1.088	0.787
HCM Control Delay	492.5	27.6	234.8	19.1	36.5	77.7	28.8	24.7	61.7	33.7
HCM Lane LOS	F	D	F	C	E	F	D	C	F	D
HCM 95th-tile Q	43	2	19.6	0.7	3.4	8	2.5	1.8	7.4	3.8

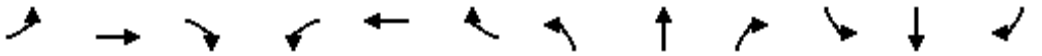
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	106	363	54	34	365	138	66	404	51	112	385	59
Future Volume (vph)	106	363	54	34	365	138	66	404	51	112	385	59
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	190		200	100		50	150		150	195		150
Storage Lanes	1		0	1		1	0		0	1		0
Taper Length (ft)	90			90			25			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		817			587			676			1348	
Travel Time (s)		10.1			7.3			9.2			18.4	
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	7	4		3	8			2			6	
Permitted Phases			4			8	2			6		
Detector Phase	7	4	4	3	8	8	2	2		6	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0		7.0	7.0	
Minimum Split (s)	11.5	22.5	22.5	11.5	22.5	22.5	22.5	22.5		22.5	22.5	
Total Split (s)	21.1	42.0	42.0	11.5	32.4	32.4	66.5	66.5		66.5	66.5	
Total Split (%)	17.6%	35.0%	35.0%	9.6%	27.0%	27.0%	55.4%	55.4%		55.4%	55.4%	
Yellow Time (s)	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	
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)	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 Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Recall Mode	None	None	None	None	None	None	C-Max	C-Max		C-Max	C-Max	

Intersection Summary

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

Splits and Phases: 15: Monroe St. & Avenue 52





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	106	363	54	34	365	138	66	404	51	112	385	59
Future Volume (veh/h)	106	363	54	34	365	138	66	404	51	112	385	59
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	128	437	65	41	440	166	80	487	61	135	464	71
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	154	477	405	75	749	334	130	750	91	428	1752	267
Arrive On Green	0.09	0.26	0.26	0.04	0.22	0.22	0.58	0.58	0.58	0.58	0.58	0.58
Sat Flow, veh/h	1734	1821	1543	1734	3460	1543	166	1290	157	859	3011	458
Grp Volume(v), veh/h	128	437	65	41	440	166	628	0	0	135	266	269
Grp Sat Flow(s),veh/h/ln	1734	1821	1543	1734	1730	1543	1612	0	0	859	1730	1739
Q Serve(g_s), s	8.7	28.0	3.9	2.8	13.7	11.3	18.3	0.0	0.0	0.8	9.1	9.2
Cycle Q Clear(g_c), s	8.7	28.0	3.9	2.8	13.7	11.3	30.5	0.0	0.0	31.3	9.1	9.2
Prop In Lane	1.00		1.00	1.00		1.00	0.13		0.10	1.00		0.26
Lane Grp Cap(c), veh/h	154	477	405	75	749	334	972	0	0	428	1007	1012
V/C Ratio(X)	0.83	0.92	0.16	0.54	0.59	0.50	0.65	0.00	0.00	0.32	0.26	0.27
Avail Cap(c_a), veh/h	240	569	482	101	804	359	972	0	0	428	1007	1012
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	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.8	43.0	34.1	56.2	42.2	41.3	16.6	0.0	0.0	17.4	12.4	12.4
Incr Delay (d2), s/veh	13.0	17.7	0.2	6.0	1.0	1.1	3.3	0.0	0.0	1.9	0.6	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	4.2	14.2	1.4	1.3	5.7	4.2	11.0	0.0	0.0	2.5	3.4	3.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	66.7	60.7	34.3	62.2	43.2	42.4	19.9	0.0	0.0	19.3	13.0	13.1
LnGrp LOS	E	E	C	E	D	D	B	A	A	B	B	B
Approach Vol, veh/h		630			647			628			670	
Approach Delay, s/veh		59.2			44.2			19.9			14.3	
Approach LOS		E			D			B			B	

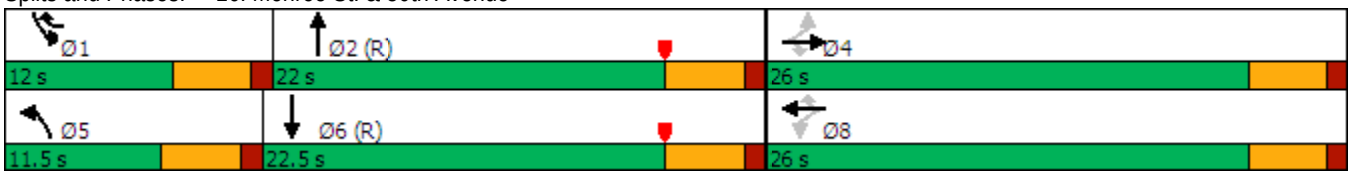
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		74.3	9.7	36.0		74.3	15.2	30.5				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		62.0	7.0	37.5		62.0	16.6	27.9				
Max Q Clear Time (g_c+I1), s		32.5	4.8	30.0		33.3	10.7	15.7				
Green Ext Time (p_c), s		4.4	0.0	1.5		3.8	0.1	2.4				

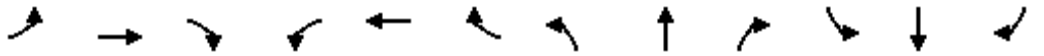
Intersection Summary												
HCM 6th Ctrl Delay			34.2									
HCM 6th LOS			C									

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	281	44	40	383	124	30	517	53	77	463	44
Future Volume (vph)	30	281	44	40	383	124	30	517	53	77	463	44
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	210		120	220		150	200		150	170		150
Storage Lanes	1		1	1		0	1		0	1		0
Taper Length (ft)	120			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		710			640			1322			436	
Travel Time (s)		9.7			8.7			18.0			5.9	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases		4			8	1	5	2		1	6	
Permitted Phases	4		4	8		8						
Detector Phase	4	4	4	8	8	1	5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0		7.0	7.0	
Minimum Split (s)	20.5	20.5	20.5	20.5	20.5	11.5	11.5	20.5		11.5	20.5	
Total Split (s)	26.0	26.0	26.0	26.0	26.0	12.0	11.5	22.0		12.0	22.5	
Total Split (%)	43.3%	43.3%	43.3%	43.3%	43.3%	20.0%	19.2%	36.7%		20.0%	37.5%	
Yellow Time (s)	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	
Lost Time Adjust (s)	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5		-0.5	-0.5	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lead/Lag						Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?						Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Max		None	C-Max	

Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 55	
Control Type: Actuated-Coordinated	

Splits and Phases: 16: Monroe St. & 50th Avenue

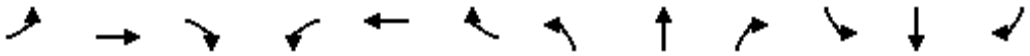




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	281	44	40	383	124	30	517	53	77	463	44
Future Volume (veh/h)	30	281	44	40	383	124	30	517	53	77	463	44
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	35	331	52	47	451	146	35	608	62	91	545	52
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	197	580	491	287	580	645	104	1212	123	172	1346	128
Arrive On Green	0.32	0.32	0.32	0.32	0.32	0.32	0.06	0.38	0.37	0.10	0.42	0.41
Sat Flow, veh/h	821	1821	1543	1000	1821	1543	1734	3170	323	1734	3193	304
Grp Volume(v), veh/h	35	331	52	47	451	146	35	331	339	91	295	302
Grp Sat Flow(s),veh/h/ln	821	1821	1543	1000	1821	1543	1734	1730	1763	1734	1730	1766
Q Serve(g_s), s	2.4	9.1	1.4	2.5	13.5	3.7	1.2	8.8	8.8	3.0	7.1	7.2
Cycle Q Clear(g_c), s	15.9	9.1	1.4	11.5	13.5	3.7	1.2	8.8	8.8	3.0	7.1	7.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.18	1.00		0.17
Lane Grp Cap(c), veh/h	197	580	491	287	580	645	104	661	674	172	730	745
V/C Ratio(X)	0.18	0.57	0.11	0.16	0.78	0.23	0.34	0.50	0.50	0.53	0.40	0.41
Avail Cap(c_a), veh/h	237	668	566	335	668	719	217	661	674	231	730	745
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	1.00
Uniform Delay (d), s/veh	25.7	17.0	14.4	21.8	18.5	11.2	27.1	14.2	14.2	25.7	12.1	12.1
Incr Delay (d2), s/veh	0.4	0.9	0.1	0.3	5.1	0.2	1.9	2.7	2.7	2.5	1.7	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	3.2	0.4	0.5	5.4	1.0	0.5	3.2	3.2	1.2	2.4	2.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.1	17.9	14.5	22.1	23.6	11.4	29.0	16.9	16.9	28.2	13.8	13.8
LnGrp LOS	C	B	B	C	C	B	C	B	B	C	B	B
Approach Vol, veh/h		418			644			705			688	
Approach Delay, s/veh		18.2			20.7			17.5			15.7	
Approach LOS		B			C			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.0	26.9		23.1	7.6	29.3		23.1				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	7.5	17.5		21.5	7.0	18.0		21.5				
Max Q Clear Time (g_c+I1), s	5.0	10.8		17.9	3.2	9.2		15.5				
Green Ext Time (p_c), s	0.0	2.0		0.7	0.0	2.1		1.7				

Intersection Summary												
HCM 6th Ctrl Delay			17.9									
HCM 6th LOS			B									



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	41	148	12	2	102	4	6	168	3	13	168	24
Future Volume (vph)	41	148	12	2	102	4	6	168	3	13	168	24
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		150	150		150	150		150	150		150
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		50			50			55			55	
Link Distance (ft)		5266			1079			1013			510	
Travel Time (s)		71.8			14.7			12.6			6.3	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	

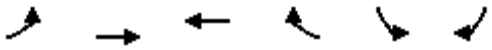
Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Intersection Delay, s/veh	10.1
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	41	148	12	2	102	4	6	168	3	13	168	24
Future Vol, veh/h	41	148	12	2	102	4	6	168	3	13	168	24
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	44	157	13	2	109	4	6	179	3	14	179	26
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	10.4	9.4	10	10.2
HCM LOS	B	A	A	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	3%	20%	2%	6%
Vol Thru, %	95%	74%	94%	82%
Vol Right, %	2%	6%	4%	12%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	177	201	108	205
LT Vol	6	41	2	13
Through Vol	168	148	102	168
RT Vol	3	12	4	24
Lane Flow Rate	188	214	115	218
Geometry Grp	1	1	1	1
Degree of Util (X)	0.264	0.302	0.17	0.3
Departure Headway (Hd)	5.049	5.092	5.315	4.958
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	702	697	679	715
Service Time	3.147	3.186	3.315	3.053
HCM Lane V/C Ratio	0.268	0.307	0.169	0.305
HCM Control Delay	10	10.4	9.4	10.2
HCM Lane LOS	A	B	A	B
HCM 95th-tile Q	1.1	1.3	0.6	1.3



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	33	95	0
Future Volume (vph)	0	0	0	33	95	0
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Link Speed (mph)		40	40		25	
Link Distance (ft)		207	1772		380	
Travel Time (s)		3.5	30.2		10.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	6.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	33	95	0
Future Vol, veh/h	0	0	0	33	95	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	36	103	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	36	0	-	0	18	18
Stage 1	-	-	-	-	18	-
Stage 2	-	-	-	-	0	-
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	1575	-	-	-	1000	1061
Stage 1	-	-	-	-	1005	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1575	-	-	-	1000	1061
Mov Cap-2 Maneuver	-	-	-	-	1000	-
Stage 1	-	-	-	-	1005	-
Stage 2	-	-	-	-	-	-

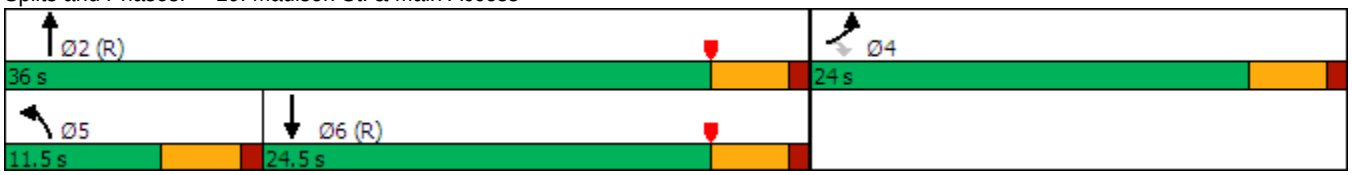
Approach	EB	WB	SB
HCM Control Delay, s	0	0	9
HCM LOS			A

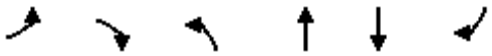
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1575	-	-	-	1000
HCM Lane V/C Ratio	-	-	-	-	0.103
HCM Control Delay (s)	0	-	-	-	9
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.3

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	276	20	24	327	316	105
Future Volume (vph)	276	20	24	327	316	105
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Storage Length (ft)	100	0	150			0
Storage Lanes	1	1	1			0
Taper Length (ft)	90		90			
Right Turn on Red		Yes				Yes
Link Speed (mph)	25			50	50	
Link Distance (ft)	499			880	159	
Travel Time (s)	13.6			12.0	2.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Turn Type	Prot	Perm	Prot	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases		4				
Detector Phase	4	4	5	2	6	
Switch Phase						
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	
Minimum Split (s)	22.5	22.5	11.5	22.5	22.5	
Total Split (s)	24.0	24.0	11.5	36.0	24.5	
Total Split (%)	40.0%	40.0%	19.2%	60.0%	40.8%	
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	None	None	C-Max	C-Max	

Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	

Splits and Phases: 19: Madison St. & Main Access





Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	276	20	24	327	316	105
Future Volume (veh/h)	276	20	24	327	316	105
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	300	22	26	355	343	114
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	361	321	71	2220	1347	441
Arrive On Green	0.21	0.21	0.04	0.64	0.53	0.53
Sat Flow, veh/h	1734	1543	1734	3551	2653	838
Grp Volume(v), veh/h	300	22	26	355	230	227
Grp Sat Flow(s),veh/h/ln	1734	1543	1734	1730	1730	1670
Q Serve(g_s), s	9.9	0.7	0.9	2.5	4.4	4.5
Cycle Q Clear(g_c), s	9.9	0.7	0.9	2.5	4.4	4.5
Prop In Lane	1.00	1.00	1.00			0.50
Lane Grp Cap(c), veh/h	361	321	71	2220	909	878
V/C Ratio(X)	0.83	0.07	0.37	0.16	0.25	0.26
Avail Cap(c_a), veh/h	564	502	202	2220	909	878
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	22.7	19.1	28.0	4.3	7.8	7.8
Incr Delay (d2), s/veh	6.0	0.1	3.1	0.2	0.7	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.4	0.7	0.4	0.5	1.3	1.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	28.8	19.2	31.1	4.4	8.5	8.5
LnGrp LOS	C	B	C	A	A	A
Approach Vol, veh/h	322			381	457	
Approach Delay, s/veh	28.1			6.3	8.5	
Approach LOS	C			A	A	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		43.0		17.0	7.0	36.0
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		31.5		19.5	7.0	20.0
Max Q Clear Time (g_c+I1), s		4.5		11.9	2.9	6.5
Green Ext Time (p_c), s		2.0		0.6	0.0	2.0

Intersection Summary	
HCM 6th Ctrl Delay	13.2
HCM 6th LOS	B

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	201	4	13	161	6	3
Future Volume (vph)	201	4	13	161	6	3
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Storage Length (ft)		0	50		0	0
Storage Lanes		0	1		1	0
Taper Length (ft)			60		60	
Link Speed (mph)	50			50	25	
Link Distance (ft)	403			335	383	
Travel Time (s)	5.5			4.6	10.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
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	201	4	13	161	6	3
Future Vol, veh/h	201	4	13	161	6	3
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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	218	4	14	175	7	3

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	222	0	336	220
Stage 1	-	-	-	-	220	-
Stage 2	-	-	-	-	116	-
Critical Hdwy	-	-	4.13	-	6.63	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.83	-
Follow-up Hdwy	-	-	2.219	-	3.519	3.319
Pot Cap-1 Maneuver	-	-	1346	-	646	819
Stage 1	-	-	-	-	816	-
Stage 2	-	-	-	-	897	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1346	-	640	819
Mov Cap-2 Maneuver	-	-	-	-	678	-
Stage 1	-	-	-	-	816	-
Stage 2	-	-	-	-	888	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.6	10.1
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	719	-	-	1346	-
HCM Lane V/C Ratio	0.014	-	-	0.01	-
HCM Control Delay (s)	10.1	-	-	7.7	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	197	7	0	174	0	4
Future Volume (vph)	197	7	0	174	0	4
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Link Speed (mph)	50			50	25	
Link Distance (ft)	335			276	233	
Travel Time (s)	4.6			3.8	6.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

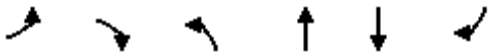
Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	197	7	0	174	0	4
Future Vol, veh/h	197	7	0	174	0	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	214	8	0	189	0	4

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	218
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.319
Pot Cap-1 Maneuver	-	-	0	-	0	821
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	821
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	9.4
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	821	-	-	-
HCM Lane V/C Ratio	0.005	-	-	-
HCM Control Delay (s)	9.4	-	-	-
HCM Lane LOS	A	-	-	-
HCM 95th %tile Q(veh)	0	-	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	10	0	603	411	14
Future Volume (vph)	0	10	0	603	411	14
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Link Speed (mph)	25			50	50	
Link Distance (ft)	210			234	288	
Travel Time (s)	5.7			3.2	3.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

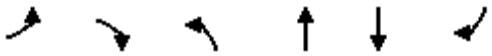
Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	10	0	603	411	14
Future Vol, veh/h	0	10	0	603	411	14
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	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	11	0	655	447	15

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	231	-	0	-	0
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	771	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	771	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	771	-	-
HCM Lane V/C Ratio	-	0.014	-	-
HCM Control Delay (s)	-	9.7	-	-
HCM Lane LOS	-	A	-	-
HCM 95th %tile Q(veh)	-	0	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	1	1	1	259	255	1
Future Volume (vph)	1	1	1	259	255	1
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Storage Length (ft)	0	0	150			0
Storage Lanes	1	0	1			0
Taper Length (ft)	90		90			
Link Speed (mph)	25			40	40	
Link Distance (ft)	306			593	547	
Travel Time (s)	8.3			10.1	9.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

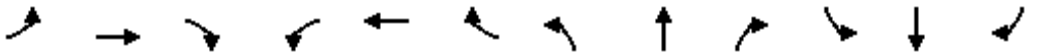
Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	1	1	1	259	255	1
Future Vol, veh/h	1	1	1	259	255	1
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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	1	1	282	277	1

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	421	139	278	0	-	0
Stage 1	278	-	-	-	-	-
Stage 2	143	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	561	884	1282	-	-	-
Stage 1	744	-	-	-	-	-
Stage 2	869	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	560	884	1282	-	-	-
Mov Cap-2 Maneuver	560	-	-	-	-	-
Stage 1	743	-	-	-	-	-
Stage 2	869	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1282	-	686	-	-
HCM Lane V/C Ratio	0.001	-	0.003	-	-
HCM Control Delay (s)	7.8	-	10.3	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	134	136	22	138	115	166	15	452	85	130	654	131
Future Volume (vph)	134	136	22	138	115	166	15	452	85	130	654	131
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	100		100	180		180	330		160	160		50
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	90			90			90			90		
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		276			988			288			752	
Travel Time (s)		3.8			13.5			3.9			10.3	
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			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Intersection Delay, s/veh	87.9
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	134	136	22	138	115	166	15	452	85	130	654	131
Future Vol, veh/h	134	136	22	138	115	166	15	452	85	130	654	131
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	146	148	24	150	125	180	16	491	92	141	711	142
Number of Lanes	1	1	1	1	2	0	1	2	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	3	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	3	3	3
HCM Control Delay	26.7	30.6	70.1	144.4
HCM LOS	D	D	F	F

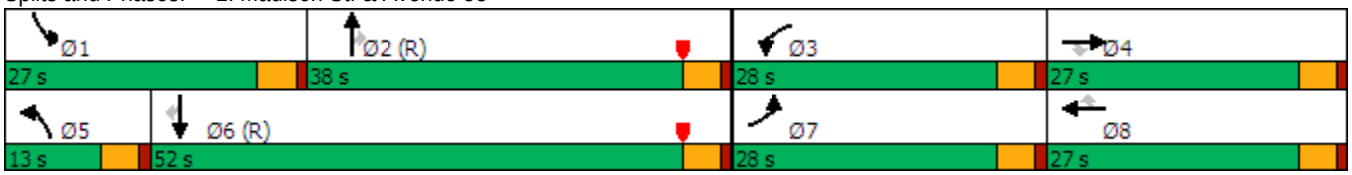
Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Thru, %	0%	100%	64%	0%	100%	0%	0%	100%	19%	0%	100%
Vol Right, %	0%	0%	36%	0%	0%	100%	0%	0%	81%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	15	301	236	134	136	22	138	77	204	130	436
LT Vol	15	0	0	134	0	0	138	0	0	130	0
Through Vol	0	301	151	0	136	0	0	77	38	0	436
RT Vol	0	0	85	0	0	22	0	0	166	0	0
Lane Flow Rate	16	328	256	146	148	24	150	83	222	141	474
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.053	1.024	0.783	0.514	0.502	0.077	0.514	0.274	0.695	0.429	1.376
Departure Headway (Hd)	12.007	11.507	11.254	12.852	12.352	11.652	12.55	12.05	11.481	10.939	10.453
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	300	318	323	283	294	309	290	300	318	329	351
Service Time	9.707	9.207	8.954	10.552	10.052	9.352	10.25	9.75	9.181	8.697	8.197
HCM Lane V/C Ratio	0.053	1.031	0.793	0.516	0.503	0.078	0.517	0.277	0.698	0.429	1.35
HCM Control Delay	15.4	92.6	44.8	28.4	26.9	15.3	27.8	19.2	36.7	21.7	214.7
HCM Lane LOS	C	F	E	D	D	C	D	C	E	C	F
HCM 95th-tile Q	0.2	11.4	6.3	2.7	2.6	0.2	2.7	1.1	4.9	2.1	23.6

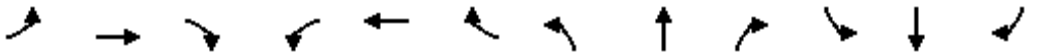
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	134	136	22	138	115	166	15	452	85	130	654	131
Future Volume (vph)	134	136	22	138	115	166	15	452	85	130	654	131
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	100		100	180		180	330		160	160		50
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)		50			50			50			50	
Link Distance (ft)		276			988			288			752	
Travel Time (s)		3.8			13.5			3.9			10.3	
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 (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	22.5	22.5	11.5	22.5	22.5	11.5	22.5	22.5	11.5	22.5	22.5
Total Split (s)	28.0	27.0	27.0	28.0	27.0	27.0	13.0	38.0	38.0	27.0	52.0	52.0
Total Split (%)	23.3%	22.5%	22.5%	23.3%	22.5%	22.5%	10.8%	31.7%	31.7%	22.5%	43.3%	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	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	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	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 Yellow
Natural Cycle: 70
Control Type: Actuated-Coordinated

Splits and Phases: 1: Madison St. & Avenue 58





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	134	136	22	138	115	166	15	452	85	130	654	131
Future Volume (veh/h)	134	136	22	138	115	166	15	452	85	130	654	131
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	146	148	24	150	125	180	16	491	92	141	711	142
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	175	244	207	179	472	210	42	1784	796	169	2038	909
Arrive On Green	0.10	0.13	0.13	0.10	0.14	0.14	0.02	0.52	0.52	0.10	0.59	0.59
Sat Flow, veh/h	1734	1821	1543	1734	3460	1543	1734	3460	1543	1734	3460	1543
Grp Volume(v), veh/h	146	148	24	150	125	180	16	491	92	141	711	142
Grp Sat Flow(s),veh/h/ln	1734	1821	1543	1734	1730	1543	1734	1730	1543	1734	1730	1543
Q Serve(g_s), s	9.9	9.2	1.6	10.2	3.9	13.7	1.1	9.6	3.7	9.6	12.8	5.0
Cycle Q Clear(g_c), s	9.9	9.2	1.6	10.2	3.9	13.7	1.1	9.6	3.7	9.6	12.8	5.0
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	175	244	207	179	472	210	42	1784	796	169	2038	909
V/C Ratio(X)	0.84	0.61	0.12	0.84	0.27	0.86	0.38	0.28	0.12	0.83	0.35	0.16
Avail Cap(c_a), veh/h	340	341	289	340	649	289	123	1784	796	325	2038	909
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	1.00
Uniform Delay (d), s/veh	53.0	49.0	45.7	52.8	46.4	50.7	57.7	16.4	15.0	53.2	12.8	11.2
Incr Delay (d2), s/veh	10.0	2.4	0.2	10.0	0.3	16.5	5.6	0.4	0.3	10.1	0.5	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.7	4.2	0.6	4.8	1.6	6.1	0.5	3.6	1.3	4.5	4.6	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	63.0	51.4	46.0	62.8	46.7	67.1	63.3	16.8	15.3	63.3	13.2	11.5
LnGrp LOS	E	D	D	E	D	E	E	B	B	E	B	B
Approach Vol, veh/h		318			455			599			994	
Approach Delay, s/veh		56.3			60.1			17.8			20.1	
Approach LOS		E			E			B			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.2	66.4	16.9	20.6	7.4	75.2	16.6	20.9
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	22.5	33.5	23.5	22.5	8.5	47.5	23.5	22.5
Max Q Clear Time (g_c+I1), s	11.6	11.6	12.2	11.2	3.1	14.8	11.9	15.7
Green Ext Time (p_c), s	0.2	3.1	0.3	0.5	0.0	5.2	0.3	0.7

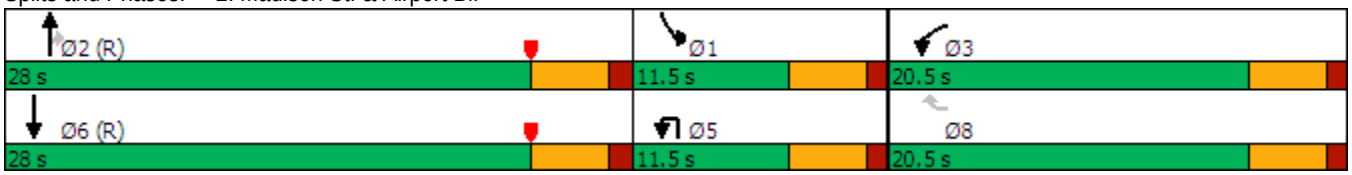
Intersection Summary	
HCM 6th Ctrl Delay	32.1
HCM 6th LOS	C

Lane Group	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	88	108	1	623	75	76	764
Future Volume (vph)	88	108	1	623	75	76	764
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150	150	150		50	150	
Storage Lanes	0	0	1		1	1	
Taper Length (ft)	25		140			90	
Right Turn on Red		Yes			Yes		
Link Speed (mph)	50			50			50
Link Distance (ft)	5252			767			818
Travel Time (s)	71.6			10.5			11.2
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Shared Lane Traffic (%)							
Turn Type	Prot	Perm	Prot	NA	Perm	Prot	NA
Protected Phases	3		5	2		1	6
Permitted Phases		8			2		
Detector Phase	3	8	5	2	2	1	6
Switch Phase							
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	20.5	11.5	20.5	20.5	11.5	20.5
Total Split (s)	20.5	20.5	11.5	28.0	28.0	11.5	28.0
Total Split (%)	34.2%	34.2%	19.2%	46.7%	46.7%	19.2%	46.7%
Yellow Time (s)	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
Lost Time Adjust (s)	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag			Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?			Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	C-Max	C-Max	None	C-Max

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 60
Offset: 28 (47%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
Natural Cycle: 55
Control Type: Actuated-Coordinated

Splits and Phases: 2: Madison St. & Airport Bl.



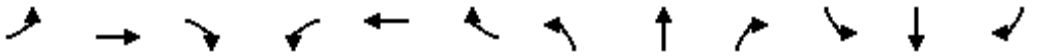
Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (veh/h)	88	108	1	623	75	76	764
Future Volume (veh/h)	88	108	1	623	75	76	764
Initial Q (Qb), veh	0	0		0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00			1.00	1.00	
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No
Adj Sat Flow, veh/h/ln	1821	1821		1821	1821	1821	1821
Adj Flow Rate, veh/h	99	121		700	84	85	858
Peak Hour Factor	0.89	0.89		0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2		2	2	2	2
Cap, veh/h	212	188		1384	617	482	2577
Arrive On Green	0.12	0.12		0.40	0.40	0.28	0.74
Sat Flow, veh/h	1734	1543		3551	1543	1734	3551
Grp Volume(v), veh/h	99	121		700	84	85	858
Grp Sat Flow(s),veh/h/ln	1734	1543		1730	1543	1734	1730
Q Serve(g_s), s	3.2	4.5		9.1	1.1	2.2	5.1
Cycle Q Clear(g_c), s	3.2	4.5		9.1	1.1	2.2	5.1
Prop In Lane	1.00	1.00			1.00	1.00	
Lane Grp Cap(c), veh/h	212	188		1384	617	482	2577
V/C Ratio(X)	0.47	0.64		0.51	0.14	0.18	0.33
Avail Cap(c_a), veh/h	477	424		1384	617	482	2577
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	24.5	25.1		13.5	3.6	16.4	2.6
Incr Delay (d2), s/veh	1.6	3.6		1.3	0.5	0.2	0.3
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	1.6		3.0	0.6	0.8	0.4
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	26.1	28.7		14.9	4.0	16.6	2.9
LnGrp LOS	C	C		B	A	B	A
Approach Vol, veh/h	220			784			943
Approach Delay, s/veh	27.6			13.7			4.2
Approach LOS	C			B			A

Timer - Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	20.7	28.0				48.7		11.3
Change Period (Y+Rc), s	4.5	4.5				4.5		4.5
Max Green Setting (Gmax), s	7.0	23.5				23.5		16.0
Max Q Clear Time (g_c+I1), s	4.2	11.1				7.1		6.5
Green Ext Time (p_c), s	0.0	3.6				4.9		0.4

Intersection Summary		
HCM 6th Ctrl Delay	10.7	
HCM 6th LOS	B	

Notes

User approved ignoring U-Turning movement.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	24	329	510	56	206	134	395	535	103	108	427	18
Future Volume (vph)	24	329	510	56	206	134	395	535	103	108	427	18
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	160		150	910		150	160		120	305		150
Storage Lanes	1		0	1		1	2		1	1		0
Taper Length (ft)	80			120			120			100		
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		5080			840			924			2398	
Travel Time (s)		63.0			10.4			12.6			32.7	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Intersection Delay, s/veh	250.1
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	24	329	510	56	206	134	395	535	103	108	427	18
Future Vol, veh/h	24	329	510	56	206	134	395	535	103	108	427	18
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	27	370	573	63	231	151	444	601	116	121	480	20
Number of Lanes	1	2	0	1	2	0	1	2	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	3	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	3	3	3
HCM Control Delay	496.8	37.4	210	92.3
HCM LOS	F	E	F	F

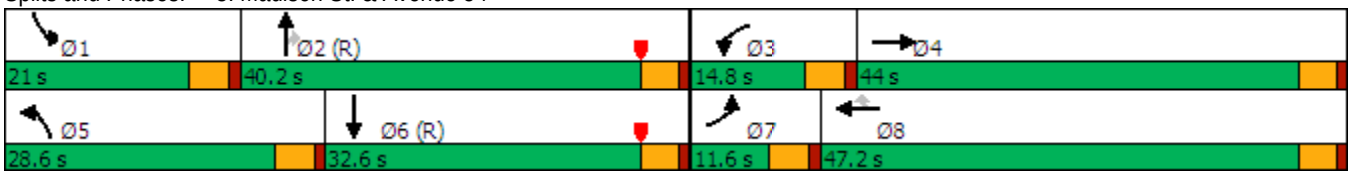
Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%
Vol Thru, %	0%	100%	63%	0%	100%	18%	0%	100%	34%	0%	100%	89%
Vol Right, %	0%	0%	37%	0%	0%	82%	0%	0%	66%	0%	0%	11%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	395	357	281	24	219	620	56	137	203	108	285	160
LT Vol	395	0	0	24	0	0	56	0	0	108	0	0
Through Vol	0	357	178	0	219	110	0	137	69	0	285	142
RT Vol	0	0	103	0	0	510	0	0	134	0	0	18
Lane Flow Rate	444	401	316	27	246	696	63	154	228	121	320	180
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	1.533	1.33	1.027	0.101	0.89	2.403	0.238	0.564	0.803	0.457	1.162	0.65
Departure Headway (Hd)	13.882	13.382	13.126	13.494	12.997	12.425	12.452	11.952	11.489	14.521	14.021	13.942
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	266	277	278	265	278	299	290	304	317	250	262	261
Service Time	11.582	11.082	10.826	11.287	10.787	10.211	10.152	9.652	9.189	12.221	11.721	11.642
HCM Lane V/C Ratio	1.669	1.448	1.137	0.102	0.885	2.328	0.217	0.507	0.719	0.484	1.221	0.69
HCM Control Delay	291.3	206.6	100	17.8	67.5	667.3	19	29.1	48.1	28.9	146.2	39.3
HCM Lane LOS	F	F	F	C	F	F	C	D	E	D	F	E
HCM 95th-tile Q	23.6	18.4	10.8	0.3	7.9	55.2	0.9	3.2	6.6	2.2	13.5	4.1

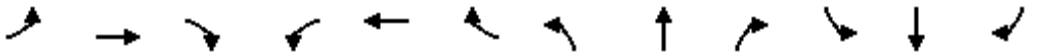
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	24	329	510	56	206	134	395	535	103	108	427	18
Future Volume (vph)	24	329	510	56	206	134	395	535	103	108	427	18
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	160		150	910		150	160		120	305		150
Storage Lanes	1		0	1		1	2		1	1		0
Taper Length (ft)	80			120			120			100		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		5080			840			924			2398	
Travel Time (s)		63.0			10.4			12.6			32.7	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Shared Lane Traffic (%)												
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8			2			
Detector Phase	7	4		3	8	8	5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	
Minimum Split (s)	11.5	22.5		11.5	22.5	22.5	11.5	22.5	22.5	11.5	22.5	
Total Split (s)	11.6	44.0		14.8	47.2	47.2	28.6	40.2	40.2	21.0	32.6	
Total Split (%)	9.7%	36.7%		12.3%	39.3%	39.3%	23.8%	33.5%	33.5%	17.5%	27.2%	
Yellow Time (s)	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	
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)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	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 Yellow
Natural Cycle: 75
Control Type: Actuated-Coordinated

Splits and Phases: 3: Madison St. & Avenue 54





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	24	329	510	56	206	134	395	535	103	108	427	18
Future Volume (veh/h)	24	329	510	56	206	134	395	535	103	108	427	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	27	370	573	63	231	151	444	601	116	121	480	20
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	60	569	508	89	1196	534	515	1332	594	147	1072	45
Arrive On Green	0.03	0.33	0.33	0.05	0.35	0.35	0.15	0.38	0.38	0.08	0.32	0.32
Sat Flow, veh/h	1734	1730	1543	1734	3460	1543	3365	3460	1543	1734	3385	141
Grp Volume(v), veh/h	27	370	573	63	231	151	444	601	116	121	245	255
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1730	1543	1682	1730	1543	1734	1730	1796
Q Serve(g_s), s	1.8	21.9	39.5	4.3	5.6	8.5	15.5	15.5	6.0	8.2	13.5	13.6
Cycle Q Clear(g_c), s	1.8	21.9	39.5	4.3	5.6	8.5	15.5	15.5	6.0	8.2	13.5	13.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.08
Lane Grp Cap(c), veh/h	60	569	508	89	1196	534	515	1332	594	147	548	569
V/C Ratio(X)	0.45	0.65	1.13	0.71	0.19	0.28	0.86	0.45	0.20	0.82	0.45	0.45
Avail Cap(c_a), veh/h	103	569	508	149	1231	549	676	1332	594	238	548	569
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.84	0.84	0.84	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.8	34.3	40.3	56.1	27.5	28.5	49.6	27.5	24.6	54.0	32.6	32.6
Incr Delay (d2), s/veh	4.4	2.2	77.1	9.9	0.1	0.3	8.9	1.1	0.7	11.3	2.6	2.5
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	0.8	9.0	24.8	2.0	2.2	3.0	6.9	6.3	2.2	3.9	5.8	6.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	61.2	36.5	117.4	66.0	27.6	28.8	58.5	28.6	25.3	65.3	35.3	35.2
LnGrp LOS	E	D	F	E	C	C	E	C	C	E	D	D
Approach Vol, veh/h		970			445			1161			621	
Approach Delay, s/veh		85.0			33.4			39.7			41.1	
Approach LOS		F			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.7	50.7	10.6	44.0	22.8	42.5	8.7	46.0
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	16.5	35.7	10.3	39.5	24.1	28.1	7.1	42.7
Max Q Clear Time (g_c+I1), s	10.2	17.5	6.3	41.5	17.5	15.6	3.8	10.5
Green Ext Time (p_c), s	0.1	3.7	0.0	0.0	0.9	2.1	0.0	1.7

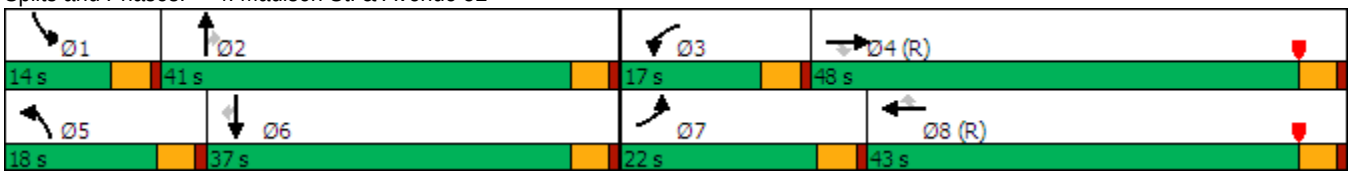
Intersection Summary	
HCM 6th Ctrl Delay	52.8
HCM 6th LOS	D

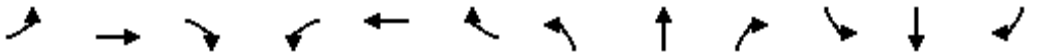
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	86	547	106	49	497	70	131	453	60	79	395	77
Future Volume (vph)	86	547	106	49	497	70	131	453	60	79	395	77
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	435		50	200		325	160		160	255		50
Storage Lanes	1		1	1		1	2		1	2		1
Taper Length (ft)	105			120			140			160		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			55			50			50	
Link Distance (ft)		1169			798			1237			1379	
Travel Time (s)		17.7			9.9			16.9			18.8	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	30.5	30.5	11.5	30.5	30.5	11.5	31.5	31.5	11.5	30.5	30.5
Total Split (s)	22.0	48.0	48.0	17.0	43.0	43.0	18.0	41.0	41.0	14.0	37.0	37.0
Total Split (%)	18.3%	40.0%	40.0%	14.2%	35.8%	35.8%	15.0%	34.2%	34.2%	11.7%	30.8%	30.8%
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	Max	Max

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 65.5 (55%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow
Natural Cycle: 85
Control Type: Actuated-Coordinated

Splits and Phases: 4: Madison St. & Avenue 52





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	86	547	106	49	497	70	131	453	60	79	395	77
Future Volume (veh/h)	86	547	106	49	497	70	131	453	60	79	395	77
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	100	636	123	57	578	81	152	527	70	92	459	90
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	125	1525	680	86	1448	646	210	1052	469	187	1029	459
Arrive On Green	0.07	0.44	0.44	0.05	0.42	0.42	0.06	0.30	0.30	0.06	0.30	0.30
Sat Flow, veh/h	1734	3460	1543	1734	3460	1543	3365	3460	1543	3365	3460	1543
Grp Volume(v), veh/h	100	636	123	57	578	81	152	527	70	92	459	90
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1730	1543	1682	1730	1543	1682	1730	1543
Q Serve(g_s), s	6.8	15.1	5.8	3.9	14.0	3.9	5.3	15.0	4.0	3.2	12.9	5.2
Cycle Q Clear(g_c), s	6.8	15.1	5.8	3.9	14.0	3.9	5.3	15.0	4.0	3.2	12.9	5.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	125	1525	680	86	1448	646	210	1052	469	187	1029	459
V/C Ratio(X)	0.80	0.42	0.18	0.66	0.40	0.13	0.72	0.50	0.15	0.49	0.45	0.20
Avail Cap(c_a), veh/h	253	1525	680	181	1448	646	379	1052	469	266	1029	459
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	1.00
Uniform Delay (d), s/veh	54.9	23.0	20.4	56.0	24.4	21.4	55.2	34.3	30.4	55.0	34.1	31.4
Incr Delay (d2), s/veh	11.3	0.8	0.6	8.4	0.8	0.4	4.7	1.7	0.7	2.0	1.4	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	3.3	6.1	2.1	1.8	5.5	1.4	2.3	6.3	1.5	1.4	5.4	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	66.1	23.8	21.0	64.4	25.2	21.8	59.9	36.0	31.1	57.0	35.5	32.4
LnGrp LOS	E	C	C	E	C	C	E	D	C	E	D	C
Approach Vol, veh/h		859			716			749			641	
Approach Delay, s/veh		28.4			27.9			40.4			38.2	
Approach LOS		C			C			D			D	

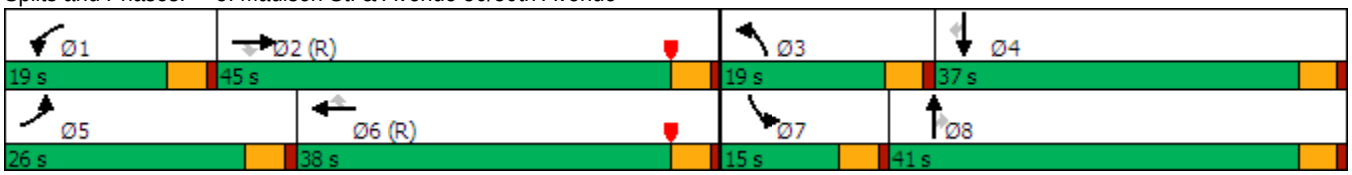
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.2	41.0	10.5	57.4	12.0	40.2	13.1	54.7
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	9.5	36.5	12.5	43.5	13.5	32.5	17.5	38.5
Max Q Clear Time (g_c+I1), s	5.2	17.0	5.9	17.1	7.3	14.9	8.8	16.0
Green Ext Time (p_c), s	0.1	3.2	0.0	4.5	0.2	2.7	0.1	3.6

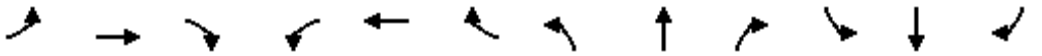
Intersection Summary	
HCM 6th Ctrl Delay	33.4
HCM 6th LOS	C

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	111	498	179	55	427	77	144	521	44	73	375	115
Future Volume (vph)	111	498	179	55	427	77	144	521	44	73	375	115
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	305		210	300		240	290		220	200		200
Storage Lanes	1		1	1		1	2		1	2		1
Taper Length (ft)	120			90			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			50			50			50	
Link Distance (ft)		579			1049			1270			550	
Travel Time (s)		8.8			14.3			17.3			7.5	
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 (%)												
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)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	30.5	30.5	11.5	30.5	30.5	11.5	30.5	30.5	11.5	30.5	30.5
Total Split (s)	26.0	45.0	45.0	19.0	38.0	38.0	19.0	41.0	41.0	15.0	37.0	37.0
Total Split (%)	21.7%	37.5%	37.5%	15.8%	31.7%	31.7%	15.8%	34.2%	34.2%	12.5%	30.8%	30.8%
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	Max	Max

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 64.5 (54%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 85	
Control Type: Actuated-Coordinated	

Splits and Phases: 5: Madison St. & Avenue 50/50th Avenue

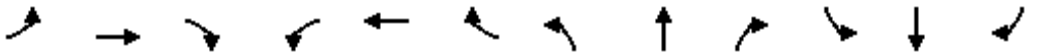




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	111	498	179	55	427	77	144	521	44	73	375	115
Future Volume (veh/h)	111	498	179	55	427	77	144	521	44	73	375	115
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	117	524	188	58	449	81	152	548	46	77	395	121
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	144	1530	682	87	1416	631	210	1052	469	181	1022	456
Arrive On Green	0.08	0.44	0.44	0.05	0.41	0.41	0.06	0.30	0.30	0.05	0.30	0.30
Sat Flow, veh/h	1734	3460	1543	1734	3460	1543	3365	3460	1543	3365	3460	1543
Grp Volume(v), veh/h	117	524	188	58	449	81	152	548	46	77	395	121
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1730	1543	1682	1730	1543	1682	1730	1543
Q Serve(g_s), s	8.0	11.9	9.3	3.9	10.6	3.9	5.3	15.7	2.6	2.7	10.9	7.2
Cycle Q Clear(g_c), s	8.0	11.9	9.3	3.9	10.6	3.9	5.3	15.7	2.6	2.7	10.9	7.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	144	1530	682	87	1416	631	210	1052	469	181	1022	456
V/C Ratio(X)	0.81	0.34	0.28	0.67	0.32	0.13	0.72	0.52	0.10	0.42	0.39	0.27
Avail Cap(c_a), veh/h	311	1530	682	210	1416	631	407	1052	469	294	1022	456
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	1.00
Uniform Delay (d), s/veh	54.1	22.0	21.3	56.0	24.1	22.1	55.2	34.5	29.9	55.0	33.6	32.3
Incr Delay (d2), s/veh	10.5	0.6	1.0	8.6	0.6	0.4	4.6	1.8	0.4	1.6	1.1	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.8	4.8	3.4	1.9	4.2	1.4	2.3	6.6	1.0	1.1	4.5	2.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	64.6	22.6	22.3	64.7	24.7	22.5	59.9	36.4	30.4	56.5	34.7	33.7
LnGrp LOS	E	C	C	E	C	C	E	D	C	E	C	C
Approach Vol, veh/h		829			588			746			593	
Approach Delay, s/veh		28.5			28.3			40.8			37.4	
Approach LOS		C			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.5	57.6	12.0	40.0	14.4	53.6	11.0	41.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	14.5	40.5	14.5	32.5	21.5	33.5	10.5	36.5
Max Q Clear Time (g_c+I1), s	5.9	13.9	7.3	12.9	10.0	12.6	4.7	17.7
Green Ext Time (p_c), s	0.1	3.9	0.2	2.5	0.2	2.8	0.1	3.2

Intersection Summary	
HCM 6th Ctrl Delay	33.7
HCM 6th LOS	C



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	31	24	2	34	10	589	6	252	53	761	305	2
Future Volume (vph)	31	24	2	34	10	589	6	252	53	761	305	2
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	110		110	140		140	150		150	240		0
Storage Lanes	0		2	1		0	0		0	2		1
Taper Length (ft)	0			110			25			140		
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		531			5080			436			1277	
Travel Time (s)		6.6			63.0			5.4			15.8	
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Intersection Delay, s/veh	180
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	31	24	2	34	10	589	6	252	53	761	305	2
Future Vol, veh/h	31	24	2	34	10	589	6	252	53	761	305	2
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	38	29	2	41	12	718	7	307	65	928	372	2
Number of Lanes	1	2	0	1	1	1	0	2	0	2	1	0

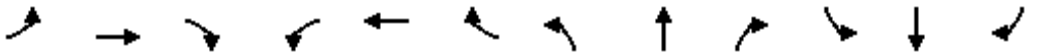
Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	2	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	3	3	3
HCM Control Delay	17.7	396.9	28.4	104.3
HCM LOS	C	F	D	F

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	5%	0%	100%	0%	0%	100%	0%	0%	100%	100%	0%
Vol Thru, %	95%	70%	0%	100%	80%	0%	100%	0%	0%	0%	99%
Vol Right, %	0%	30%	0%	0%	20%	0%	0%	100%	0%	0%	1%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	132	179	31	16	10	34	10	589	381	381	307
LT Vol	6	0	31	0	0	34	0	0	381	381	0
Through Vol	126	126	0	16	8	0	10	0	0	0	305
RT Vol	0	53	0	0	2	0	0	589	0	0	2
Lane Flow Rate	161	218	38	20	12	41	12	718	464	464	374
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.458	0.607	0.127	0.063	0.039	0.122	0.034	1.873	1.142	1.142	0.869
Departure Headway (Hd)	12.04	11.81	13.874	13.344	13.195	11.04	10.528	9.813	10.505	10.505	9.991
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	301	308	260	270	273	327	342	381	348	348	367
Service Time	9.74	9.51	11.574	11.044	10.895	8.74	8.228	7.513	8.205	8.205	7.691
HCM Lane V/C Ratio	0.535	0.708	0.146	0.074	0.044	0.125	0.035	1.885	1.333	1.333	1.019
HCM Control Delay	24.5	31.2	18.6	16.9	16.4	15.3	13.6	425.4	125.3	125.3	52.3
HCM Lane LOS	C	D	C	C	C	C	B	F	F	F	F
HCM 95th-tile Q	2.3	3.7	0.4	0.2	0.1	0.4	0.1	45.7	15.5	15.5	8.3

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	31	24	2	34	10	589	6	252	53	761	305	2
Future Volume (vph)	31	24	2	34	10	589	6	252	53	761	305	2
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	110		110	140		140	150		150	240		0
Storage Lanes	0		2	1		0	0		0	2		1
Taper Length (ft)	0			110			25			140		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		531			5080			436			1277	
Travel Time (s)		6.6			63.0			5.4			15.8	
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA	pm+ov	Split	NA		Split	NA	Perm
Protected Phases		2			6	4	8	8		4	4	
Permitted Phases	2			6		6						4
Detector Phase	2	2		6	6	4	8	8		4	4	4
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	22.5	22.5		22.5	22.5	22.5	22.5	22.5		22.5	22.5	22.5
Total Split (s)	27.0	27.0		27.0	27.0	66.0	27.0	27.0		66.0	66.0	66.0
Total Split (%)	22.5%	22.5%		22.5%	22.5%	55.0%	22.5%	22.5%		55.0%	55.0%	55.0%
Yellow Time (s)	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
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)	4.5	4.5		4.5	4.5	4.5		4.5		4.5	4.5	4.5
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max		None	None	Max	Max	Max		Max	Max	Max

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:EBTL, Start of Yellow	
Natural Cycle: 70	
Control Type: Actuated-Coordinated	

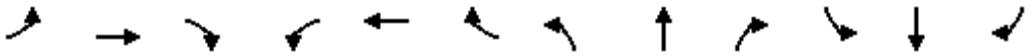
Splits and Phases: 6: Jefferson St. & Avenue 54



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	31	24	2	34	10	589	6	252	53	761	305	2
Future Volume (veh/h)	31	24	2	34	10	589	6	252	53	761	305	2
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	38	29	2	41	12	718	7	307	65	928	372	2
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	192	616	42	308	341	1080	12	532	118	1724	1773	791
Arrive On Green	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.51	0.51	0.51
Sat Flow, veh/h	726	3287	224	1378	1821	1543	63	2835	628	3365	3460	1543
Grp Volume(v), veh/h	38	15	16	41	12	718	202	0	177	928	372	2
Grp Sat Flow(s),veh/h/ln	726	1730	1781	1378	1821	1543	1818	0	1708	1682	1730	1543
Q Serve(g_s), s	5.4	0.9	0.9	3.0	0.6	22.5	12.2	0.0	11.3	22.3	7.0	0.1
Cycle Q Clear(g_c), s	6.1	0.9	0.9	3.9	0.6	22.5	12.2	0.0	11.3	22.3	7.0	0.1
Prop In Lane	1.00		0.13	1.00		1.00	0.03		0.37	1.00		1.00
Lane Grp Cap(c), veh/h	192	324	334	308	341	1080	341	0	320	1724	1773	791
V/C Ratio(X)	0.20	0.05	0.05	0.13	0.04	0.66	0.59	0.00	0.55	0.54	0.21	0.00
Avail Cap(c_a), veh/h	192	324	334	308	341	1080	341	0	320	1724	1773	791
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.78	0.78	0.78	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.4	40.0	40.0	41.6	39.9	8.8	44.6	0.0	44.2	19.7	16.0	14.3
Incr Delay (d2), s/veh	2.3	0.3	0.3	0.2	0.0	1.2	7.4	0.0	6.7	1.2	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	0.4	0.4	1.0	0.3	21.4	5.9	0.0	5.1	8.1	2.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.6	40.2	40.2	41.7	39.9	10.0	52.0	0.0	50.9	20.9	16.2	14.3
LnGrp LOS	D	D	D	D	D	A	D	A	D	C	B	B
Approach Vol, veh/h		69			771			379			1302	
Approach Delay, s/veh		42.7			12.1			51.5			19.6	
Approach LOS		D			B			D			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		27.0		66.0		27.0		27.0				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		22.5		61.5		22.5		22.5				
Max Q Clear Time (g_c+I1), s		8.1		24.3		24.5		14.2				
Green Ext Time (p_c), s		0.2		6.4		0.0		1.2				

Intersection Summary												
HCM 6th Ctrl Delay			22.7									
HCM 6th LOS			C									



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	108	429	364	31	470	334	253	727	77	200	781	155
Future Volume (vph)	108	429	364	31	470	334	253	727	77	200	781	155
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Link Speed (mph)		50			50			50			55	
Link Distance (ft)		709			813			334			462	
Travel Time (s)		9.7			11.1			4.6			5.7	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)												
Sign Control		Yield			Yield			Yield			Yield	

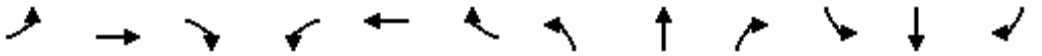
Intersection Summary	
Area Type:	Other

Control Type: Roundabout

Intersection	
Intersection Delay, s/veh	241.0
Intersection LOS	F

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	968	897	1137	1222
Demand Flow Rate, veh/h	987	915	1160	1246
Vehicles Circulating, veh/h	1110	1193	807	826
Vehicles Exiting, veh/h	792	689	891	916
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	111.1	118.7	345.6	336.1
Approach LOS	F	F	F	F

Lane	Left	Bypass	Left	Bypass	Left	Bypass	Left	Bypass
Designated Moves	LT	R	LT	R	LT	R	LT	R
Assumed Moves	LT	R	LT	R	LT	R	LT	R
RT Channelized		Free		Free		Free		Free
Lane Util	1.000		1.000		1.000		1.000	
Follow-Up Headway, s	2.609		2.609		2.609		2.609	
Critical Headway, s	4.976	399	4.976	366	4.976	85	4.976	170
Entry Flow, veh/h	588	1887	549	1887	1075	1887	1076	1887
Cap Entry Lane, veh/h	445	0.980	409	0.980	606	0.980	594	0.980
Entry HV Adj Factor	0.981	391	0.980	359	0.981	83	0.981	167
Flow Entry, veh/h	577	1850	538	1850	1054	1850	1055	1850
Cap Entry, veh/h	436	0.211	400	0.194	594	0.045	583	0.090
V/C Ratio	1.322	0.0	1.343	0.0	1.774	0.0	1.811	0.0
Control Delay, s/veh	186.4	A	198.0	A	372.8	A	389.3	A
LOS	F	1	F	1	F	0	F	0
95th %tile Queue, veh	26		25		64		65	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	108	429	364	31	470	334	253	727	77	200	781	155
Future Volume (vph)	108	429	364	31	470	334	253	727	77	200	781	155
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	0		100	0		100	0		0	0		0
Storage Lanes	0		1	0		1	0		1	0		1
Taper Length (ft)	60			60			60			60		
Link Speed (mph)		50			50			50			55	
Link Distance (ft)		709			813			334			462	
Travel Time (s)		9.7			11.1			4.6			5.7	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)												
Sign Control		Yield			Yield			Yield			Yield	

Intersection Summary	
Area Type:	Other
Control Type: Roundabout	

Intersection	
Intersection Delay, s/veh	34.8
Intersection LOS	D

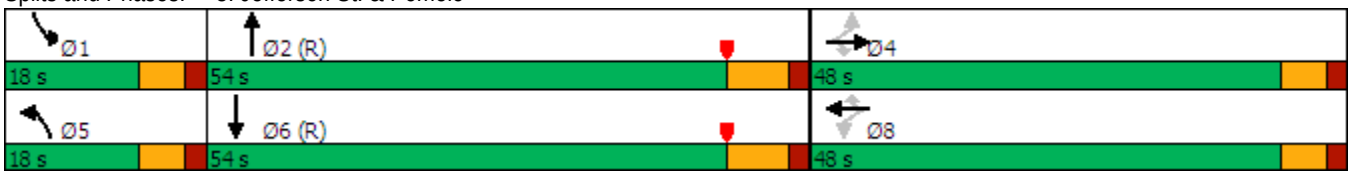
Approach	EB	WB	NB	SB
Entry Lanes	1	1	2	2
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	968	897	1137	1222
Demand Flow Rate, veh/h	987	915	1160	1246
Vehicles Circulating, veh/h	1110	1193	807	826
Vehicles Exiting, veh/h	792	689	891	916
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	47.4	49.6	24.1	23.8
Approach LOS	E	E	C	C

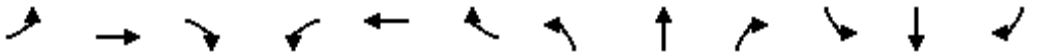
Lane	Left	Bypass	Left	Bypass	Left	Right	Bypass	Left	Right	Bypass
Designated Moves	LT	R	LT	R	LT	TR	R	LT	TR	R
Assumed Moves	LT	R	LT	R	LT	TR	R	LT	TR	R
RT Channelized		Free		Free			Free			Free
Lane Util	1.000		1.000		0.470	0.530		0.470	0.530	
Follow-Up Headway, s	2.480		2.480		2.667	2.480		2.667	2.480	
Critical Headway, s	4.328	399	4.328	366	4.645	4.328	85	4.645	4.328	170
Entry Flow, veh/h	588	1887	549	1887	505	570	1887	506	570	1887
Cap Entry Lane, veh/h	560	0.980	522	0.980	643	726	0.980	631	715	0.980
Entry HV Adj Factor	0.981	391	0.980	359	0.981	0.980	83	0.980	0.981	167
Flow Entry, veh/h	577	1850	538	1850	496	559	1850	496	559	1850
Cap Entry, veh/h	550	0.211	511	0.194	630	712	0.045	619	701	0.090
V/C Ratio	1.050	0.0	1.052	0.0	0.786	0.785	0.0	0.801	0.798	0.0
Control Delay, s/veh	79.5	A	82.8	A	27.3	24.8	A	29.1	26.2	A
LOS	F	1	F	1	D	C	0	D	D	0
95th %tile Queue, veh	17		16		8	8		8	8	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	66	2	21	9	1	42	3	1184	7	23	1195	68
Future Volume (vph)	66	2	21	9	1	42	3	1184	7	23	1195	68
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	0		0	0		0	160		0	180		0
Storage Lanes	0		1	0		1	1		0	1		0
Taper Length (ft)	60			60			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			55			55	
Link Distance (ft)		509			561			1820			1343	
Travel Time (s)		13.9			15.3			22.6			16.6	
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 (%)												
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						
Detector Phase	4	4	4	8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	
Minimum Split (s)	48.0	48.0	48.0	48.0	48.0	48.0	18.0	40.5		18.0	39.5	
Total Split (s)	48.0	48.0	48.0	48.0	48.0	48.0	18.0	54.0		18.0	54.0	
Total Split (%)	40.0%	40.0%	40.0%	40.0%	40.0%	40.0%	15.0%	45.0%		15.0%	45.0%	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	5.5		4.0	5.5	
All-Red Time (s)	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	
Total Lost Time (s)		6.0	6.0		6.0	6.0	6.0	7.5		6.0	7.5	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Min		None	C-Min	

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 30 (25%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 110	
Control Type: Actuated-Coordinated	

Splits and Phases: 8: Jefferson St. & Pomelo





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	66	2	21	9	1	42	3	1184	7	23	1195	68
Future Volume (veh/h)	66	2	21	9	1	42	3	1184	7	23	1195	68
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	69	2	22	9	1	44	3	1246	7	24	1258	72
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	73	1	524	66	4	524	17	2260	13	96	2350	135
Arrive On Green	0.34	0.34	0.34	0.34	0.34	0.34	0.01	0.44	0.44	0.02	0.16	0.16
Sat Flow, veh/h	41	4	1543	27	13	1543	1734	5102	29	1734	4811	275
Grp Volume(v), veh/h	71	0	22	10	0	44	3	809	444	24	867	463
Grp Sat Flow(s),veh/h/ln	44	0	1543	40	0	1543	1734	1657	1816	1734	1657	1772
Q Serve(g_s), s	1.2	0.0	1.1	0.6	0.0	2.3	0.2	21.6	21.6	1.6	28.8	28.8
Cycle Q Clear(g_c), s	40.7	0.0	1.1	40.4	0.0	2.3	0.2	21.6	21.6	1.6	28.8	28.8
Prop In Lane	0.97		1.00	0.90		1.00	1.00		0.02	1.00		0.16
Lane Grp Cap(c), veh/h	74	0	524	71	0	524	17	1468	805	96	1619	866
V/C Ratio(X)	0.96	0.00	0.04	0.14	0.00	0.08	0.18	0.55	0.55	0.25	0.54	0.54
Avail Cap(c_a), veh/h	89	0	540	86	0	540	173	1468	805	173	1619	866
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.67	0.67	0.67
Uniform Delay (d), s/veh	59.4	0.0	26.6	45.9	0.0	27.0	59.0	24.6	24.6	56.5	37.8	37.8
Incr Delay (d2), s/veh	81.4	0.0	0.1	1.9	0.0	0.1	10.9	1.5	2.7	1.9	0.9	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.9	0.0	0.4	0.3	0.0	0.9	0.1	8.1	9.2	0.7	12.8	13.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	140.7	0.0	26.6	47.8	0.0	27.1	69.8	26.1	27.3	58.4	38.7	39.4
LnGrp LOS	F	A	C	D	A	C	E	C	C	E	D	D
Approach Vol, veh/h		93			54			1256			1354	
Approach Delay, s/veh		113.7			30.9			26.7			39.3	
Approach LOS		F			C			C			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.6	60.0		47.4	7.1	65.5		47.4				
Change Period (Y+Rc), s	6.0	7.5		6.0	6.0	7.5		6.0				
Max Green Setting (Gmax), s	12.0	46.5		42.0	12.0	46.5		42.0				
Max Q Clear Time (g_c+I1), s	3.6	23.6		42.7	2.2	30.8		42.4				
Green Ext Time (p_c), s	0.0	13.7		0.0	0.0	11.0		0.0				

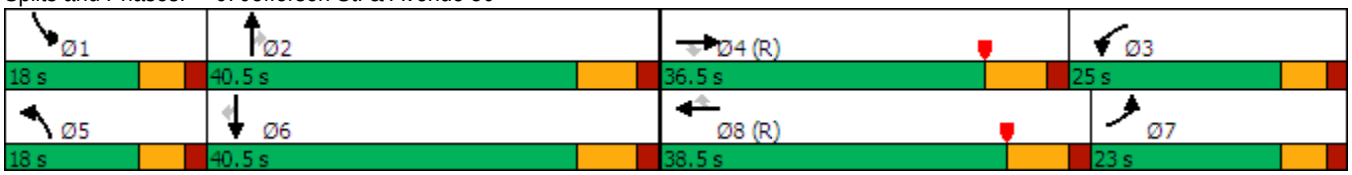
Intersection Summary												
HCM 6th Ctrl Delay			35.9									
HCM 6th LOS			D									

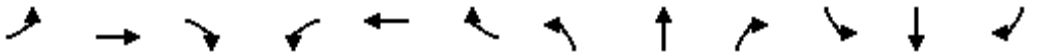
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	362	408	152	153	371	214	142	1047	102	303	975	239
Future Volume (vph)	362	408	152	153	371	214	142	1047	102	303	975	239
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	245		100	105		0	360		220	280		230
Storage Lanes	1		1	1		1	1		1	2		1
Taper Length (ft)	120			60			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			45			55			55	
Link Distance (ft)		693			995			1343			697	
Travel Time (s)		9.5			15.1			16.6			8.6	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Minimum Split (s)	18.0	31.5	31.5	18.0	38.5	38.5	18.0	40.5	40.5	18.0	40.5	40.5
Total Split (s)	23.0	36.5	36.5	25.0	38.5	38.5	18.0	40.5	40.5	18.0	40.5	40.5
Total Split (%)	19.2%	30.4%	30.4%	20.8%	32.1%	32.1%	15.0%	33.8%	33.8%	15.0%	33.8%	33.8%
Yellow Time (s)	4.0	5.5	5.5	4.0	5.5	5.5	4.0	5.5	5.5	4.0	5.5	5.5
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	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	0.0
Total Lost Time (s)	6.0	7.5	7.5	6.0	7.5	7.5	6.0	7.5	7.5	6.0	7.5	7.5
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lead	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	Min	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow
Natural Cycle: 125
Control Type: Actuated-Coordinated

Splits and Phases: 9: Jefferson St. & Avenue 50





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	362	408	152	153	371	214	142	1047	102	303	975	239
Future Volume (veh/h)	362	408	152	153	371	214	142	1047	102	303	975	239
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	373	421	157	158	382	221	146	1079	105	312	1005	246
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	308	582	260	427	431	365	173	1295	402	336	1297	403
Arrive On Green	0.18	0.17	0.17	0.25	0.24	0.24	0.03	0.09	0.09	0.10	0.26	0.26
Sat Flow, veh/h	1734	3460	1543	1734	1821	1543	1734	4972	1543	3365	4972	1543
Grp Volume(v), veh/h	373	421	157	158	382	221	146	1079	105	312	1005	246
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1821	1543	1734	1657	1543	1682	1657	1543
Q Serve(g_s), s	21.3	13.8	8.4	9.1	24.3	11.0	10.0	25.6	3.9	11.0	22.5	10.2
Cycle Q Clear(g_c), s	21.3	13.8	8.4	9.1	24.3	11.0	10.0	25.6	3.9	11.0	22.5	10.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	308	582	260	427	431	365	173	1295	402	336	1297	403
V/C Ratio(X)	1.21	0.72	0.60	0.37	0.89	0.61	0.84	0.83	0.26	0.93	0.77	0.61
Avail Cap(c_a), veh/h	308	836	373	427	470	399	173	1367	424	336	1367	424
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.94	0.94	0.94	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.3	47.3	25.6	37.5	44.2	21.3	57.1	52.3	11.7	53.6	41.1	14.4
Incr Delay (d2), s/veh	120.6	7.6	10.0	0.2	22.6	7.3	27.2	4.4	0.5	30.6	2.9	2.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	19.2	6.4	3.7	3.8	13.3	4.6	5.8	11.8	2.9	5.9	9.0	3.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	169.9	54.9	35.7	37.7	66.9	28.5	84.3	56.6	12.1	84.1	44.0	17.3
LnGrp LOS	F	D	D	D	E	C	F	E	B	F	D	B
Approach Vol, veh/h		951			761			1330			1563	
Approach Delay, s/veh		96.8			49.7			56.2			47.8	
Approach LOS		F			D			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.0	38.8	35.5	27.7	18.0	38.8	27.3	35.9
Change Period (Y+Rc), s	6.0	7.5	6.0	7.5	6.0	7.5	6.0	7.5
Max Green Setting (Gmax), s	12.0	33.0	19.0	29.0	12.0	33.0	17.0	31.0
Max Q Clear Time (g_c+I1), s	13.0	27.6	11.1	15.8	12.0	24.5	23.3	26.3
Green Ext Time (p_c), s	0.0	3.6	0.1	4.4	0.0	5.4	0.0	2.1

Intersection Summary	
HCM 6th Ctrl Delay	60.6
HCM 6th LOS	E

Notes

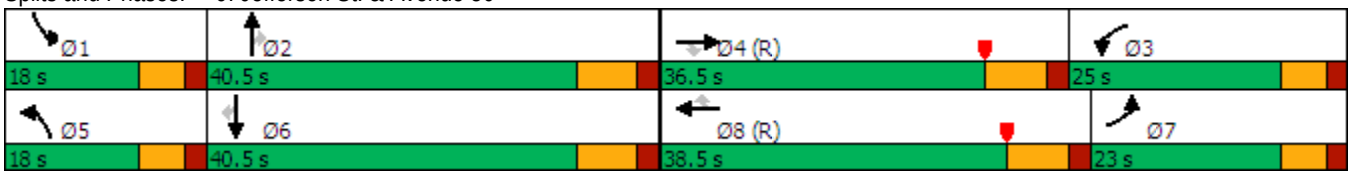
User approved pedestrian interval to be less than phase max green.

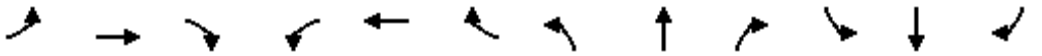
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	362	408	152	153	371	214	142	1047	102	303	975	239
Future Volume (vph)	362	408	152	153	371	214	142	1047	102	303	975	239
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	245		100	105		0	360		220	280		230
Storage Lanes	1		1	1		1	1		1	2		1
Taper Length (ft)	120			60			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			45			55			55	
Link Distance (ft)		693			995			1343			697	
Travel Time (s)		9.5			15.1			16.6			8.6	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Minimum Split (s)	18.0	31.5	31.5	18.0	38.5	38.5	18.0	40.5	40.5	18.0	40.5	40.5
Total Split (s)	23.0	36.5	36.5	25.0	38.5	38.5	18.0	40.5	40.5	18.0	40.5	40.5
Total Split (%)	19.2%	30.4%	30.4%	20.8%	32.1%	32.1%	15.0%	33.8%	33.8%	15.0%	33.8%	33.8%
Yellow Time (s)	4.0	5.5	5.5	4.0	5.5	5.5	4.0	5.5	5.5	4.0	5.5	5.5
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	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	0.0
Total Lost Time (s)	6.0	7.5	7.5	6.0	7.5	7.5	6.0	7.5	7.5	6.0	7.5	7.5
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lead	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	Min	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow
Natural Cycle: 125
Control Type: Actuated-Coordinated

Splits and Phases: 9: Jefferson St. & Avenue 50





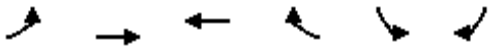
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	362	408	152	153	371	214	142	1047	102	303	975	239
Future Volume (veh/h)	362	408	152	153	371	214	142	1047	102	303	975	239
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	373	421	157	158	382	221	146	1079	105	312	1005	246
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	435	582	260	427	566	253	173	1295	402	336	1297	403
Arrive On Green	0.25	0.17	0.17	0.25	0.16	0.16	0.03	0.09	0.09	0.10	0.26	0.26
Sat Flow, veh/h	1734	3460	1543	1734	3460	1543	1734	4972	1543	3365	4972	1543
Grp Volume(v), veh/h	373	421	157	158	382	221	146	1079	105	312	1005	246
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1730	1543	1734	1657	1543	1682	1657	1543
Q Serve(g_s), s	24.6	13.8	8.4	9.1	12.5	12.5	10.0	25.6	3.9	11.0	22.5	8.6
Cycle Q Clear(g_c), s	24.6	13.8	8.4	9.1	12.5	12.5	10.0	25.6	3.9	11.0	22.5	8.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	435	582	260	427	566	253	173	1295	402	336	1297	403
V/C Ratio(X)	0.86	0.72	0.60	0.37	0.67	0.88	0.84	0.83	0.26	0.93	0.77	0.61
Avail Cap(c_a), veh/h	435	836	373	427	894	399	173	1367	424	336	1367	424
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.94	0.94	0.94	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.9	47.3	25.6	37.5	47.2	27.3	57.1	52.3	11.7	53.6	41.1	10.1
Incr Delay (d2), s/veh	15.3	7.6	10.0	0.2	6.3	31.9	27.2	4.4	0.5	30.6	2.9	2.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.9	6.4	3.7	3.8	5.7	6.7	5.8	11.8	2.9	5.9	9.0	5.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	58.2	54.9	35.7	37.7	53.5	59.1	84.3	56.6	12.1	84.1	44.0	13.0
LnGrp LOS	E	D	D	D	D	E	F	E	B	F	D	B
Approach Vol, veh/h		951			761			1330			1563	
Approach Delay, s/veh		53.0			51.8			56.2			47.1	
Approach LOS		D			D			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.0	38.8	35.5	27.7	18.0	38.8	36.1	27.1
Change Period (Y+Rc), s	6.0	7.5	6.0	7.5	6.0	7.5	6.0	7.5
Max Green Setting (Gmax), s	12.0	33.0	19.0	29.0	12.0	33.0	17.0	31.0
Max Q Clear Time (g_c+I1), s	13.0	27.6	11.1	15.8	12.0	24.5	26.6	14.5
Green Ext Time (p_c), s	0.0	3.6	0.1	4.4	0.0	5.4	0.0	5.1

Intersection Summary	
HCM 6th Ctrl Delay	51.7
HCM 6th LOS	D

Notes

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



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	54	55	82	179	325	82
Future Volume (vph)	54	55	82	179	325	82
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Link Speed (mph)		40	40		40	
Link Distance (ft)		1772	661		437	
Travel Time (s)		30.2	11.3		7.4	
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Shared Lane Traffic (%)						
Sign Control		Stop	Stop		Stop	

Intersection Summary	
Area Type:	Other

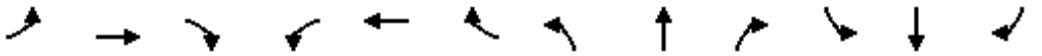
Control Type: Unsignalized

Intersection	
Intersection Delay, s/veh	15.4
Intersection LOS	C

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	54	55	82	179	325	82
Future Vol, veh/h	54	55	82	179	325	82
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	66	67	100	218	396	100
Number of Lanes	0	1	1	1	1	1

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	2	1	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	2	0	2
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	2	1
HCM Control Delay	11.4	10.8	19.5
HCM LOS	B	B	C

Lane	EBLn1	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	50%	0%	0%	100%	0%
Vol Thru, %	50%	100%	0%	0%	0%
Vol Right, %	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	109	82	179	325	82
LT Vol	54	0	0	325	0
Through Vol	55	82	0	0	0
RT Vol	0	0	179	0	82
Lane Flow Rate	133	100	218	396	100
Geometry Grp	4	7	7	7	7
Degree of Util (X)	0.235	0.174	0.337	0.695	0.142
Departure Headway (Hd)	6.375	6.262	5.552	6.314	5.103
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	564	573	646	575	703
Service Time	4.417	4.001	3.291	4.04	2.83
HCM Lane V/C Ratio	0.236	0.175	0.337	0.689	0.142
HCM Control Delay	11.4	10.3	11.1	22.2	8.7
HCM Lane LOS	B	B	B	C	A
HCM 95th-tile Q	0.9	0.6	1.5	5.5	0.5



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	51	175	157	21	108	131	108	330	15	204	416	54
Future Volume (vph)	51	175	157	21	108	131	108	330	15	204	416	54
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		0	150		150	100		150	320		150
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	90			90			90			90		
Link Speed (mph)		45			45			50			50	
Link Distance (ft)		598			1045			1022			1291	
Travel Time (s)		9.1			15.8			13.9			17.6	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Intersection Delay, s/veh	98.9
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	51	175	157	21	108	131	108	330	15	204	416	54
Future Vol, veh/h	51	175	157	21	108	131	108	330	15	204	416	54
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	58	199	178	24	123	149	123	375	17	232	473	61
Number of Lanes	0	1	1	0	1	0	1	1	0	1	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	3	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	2	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	3	1	2
HCM Control Delay	37.5	62.4	110	140.4
HCM LOS	E	F	F	F

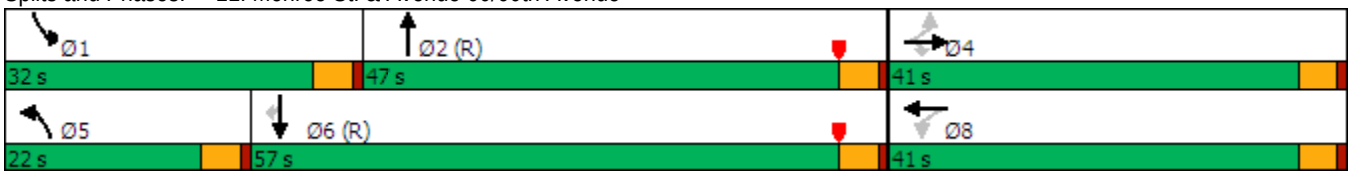
Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	23%	0%	8%	100%	0%	0%
Vol Thru, %	0%	96%	77%	0%	42%	0%	100%	0%
Vol Right, %	0%	4%	0%	100%	50%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	108	345	226	157	260	204	416	54
LT Vol	108	0	51	0	21	204	0	0
Through Vol	0	330	175	0	108	0	416	0
RT Vol	0	15	0	157	131	0	0	54
Lane Flow Rate	123	392	257	178	295	232	473	61
Geometry Grp	8	8	8	8	8	8	8	8
Degree of Util (X)	0.384	1.167	0.779	0.501	0.887	0.697	1.356	0.164
Departure Headway (Hd)	11.944	11.378	11.977	11.118	11.833	11.34	10.813	10.075
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	303	321	306	326	307	320	340	358
Service Time	9.644	9.078	9.677	8.818	9.533	9.04	8.513	7.775
HCM Lane V/C Ratio	0.406	1.221	0.84	0.546	0.961	0.725	1.391	0.17
HCM Control Delay	21.9	137.6	46.6	24.5	62.4	36.4	207.7	14.7
HCM Lane LOS	C	F	E	C	F	E	F	B
HCM 95th-tile Q	1.7	15.5	6.1	2.7	8.1	4.9	22.4	0.6

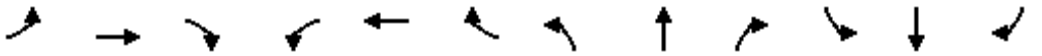
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	51	175	157	21	108	131	108	330	15	204	416	54
Future Volume (vph)	51	175	157	21	108	131	108	330	15	204	416	54
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		0	150		150	100		150	320		150
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			50			50	
Link Distance (ft)		598			1045			1022			1291	
Travel Time (s)		9.1			15.8			13.9			17.6	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8								6
Detector Phase	4	4	4	8	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0		7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5		11.5	22.5		11.5	22.5	22.5
Total Split (s)	41.0	41.0	41.0	41.0	41.0		22.0	47.0		32.0	57.0	57.0
Total Split (%)	34.2%	34.2%	34.2%	34.2%	34.2%		18.3%	39.2%		26.7%	47.5%	47.5%
Yellow Time (s)	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
Lost Time Adjust (s)		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
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None		None	C-Max		None	C-Max	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 Yellow
Natural Cycle: 60
Control Type: Actuated-Coordinated

Splits and Phases: 11: Monroe St. & Avenue 60/60th Avenue

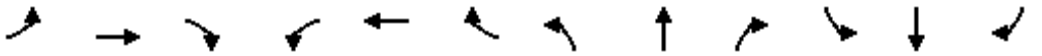




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	51	175	157	21	108	131	108	330	15	204	416	54
Future Volume (veh/h)	51	175	157	21	108	131	108	330	15	204	416	54
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	58	199	178	24	123	149	123	375	17	232	473	61
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	87	270	444	42	150	162	149	776	35	262	936	793
Arrive On Green	0.29	0.29	0.29	0.29	0.29	0.29	0.09	0.45	0.45	0.15	0.51	0.51
Sat Flow, veh/h	175	938	1543	34	521	563	1734	1729	78	1734	1821	1543
Grp Volume(v), veh/h	257	0	178	296	0	0	123	0	392	232	473	61
Grp Sat Flow(s),veh/h/ln	1113	0	1543	1118	0	0	1734	0	1807	1734	1821	1543
Q Serve(g_s), s	0.0	0.0	11.1	6.9	0.0	0.0	8.4	0.0	18.3	15.7	20.5	2.4
Cycle Q Clear(g_c), s	25.2	0.0	11.1	32.1	0.0	0.0	8.4	0.0	18.3	15.7	20.5	2.4
Prop In Lane	0.23		1.00	0.08		0.50	1.00		0.04	1.00		1.00
Lane Grp Cap(c), veh/h	357	0	444	354	0	0	149	0	811	262	936	793
V/C Ratio(X)	0.72	0.00	0.40	0.84	0.00	0.00	0.82	0.00	0.48	0.88	0.51	0.08
Avail Cap(c_a), veh/h	383	0	469	380	0	0	253	0	811	397	936	793
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.6	0.0	34.4	39.8	0.0	0.0	53.9	0.0	23.3	49.9	19.2	14.8
Incr Delay (d2), s/veh	6.0	0.0	0.6	14.3	0.0	0.0	10.7	0.0	2.1	14.3	1.9	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.2	0.0	4.1	9.8	0.0	0.0	4.0	0.0	7.8	7.6	8.4	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.6	0.0	35.0	54.0	0.0	0.0	64.6	0.0	25.3	64.2	21.1	15.0
LnGrp LOS	D	A	D	D	A	A	E	A	C	E	C	B
Approach Vol, veh/h		435			296			515			766	
Approach Delay, s/veh		40.1			54.0			34.7			33.7	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	22.6	58.4		39.0	14.8	66.2		39.0				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	27.5	42.5		36.5	17.5	52.5		36.5				
Max Q Clear Time (g_c+I1), s	17.7	20.3		27.2	10.4	22.5		34.1				
Green Ext Time (p_c), s	0.4	2.0		1.4	0.1	2.9		0.4				

Intersection Summary												
HCM 6th Ctrl Delay			38.3									
HCM 6th LOS			D									



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	99	180	62	66	167	62	88	468	72	53	542	114
Future Volume (vph)	99	180	62	66	167	62	88	468	72	53	542	114
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		150	0		0	150		150	150		150
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		50			30			50			50	
Link Distance (ft)		670			5266			913			1519	
Travel Time (s)		9.1			119.7			12.5			20.7	
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Intersection Delay, s/veh	408.6
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	99	180	62	66	167	62	88	468	72	53	542	114
Future Vol, veh/h	99	180	62	66	167	62	88	468	72	53	542	114
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	132	240	83	88	223	83	117	624	96	71	723	152
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	1	1
HCM Control Delay	169.3	118	601.8	473.4
HCM LOS	F	F	F	F

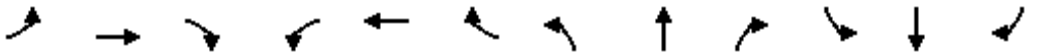
Lane	NBLn1	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	14%	29%	22%	9%	0%
Vol Thru, %	75%	53%	57%	91%	0%
Vol Right, %	11%	18%	21%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	628	341	295	595	114
LT Vol	88	99	66	53	0
Through Vol	468	180	167	542	0
RT Vol	72	62	62	0	114
Lane Flow Rate	837	455	393	793	152
Geometry Grp	5	2	2	7	7
Degree of Util (X)	2.253	1.21	1.043	2.154	0.381
Departure Headway (Hd)	12.786	15.574	16.582	13.548	12.753
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	293	236	224	278	284
Service Time	10.786	13.574	14.582	11.248	10.453
HCM Lane V/C Ratio	2.857	1.928	1.754	2.853	0.535
HCM Control Delay	601.8	169.3	118	559.7	23.1
HCM Lane LOS	F	F	F	F	C
HCM 95th-tile Q	49	13.7	9.8	43.3	1.7

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	99	180	62	66	167	62	88	468	72	53	542	114
Future Volume (vph)	99	180	62	66	167	62	88	468	72	53	542	114
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		150	150		0	150		150	150		150
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			30			50			50	
Link Distance (ft)		670			5266			913			1519	
Travel Time (s)		9.1			119.7			12.5			20.7	
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		11.5	22.5		11.5	22.5	
Total Split (s)	36.0	36.0		36.0	36.0		15.0	71.4		12.6	69.0	
Total Split (%)	30.0%	30.0%		30.0%	30.0%		12.5%	59.5%		10.5%	57.5%	
Yellow Time (s)	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	
Lost Time Adjust (s)	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	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	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 Yellow
Natural Cycle: 90
Control Type: Actuated-Coordinated

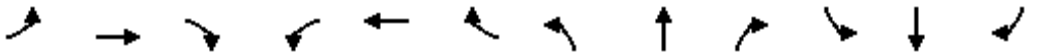
Splits and Phases: 12: Monroe St. & Avenue 58



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	99	180	62	66	167	62	88	468	72	53	542	114
Future Volume (veh/h)	99	180	62	66	167	62	88	468	72	53	542	114
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	132	240	83	88	223	83	117	624	96	71	723	152
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	172	340	117	160	332	124	141	882	136	92	793	167
Arrive On Green	0.26	0.26	0.26	0.26	0.26	0.26	0.08	0.57	0.57	0.05	0.54	0.54
Sat Flow, veh/h	1073	1293	447	1057	1265	471	1734	1541	237	1734	1459	307
Grp Volume(v), veh/h	132	0	323	88	0	306	117	0	720	71	0	875
Grp Sat Flow(s),veh/h/ln	1073	0	1741	1057	0	1736	1734	0	1778	1734	0	1766
Q Serve(g_s), s	12.6	0.0	20.2	9.9	0.0	18.9	8.0	0.0	34.9	4.9	0.0	53.8
Cycle Q Clear(g_c), s	31.5	0.0	20.2	30.0	0.0	18.9	8.0	0.0	34.9	4.9	0.0	53.8
Prop In Lane	1.00		0.26	1.00		0.27	1.00		0.13	1.00		0.17
Lane Grp Cap(c), veh/h	172	0	457	160	0	456	141	0	1018	92	0	960
V/C Ratio(X)	0.77	0.00	0.71	0.55	0.00	0.67	0.83	0.00	0.71	0.77	0.00	0.91
Avail Cap(c_a), veh/h	172	0	457	160	0	456	152	0	1018	117	0	960
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	54.6	0.0	40.1	53.7	0.0	39.6	54.3	0.0	18.5	56.1	0.0	24.8
Incr Delay (d2), s/veh	18.4	0.0	4.9	4.0	0.0	3.8	28.6	0.0	4.2	21.3	0.0	14.3
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	4.8	0.0	8.9	2.8	0.0	8.5	4.5	0.0	13.9	2.6	0.0	23.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	73.0	0.0	45.0	57.7	0.0	43.4	82.9	0.0	22.6	77.4	0.0	39.0
LnGrp LOS	E	A	D	E	A	D	F	A	C	E	A	D
Approach Vol, veh/h		455			394			837			946	
Approach Delay, s/veh		53.1			46.6			31.0			41.9	
Approach LOS		D			D			C			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.8	73.2		36.0	14.3	69.7		36.0				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	8.1	66.9		31.5	10.5	64.5		31.5				
Max Q Clear Time (g_c+I1), s	6.9	36.9		33.5	10.0	55.8		32.0				
Green Ext Time (p_c), s	0.0	4.9		0.0	0.0	3.7		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		41.1	
HCM 6th LOS		D	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	111	30	77	121	66	28	496	67	67	595	19
Future Volume (vph)	10	111	30	77	121	66	28	496	67	67	595	19
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	280		150	150		150	105		150	160		50
Storage Lanes	1		0	0		0	1		0	1		1
Taper Length (ft)	60			25			90			90		
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		5252			1251			918			726	
Travel Time (s)		71.6			17.1			12.5			9.9	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Intersection Delay, s/veh	141.7
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	111	30	77	121	66	28	496	67	67	595	19
Future Vol, veh/h	10	111	30	77	121	66	28	496	67	67	595	19
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	128	34	89	139	76	32	570	77	77	684	22
Number of Lanes	1	1	1	0	1	0	1	1	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	3	3	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	2	3	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	3	1	3
HCM Control Delay	17.5	45.3	298.8	70.2
HCM LOS	C	E	F	F

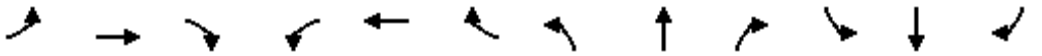
Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	100%	0%	0%	29%	100%	0%	0%
Vol Thru, %	0%	88%	0%	100%	0%	46%	0%	100%	91%
Vol Right, %	0%	12%	0%	0%	100%	25%	0%	0%	9%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	28	563	10	111	30	264	67	397	217
LT Vol	28	0	10	0	0	77	67	0	0
Through Vol	0	496	0	111	0	121	0	397	198
RT Vol	0	67	0	0	30	66	0	0	19
Lane Flow Rate	32	647	11	128	34	303	77	456	250
Geometry Grp	8	8	7	7	7	8	8	8	8
Degree of Util (X)	0.086	1.619	0.032	0.333	0.083	0.801	0.194	1.086	0.591
Departure Headway (Hd)	9.904	9.297	11.303	10.771	10.025	10.736	10.346	9.821	9.756
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	364	395	319	336	360	340	349	374	372
Service Time	7.604	6.997	9.003	8.471	7.725	8.436	8.046	7.521	7.456
HCM Lane V/C Ratio	0.088	1.638	0.034	0.381	0.094	0.891	0.221	1.219	0.672
HCM Control Delay	13.5	313	14.4	18.8	13.6	45.3	15.5	103.8	25.6
HCM Lane LOS	B	F	B	C	B	E	C	F	D
HCM 95th-tile Q	0.3	36.4	0.1	1.4	0.3	6.7	0.7	14.3	3.6

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	111	30	77	121	66	28	496	67	67	595	19
Future Volume (vph)	10	111	30	77	121	66	28	496	67	67	595	19
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	280		150	150		150	105		150	160		50
Storage Lanes	1		0	0		0	1		0	1		1
Taper Length (ft)	60			25			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		5252			1251			918			726	
Travel Time (s)		71.6			17.1			12.5			9.9	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8								6
Detector Phase	4	4	4	8	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0		7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5		11.5	22.5		11.5	22.5	22.5
Total Split (s)	39.0	39.0	39.0	39.0	39.0		11.8	65.0		16.0	69.2	69.2
Total Split (%)	32.5%	32.5%	32.5%	32.5%	32.5%		9.8%	54.2%		13.3%	57.7%	57.7%
Yellow Time (s)	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
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)	4.5	4.5	4.5		4.5		4.5	4.5		4.5	4.5	4.5
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None		None	C-Max		None	C-Max	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 Yellow
Natural Cycle: 65
Control Type: Actuated-Coordinated

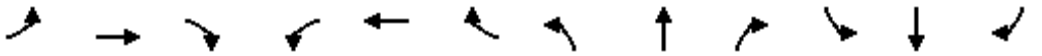
Splits and Phases: 13: Monroe St. & Airport Bl.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	111	30	77	121	66	28	496	67	67	595	19
Future Volume (veh/h)	10	111	30	77	121	66	28	496	67	67	595	19
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	11	128	34	89	139	76	32	570	77	77	684	22
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	214	443	375	122	166	83	66	924	125	98	2098	936
Arrive On Green	0.24	0.24	0.24	0.24	0.24	0.24	0.04	0.59	0.59	0.06	0.61	0.61
Sat Flow, veh/h	1166	1821	1543	343	684	342	1734	1571	212	1734	3460	1543
Grp Volume(v), veh/h	11	128	34	304	0	0	32	0	647	77	684	22
Grp Sat Flow(s),veh/h/ln	1166	1821	1543	1370	0	0	1734	0	1783	1734	1730	1543
Q Serve(g_s), s	0.0	6.9	2.0	19.5	0.0	0.0	2.2	0.0	28.1	5.3	11.6	0.7
Cycle Q Clear(g_c), s	1.8	6.9	2.0	26.3	0.0	0.0	2.2	0.0	28.1	5.3	11.6	0.7
Prop In Lane	1.00		1.00	0.29		0.25	1.00		0.12	1.00		1.00
Lane Grp Cap(c), veh/h	214	443	375	372	0	0	66	0	1049	98	2098	936
V/C Ratio(X)	0.05	0.29	0.09	0.82	0.00	0.00	0.48	0.00	0.62	0.79	0.33	0.02
Avail Cap(c_a), veh/h	266	524	444	440	0	0	106	0	1049	166	2098	936
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.98	0.98	0.98	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.0	37.0	35.2	45.3	0.0	0.0	56.5	0.0	16.0	55.9	11.6	9.4
Incr Delay (d2), s/veh	0.1	0.4	0.1	10.0	0.0	0.0	5.3	0.0	2.7	13.2	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	3.0	0.8	9.5	0.0	0.0	1.0	0.0	10.9	2.6	4.1	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.1	37.3	35.3	55.4	0.0	0.0	61.9	0.0	18.7	69.1	12.0	9.5
LnGrp LOS	D	D	D	E	A	A	E	A	B	E	B	A
Approach Vol, veh/h		173			304			679			783	
Approach Delay, s/veh		36.8			55.4			20.7			17.6	
Approach LOS		D			E			C			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.2	75.1		33.7	9.1	77.2		33.7				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	11.5	60.5		34.5	7.3	64.7		34.5				
Max Q Clear Time (g_c+I1), s	7.3	30.1		8.9	4.2	13.6		28.3				
Green Ext Time (p_c), s	0.0	4.2		0.7	0.0	4.7		0.8				

Intersection Summary												
HCM 6th Ctrl Delay			26.3									
HCM 6th LOS			C									



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	89	291	133	38	214	66	81	544	39	94	508	45
Future Volume (vph)	89	291	133	38	214	66	81	544	39	94	508	45
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	305		150	150		150	150		150	150		700
Storage Lanes	1		0	0		0	0		0	0		0
Taper Length (ft)	100			25			25			25		
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		672			623			677			775	
Travel Time (s)		8.3			7.7			9.2			10.6	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Intersection Delay, s/veh	319.1
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	89	291	133	38	214	66	81	544	39	94	508	45
Future Vol, veh/h	89	291	133	38	214	66	81	544	39	94	508	45
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	98	320	146	42	235	73	89	598	43	103	558	49
Number of Lanes	1	1	0	0	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	1	2
HCM Control Delay	139.1	100.4	512.8	370.4
HCM LOS	F	F	F	F

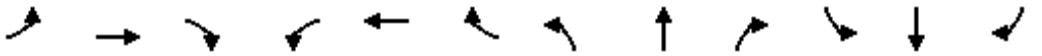
Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	12%	100%	0%	12%	16%	0%
Vol Thru, %	82%	0%	69%	67%	84%	0%
Vol Right, %	6%	0%	31%	21%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	664	89	424	318	602	45
LT Vol	81	89	0	38	94	0
Through Vol	544	0	291	214	508	0
RT Vol	39	0	133	66	0	45
Lane Flow Rate	730	98	466	349	662	49
Geometry Grp	6	7	7	6	7	7
Degree of Util (X)	2.051	0.276	1.221	0.983	1.788	0.123
Departure Headway (Hd)	12.892	13.829	13.057	16.266	12.728	11.896
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	292	262	284	227	291	303
Service Time	10.892	11.529	10.757	14.266	10.428	9.596
HCM Lane V/C Ratio	2.5	0.374	1.641	1.537	2.275	0.162
HCM Control Delay	512.8	21.7	163.7	100.4	396.9	16.3
HCM Lane LOS	F	C	F	F	F	C
HCM 95th-tile Q	41.8	1.1	15.7	8.8	33.5	0.4

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	89	291	133	38	214	66	81	544	39	94	508	45
Future Volume (vph)	89	291	133	38	214	66	81	544	39	94	508	45
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	305		150	150		150	150		150	150		700
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	100			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		672			623			677			775	
Travel Time (s)		8.3			7.7			9.2			10.6	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		11.5	22.5		11.5	22.5	
Total Split (s)	44.0	44.0		44.0	44.0		15.0	60.0		16.0	61.0	
Total Split (%)	36.7%	36.7%		36.7%	36.7%		12.5%	50.0%		13.3%	50.8%	
Yellow Time (s)	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	
Lost Time Adjust (s)	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	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	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 Yellow
Natural Cycle: 75
Control Type: Actuated-Coordinated

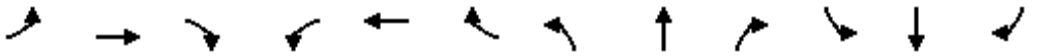
Splits and Phases: 14: Monroe St. & Avenue 54



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	89	291	133	38	214	66	81	544	39	94	508	45
Future Volume (veh/h)	89	291	133	38	214	66	81	544	39	94	508	45
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	98	320	146	42	235	73	89	598	43	103	558	49
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	243	375	171	119	422	131	111	835	60	127	836	73
Arrive On Green	0.32	0.32	0.32	0.32	0.32	0.32	0.06	0.50	0.50	0.07	0.51	0.51
Sat Flow, veh/h	1071	1184	540	927	1333	414	1734	1679	121	1734	1650	145
Grp Volume(v), veh/h	98	0	466	42	0	308	89	0	641	103	0	607
Grp Sat Flow(s),veh/h/ln	1071	0	1724	927	0	1747	1734	0	1799	1734	0	1795
Q Serve(g_s), s	10.0	0.0	30.4	5.3	0.0	17.6	6.1	0.0	33.4	7.0	0.0	30.3
Cycle Q Clear(g_c), s	27.6	0.0	30.4	35.7	0.0	17.6	6.1	0.0	33.4	7.0	0.0	30.3
Prop In Lane	1.00		0.31	1.00		0.24	1.00		0.07	1.00		0.08
Lane Grp Cap(c), veh/h	243	0	546	119	0	553	111	0	895	127	0	909
V/C Ratio(X)	0.40	0.00	0.85	0.35	0.00	0.56	0.80	0.00	0.72	0.81	0.00	0.67
Avail Cap(c_a), veh/h	256	0	567	131	0	575	152	0	895	166	0	909
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	45.4	0.0	38.4	55.1	0.0	34.0	55.4	0.0	23.5	54.8	0.0	22.1
Incr Delay (d2), s/veh	1.1	0.0	11.7	1.8	0.0	1.1	18.9	0.0	4.9	20.0	0.0	3.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	0.0	13.7	1.3	0.0	7.2	3.2	0.0	14.1	3.7	0.0	12.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.5	0.0	50.1	56.9	0.0	35.1	74.3	0.0	28.4	74.8	0.0	26.0
LnGrp LOS	D	A	D	E	A	D	E	A	C	E	A	C
Approach Vol, veh/h		564			350			730			710	
Approach Delay, s/veh		49.5			37.7			34.0			33.0	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	13.3	64.2		42.5	12.2	65.3		42.5				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	11.5	55.5		39.5	10.5	56.5		39.5				
Max Q Clear Time (g_c+I1), s	9.0	35.4		32.4	8.1	32.3		37.7				
Green Ext Time (p_c), s	0.0	3.7		1.7	0.0	3.6		0.3				

Intersection Summary												
HCM 6th Ctrl Delay			38.0									
HCM 6th LOS			D									



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	116	444	92	68	445	124	64	540	78	128	509	97
Future Volume (vph)	116	444	92	68	445	124	64	540	78	128	509	97
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	190		200	100		50	150		150	195		150
Storage Lanes	1		0	1		1	0		0	1		0
Taper Length (ft)	90			90			25			90		
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		817			587			676			1348	
Travel Time (s)		10.1			7.3			9.2			18.4	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	

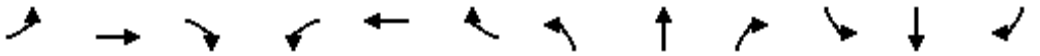
Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Intersection Delay, s/veh	330.8
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	116	444	92	68	445	124	64	540	78	128	509	97
Future Vol, veh/h	116	444	92	68	445	124	64	540	78	128	509	97
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	135	516	107	79	517	144	74	628	91	149	592	113
Number of Lanes	1	1	1	0	2	1	0	1	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	1	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	3	3	3
HCM Control Delay	282.9	100.4	841	99.1
HCM LOS	F	F	F	F

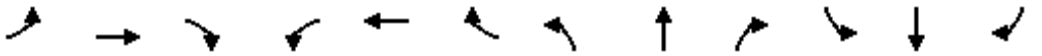
Lane	NBLn1	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	9%	100%	0%	0%	31%	0%	0%	100%	0%	0%
Vol Thru, %	79%	0%	100%	0%	69%	100%	0%	0%	100%	64%
Vol Right, %	11%	0%	0%	100%	0%	0%	100%	0%	0%	36%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	682	116	444	92	216	297	124	128	339	267
LT Vol	64	116	0	0	68	0	0	128	0	0
Through Vol	540	0	444	0	148	297	0	0	339	170
RT Vol	78	0	0	92	0	0	124	0	0	97
Lane Flow Rate	793	135	516	107	252	345	144	149	395	310
Geometry Grp	8	8	8	8	8	8	8	7	7	7
Degree of Util (X)	2.79	0.483	1.777	0.347	0.844	1.143	0.45	0.451	1.14	0.874
Departure Headway (Hd)	13.002	16.441	15.868	15.065	16.962	16.778	15.96	16.324	15.756	15.466
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	285	221	232	241	216	221	228	223	233	239
Service Time	10.702	14.141	13.568	12.765	14.662	14.478	13.66	14.024	13.456	13.166
HCM Lane V/C Ratio	2.782	0.611	2.224	0.444	1.167	1.561	0.632	0.668	1.695	1.297
HCM Control Delay	841	33.6	401.4	25.6	72.2	150	31.1	31.8	145.2	72.8
HCM Lane LOS	F	D	F	D	F	F	D	D	F	F
HCM 95th-tile Q	66.3	2.4	27.5	1.5	6.4	11.7	2.2	2.2	12.1	7.1



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	116	444	92	68	445	124	64	540	78	128	509	97
Future Volume (veh/h)	116	444	92	68	445	124	64	540	78	128	509	97
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	136	522	108	80	524	146	75	635	92	151	599	114
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	162	533	451	100	890	397	94	676	95	194	1558	296
Arrive On Green	0.09	0.29	0.29	0.06	0.26	0.26	0.54	0.54	0.54	0.54	0.54	0.54
Sat Flow, veh/h	1734	1821	1543	1734	3460	1543	114	1258	178	728	2901	551
Grp Volume(v), veh/h	136	522	108	80	524	146	802	0	0	151	357	356
Grp Sat Flow(s),veh/h/ln	1734	1821	1543	1734	1730	1543	1550	0	0	728	1730	1722
Q Serve(g_s), s	9.3	34.1	6.4	5.5	15.9	9.3	45.2	0.0	0.0	4.7	14.4	14.5
Cycle Q Clear(g_c), s	9.3	34.1	6.4	5.5	15.9	9.3	59.7	0.0	0.0	64.5	14.4	14.5
Prop In Lane	1.00		1.00	1.00		1.00	0.09		0.11	1.00		0.32
Lane Grp Cap(c), veh/h	162	533	451	100	890	397	865	0	0	194	929	925
V/C Ratio(X)	0.84	0.98	0.24	0.80	0.59	0.37	0.93	0.00	0.00	0.78	0.38	0.39
Avail Cap(c_a), veh/h	192	533	451	101	890	397	865	0	0	194	929	925
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	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.5	42.1	32.3	55.8	39.0	36.6	26.7	0.0	0.0	35.4	16.2	16.2
Incr Delay (d2), s/veh	23.8	33.7	0.3	34.3	1.0	0.6	17.3	0.0	0.0	25.8	1.2	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.9	19.3	2.3	3.3	6.5	3.4	23.7	0.0	0.0	5.8	5.6	5.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	77.4	75.8	32.6	90.1	40.0	37.1	44.1	0.0	0.0	61.2	17.4	17.4
LnGrp LOS	E	E	C	F	D	D	D	A	A	E	B	B
Approach Vol, veh/h		766			750			802			864	
Approach Delay, s/veh		70.0			44.8			44.1			25.1	
Approach LOS		E			D			D			C	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		69.0	11.4	39.6		69.0	15.7	35.4				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		64.4	7.0	35.1		64.4	13.3	28.8				
Max Q Clear Time (g_c+I1), s		61.7	7.5	36.1		66.5	11.3	17.9				
Green Ext Time (p_c), s		1.4	0.0	0.0		0.0	0.1	2.6				

Intersection Summary												
HCM 6th Ctrl Delay			45.3									
HCM 6th LOS			D									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	116	444	92	68	445	124	64	540	78	128	509	97
Future Volume (veh/h)	116	444	92	68	445	124	64	540	78	128	509	97
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	136	522	108	80	524	146	75	635	92	151	599	114
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	162	533	451	100	890	397	94	676	95	194	1558	296
Arrive On Green	0.09	0.29	0.29	0.06	0.26	0.26	0.54	0.54	0.54	0.54	0.54	0.54
Sat Flow, veh/h	1734	1821	1543	1734	3460	1543	114	1258	178	728	2901	551
Grp Volume(v), veh/h	136	522	108	80	524	146	802	0	0	151	357	356
Grp Sat Flow(s),veh/h/ln	1734	1821	1543	1734	1730	1543	1550	0	0	728	1730	1722
Q Serve(g_s), s	9.3	34.1	6.4	5.5	15.9	9.3	45.2	0.0	0.0	4.7	14.4	14.5
Cycle Q Clear(g_c), s	9.3	34.1	6.4	5.5	15.9	9.3	59.7	0.0	0.0	64.5	14.4	14.5
Prop In Lane	1.00		1.00	1.00		1.00	0.09		0.11	1.00		0.32
Lane Grp Cap(c), veh/h	162	533	451	100	890	397	865	0	0	194	929	925
V/C Ratio(X)	0.84	0.98	0.24	0.80	0.59	0.37	0.93	0.00	0.00	0.78	0.38	0.39
Avail Cap(c_a), veh/h	192	533	451	101	890	397	865	0	0	194	929	925
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	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.5	42.1	32.3	55.8	39.0	36.6	26.7	0.0	0.0	35.4	16.2	16.2
Incr Delay (d2), s/veh	23.8	33.7	0.3	34.3	1.0	0.6	17.3	0.0	0.0	25.8	1.2	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.9	19.3	2.3	3.3	6.5	3.4	23.7	0.0	0.0	5.8	5.6	5.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	77.4	75.8	32.6	90.1	40.0	37.1	44.1	0.0	0.0	61.2	17.4	17.4
LnGrp LOS	E	E	C	F	D	D	D	A	A	E	B	B
Approach Vol, veh/h		766			750			802			864	
Approach Delay, s/veh		70.0			44.8			44.1			25.1	
Approach LOS		E			D			D			C	

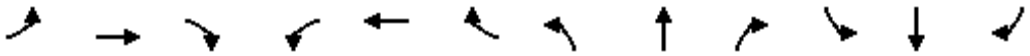
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		69.0	11.4	39.6		69.0	15.7	35.4				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		64.4	7.0	35.1		64.4	13.3	28.8				
Max Q Clear Time (g_c+I1), s		61.7	7.5	36.1		66.5	11.3	17.9				
Green Ext Time (p_c), s		1.4	0.0	0.0		0.0	0.1	2.6				

Intersection Summary												
HCM 6th Ctrl Delay			45.3									
HCM 6th LOS			D									

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	60	516	58	54	424	126	50	723	85	137	589	43
Future Volume (vph)	60	516	58	54	424	126	50	723	85	137	589	43
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	210		120	220		150	200		150	170		150
Storage Lanes	1		1	1		0	1		0	1		0
Taper Length (ft)	120			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		710			640			1322			436	
Travel Time (s)		9.7			8.7			18.0			5.9	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases		4			8	1	5	2		1	6	
Permitted Phases	4		4	8		8						
Detector Phase	4	4	4	8	8	1	5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0		7.0	7.0	
Minimum Split (s)	20.5	20.5	20.5	20.5	20.5	11.5	11.5	20.5		11.5	20.5	
Total Split (s)	26.0	26.0	26.0	26.0	26.0	12.0	11.5	22.0		12.0	22.5	
Total Split (%)	43.3%	43.3%	43.3%	43.3%	43.3%	20.0%	19.2%	36.7%		20.0%	37.5%	
Yellow Time (s)	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	
Lost Time Adjust (s)	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5		-0.5	-0.5	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lead/Lag						Lead	Lag	Lag		Lead	Lead	
Lead-Lag Optimize?						Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Max		None	C-Max	

Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 14.6 (24%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	

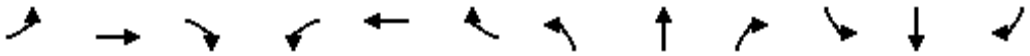
Splits and Phases: 16: Monroe St. & 50th Avenue



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	516	58	54	424	126	50	723	85	137	589	43
Future Volume (veh/h)	60	516	58	54	424	126	50	723	85	137	589	43
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	67	573	64	60	471	140	56	803	94	152	654	48
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	238	668	566	180	668	747	217	986	115	203	1008	74
Arrive On Green	0.37	0.37	0.37	0.37	0.37	0.37	0.13	0.32	0.31	0.12	0.31	0.30
Sat Flow, veh/h	810	1821	1543	791	1821	1543	1734	3120	365	1734	3268	240
Grp Volume(v), veh/h	67	573	64	60	471	140	56	445	452	152	346	356
Grp Sat Flow(s),veh/h/ln	810	1821	1543	791	1821	1543	1734	1730	1755	1734	1730	1778
Q Serve(g_s), s	4.6	17.4	1.6	4.6	13.3	3.1	1.8	14.2	14.2	5.1	10.4	10.4
Cycle Q Clear(g_c), s	17.9	17.4	1.6	22.0	13.3	3.1	1.8	14.2	14.2	5.1	10.4	10.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.21	1.00		0.13
Lane Grp Cap(c), veh/h	238	668	566	180	668	747	217	547	555	203	533	548
V/C Ratio(X)	0.28	0.86	0.11	0.33	0.71	0.19	0.26	0.81	0.81	0.75	0.65	0.65
Avail Cap(c_a), veh/h	238	668	566	180	668	747	217	547	555	231	533	548
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	1.00
Uniform Delay (d), s/veh	23.9	17.6	12.6	27.7	16.2	8.8	23.7	18.9	18.9	25.6	17.9	18.0
Incr Delay (d2), s/veh	0.6	10.8	0.1	1.1	3.4	0.1	0.6	12.5	12.4	11.0	6.0	5.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	7.7	0.5	0.8	4.9	0.8	0.7	6.5	6.6	2.4	4.2	4.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.5	28.4	12.6	28.8	19.6	8.9	24.4	31.4	31.3	36.6	23.9	23.8
LnGrp LOS	C	C	B	C	B	A	C	C	C	D	C	C
Approach Vol, veh/h		704			671			953			854	
Approach Delay, s/veh		26.6			18.2			31.0			26.2	
Approach LOS		C			B			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.0	23.0		26.0	11.5	22.5		26.0				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	7.5	17.5		21.5	7.0	18.0		21.5				
Max Q Clear Time (g_c+I1), s	7.1	16.2		19.9	3.8	12.4		24.0				
Green Ext Time (p_c), s	0.0	0.7		0.7	0.0	1.9		0.0				

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



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	55	206	10	0	177	12	16	245	18	7	217	57
Future Volume (vph)	55	206	10	0	177	12	16	245	18	7	217	57
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		150	150		150	150		150	150		150
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		50			50			55			55	
Link Distance (ft)		5266			1079			1013			510	
Travel Time (s)		71.8			14.7			12.6			6.3	
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	

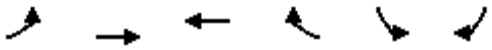
Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Intersection Delay, s/veh	23.4
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	55	206	10	0	177	12	16	245	18	7	217	57
Future Vol, veh/h	55	206	10	0	177	12	16	245	18	7	217	57
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	70	261	13	0	224	15	20	310	23	9	275	72
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	24.8	17.9	24.8	24.4
HCM LOS	C	C	C	C

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	6%	20%	0%	2%
Vol Thru, %	88%	76%	94%	77%
Vol Right, %	6%	4%	6%	20%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	279	271	189	281
LT Vol	16	55	0	7
Through Vol	245	206	177	217
RT Vol	18	10	12	57
Lane Flow Rate	353	343	239	356
Geometry Grp	1	1	1	1
Degree of Util (X)	0.694	0.687	0.498	0.691
Departure Headway (Hd)	7.078	7.208	7.497	6.992
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	509	501	478	516
Service Time	5.153	5.282	5.582	5.065
HCM Lane V/C Ratio	0.694	0.685	0.5	0.69
HCM Control Delay	24.8	24.8	17.9	24.4
HCM Lane LOS	C	C	C	C
HCM 95th-tile Q	5.3	5.2	2.7	5.3



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	104	59	0
Future Volume (vph)	0	0	0	104	59	0
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Link Speed (mph)		40	40		25	
Link Distance (ft)		207	1772		380	
Travel Time (s)		3.5	30.2		10.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	3.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	104	59	0
Future Vol, veh/h	0	0	0	104	59	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	113	64	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	113	0	-	0	57	57
Stage 1	-	-	-	-	57	-
Stage 2	-	-	-	-	0	-
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	1476	-	-	-	950	1009
Stage 1	-	-	-	-	966	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1476	-	-	-	950	1009
Mov Cap-2 Maneuver	-	-	-	-	950	-
Stage 1	-	-	-	-	966	-
Stage 2	-	-	-	-	-	-

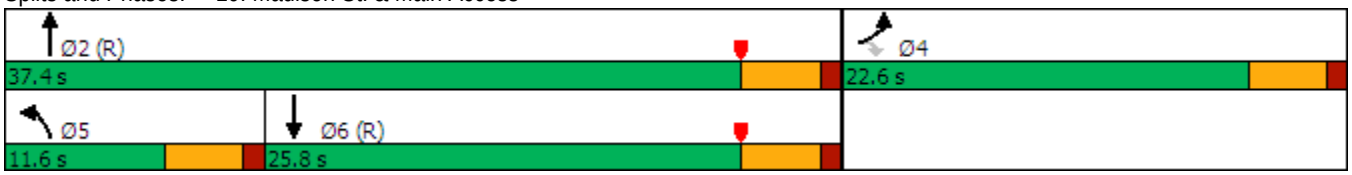
Approach	EB	WB	SB
HCM Control Delay, s	0	0	9.1
HCM LOS			A

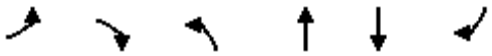
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1476	-	-	-	950
HCM Lane V/C Ratio	-	-	-	-	0.068
HCM Control Delay (s)	0	-	-	-	9.1
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.2

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	203	17	56	347	509	299
Future Volume (vph)	203	17	56	347	509	299
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Storage Length (ft)	100	0	150			0
Storage Lanes	1	1	1			0
Taper Length (ft)	90		90			
Right Turn on Red		Yes				Yes
Link Speed (mph)	25			50	50	
Link Distance (ft)	499			880	169	
Travel Time (s)	13.6			12.0	2.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Turn Type	Prot	Perm	Prot	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases		4				
Detector Phase	4	4	5	2	6	
Switch Phase						
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	
Minimum Split (s)	22.5	22.5	11.5	22.5	22.5	
Total Split (s)	22.6	22.6	11.6	37.4	25.8	
Total Split (%)	37.7%	37.7%	19.3%	62.3%	43.0%	
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	None	None	C-Max	C-Max	

Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	

Splits and Phases: 19: Madison St. & Main Access





Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	203	17	56	347	509	299
Future Volume (veh/h)	203	17	56	347	509	299
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	221	18	61	377	553	325
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	278	248	129	2386	1133	665
Arrive On Green	0.16	0.16	0.07	0.69	0.54	0.54
Sat Flow, veh/h	1734	1543	1734	3551	2189	1232
Grp Volume(v), veh/h	221	18	61	377	456	422
Grp Sat Flow(s),veh/h/ln	1734	1543	1734	1730	1730	1599
Q Serve(g_s), s	7.4	0.6	2.0	2.3	9.9	9.9
Cycle Q Clear(g_c), s	7.4	0.6	2.0	2.3	9.9	9.9
Prop In Lane	1.00	1.00	1.00			0.77
Lane Grp Cap(c), veh/h	278	248	129	2386	934	864
V/C Ratio(X)	0.79	0.07	0.47	0.16	0.49	0.49
Avail Cap(c_a), veh/h	523	466	205	2386	934	864
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	24.2	21.4	26.6	3.2	8.6	8.6
Incr Delay (d2), s/veh	5.1	0.1	2.7	0.1	1.8	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	0.6	0.8	0.3	2.9	2.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	29.3	21.5	29.3	3.4	10.4	10.6
LnGrp LOS	C	C	C	A	B	B
Approach Vol, veh/h	239			438	878	
Approach Delay, s/veh	28.7			7.0	10.5	
Approach LOS	C			A	B	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		45.9		14.1	9.0	36.9
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		32.9		18.1	7.1	21.3
Max Q Clear Time (g_c+I1), s		4.3		9.4	4.0	11.9
Green Ext Time (p_c), s		2.2		0.5	0.0	3.5

Intersection Summary		
HCM 6th Ctrl Delay	12.3	
HCM 6th LOS	B	

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	277	8	28	232	25	13
Future Volume (vph)	277	8	28	232	25	13
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Storage Length (ft)		0	50		0	0
Storage Lanes		0	1		1	0
Taper Length (ft)			60		60	
Link Speed (mph)	50			50	25	
Link Distance (ft)	403			335	383	
Travel Time (s)	5.5			4.6	10.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	1.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	277	8	28	232	25	13
Future Vol, veh/h	277	8	28	232	25	13
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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	301	9	30	252	27	14

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	310	0	492	306
Stage 1	-	-	-	-	306	-
Stage 2	-	-	-	-	186	-
Critical Hdwy	-	-	4.13	-	6.63	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.83	-
Follow-up Hdwy	-	-	2.219	-	3.519	3.319
Pot Cap-1 Maneuver	-	-	1249	-	521	733
Stage 1	-	-	-	-	746	-
Stage 2	-	-	-	-	828	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1249	-	508	733
Mov Cap-2 Maneuver	-	-	-	-	585	-
Stage 1	-	-	-	-	746	-
Stage 2	-	-	-	-	808	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.9	11.1
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	628	-	-	1249	-
HCM Lane V/C Ratio	0.066	-	-	0.024	-
HCM Control Delay (s)	11.1	-	-	8	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.2	-	-	0.1	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	274	16	0	260	0	17
Future Volume (vph)	274	16	0	260	0	17
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Link Speed (mph)	50			50	25	
Link Distance (ft)	335			276	233	
Travel Time (s)	4.6			3.8	6.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

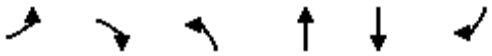
Intersection	
Int Delay, s/veh	0.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	274	16	0	260	0	17
Future Vol, veh/h	274	16	0	260	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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	298	17	0	283	0	18

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	307
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.319
Pot Cap-1 Maneuver	-	-	0	-	0	732
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	732
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	732	-	-	-
HCM Lane V/C Ratio	0.025	-	-	-
HCM Control Delay (s)	10	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q(veh)	0.1	-	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	35	0	550	773	34
Future Volume (vph)	0	35	0	550	773	34
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Link Speed (mph)	25			50	50	
Link Distance (ft)	210			224	288	
Travel Time (s)	5.7			3.1	3.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

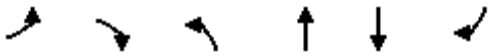
Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	35	0	550	773	34
Future Vol, veh/h	0	35	0	550	773	34
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	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	38	0	598	840	37

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	439	-	0	-	0
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	566	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	566	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.8	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	566	-	-
HCM Lane V/C Ratio	-	0.067	-	-
HCM Control Delay (s)	-	11.8	-	-
HCM Lane LOS	-	B	-	-
HCM 95th %tile Q(veh)	-	0.2	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	1	1	1	233	406	1
Future Volume (vph)	1	1	1	233	406	1
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Link Speed (mph)	25			40	40	
Link Distance (ft)	306			597	522	
Travel Time (s)	8.3			10.2	8.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	1	1	1	233	406	1
Future Vol, veh/h	1	1	1	233	406	1
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	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	1	1	253	441	1

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	571	221	442	0	-	0
Stage 1	442	-	-	-	-	-
Stage 2	129	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	451	783	1114	-	-	-
Stage 1	615	-	-	-	-	-
Stage 2	883	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	451	783	1114	-	-	-
Mov Cap-2 Maneuver	451	-	-	-	-	-
Stage 1	614	-	-	-	-	-
Stage 2	883	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.3	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1114	-	572	-	-
HCM Lane V/C Ratio	0.001	-	0.004	-	-
HCM Control Delay (s)	8.2	0	11.3	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection: 18: Avenue 60 & S. Access

Movement	SB
Directions Served	LR
Maximum Queue (ft)	56
Average Queue (ft)	34
95th Queue (ft)	59
Link Distance (ft)	352
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 19: Madison St. & Main Access

Movement	EB	EB	NB	NB	NB	SB	SB	B51
Directions Served	L	R	L	T	T	T	TR	T
Maximum Queue (ft)	178	132	44	65	56	113	124	13
Average Queue (ft)	127	26	21	35	22	59	69	2
95th Queue (ft)	191	130	52	71	57	120	133	21
Link Distance (ft)		452		848	848	96	96	183
Upstream Blk Time (%)						2	2	
Queuing Penalty (veh)						5	6	
Storage Bay Dist (ft)	100		150					
Storage Blk Time (%)	15	0						
Queuing Penalty (veh)	3	0						

Intersection: 20: Project Access 1 & Avenue 58

Movement	WB	NB
Directions Served	L	LR
Maximum Queue (ft)	20	26
Average Queue (ft)	2	7
95th Queue (ft)	15	28
Link Distance (ft)		348
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	50	
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 21: Project Access 2 & Avenue 58

Movement	NB
Directions Served	R
Maximum Queue (ft)	26
Average Queue (ft)	4
95th Queue (ft)	22
Link Distance (ft)	199
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 22: Madison St. & Project Access 3

Movement	EB
Directions Served	R
Maximum Queue (ft)	24
Average Queue (ft)	7
95th Queue (ft)	28
Link Distance (ft)	164
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 23: Madison St. & Golf Course S. Access

Movement	EB
Directions Served	LR
Maximum Queue (ft)	15
Average Queue (ft)	2
95th Queue (ft)	15
Link Distance (ft)	259
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Zone Summary

Zone wide Queuing Penalty: 14

Intersection: 18: Avenue 60 & S. Access

Movement	SB
Directions Served	LR
Maximum Queue (ft)	49
Average Queue (ft)	31
95th Queue (ft)	56
Link Distance (ft)	352
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 19: Madison St. & Main Access

Movement	EB	EB	NB	NB	NB	SB	SB	B51	B51
Directions Served	L	R	L	T	T	T	TR	T	T
Maximum Queue (ft)	141	71	76	66	47	159	180	13	54
Average Queue (ft)	98	22	43	31	18	92	114	2	11
95th Queue (ft)	154	86	76	64	49	164	188	22	49
Link Distance (ft)		452		848	848	105	105	173	173
Upstream Blk Time (%)						5	8		
Queuing Penalty (veh)						20	33		
Storage Bay Dist (ft)	100		150						
Storage Blk Time (%)	7	0							
Queuing Penalty (veh)	1	0							

Intersection: 20: Project Access 1 & Avenue 58

Movement	WB	NB
Directions Served	L	LR
Maximum Queue (ft)	26	51
Average Queue (ft)	8	23
95th Queue (ft)	30	55
Link Distance (ft)		348
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	50	
Storage Blk Time (%)	0	
Queuing Penalty (veh)	0	

Intersection: 21: Project Access 2 & Avenue 58

Movement	EB	NB
Directions Served	TR	R
Maximum Queue (ft)	20	34
Average Queue (ft)	3	15
95th Queue (ft)	25	40
Link Distance (ft)	285	199
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 22: Madison St. & Project Access 3

Movement	EB
Directions Served	R
Maximum Queue (ft)	36
Average Queue (ft)	20
95th Queue (ft)	46
Link Distance (ft)	164
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Zone Summary

Zone wide Queuing Penalty: 55

Intersection: 23: Madison St. & Golf Course S. Access

Movement	EB
Directions Served	LR
Maximum Queue (ft)	10
Average Queue (ft)	2
95th Queue (ft)	13
Link Distance (ft)	265
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

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ATTACHMENT 2:

2040 WITH PROJECT INTERSECTION OPERATIONS ANALYSIS WORKSHEETS AND QUEUEING ANALYSIS WORKSHEETS

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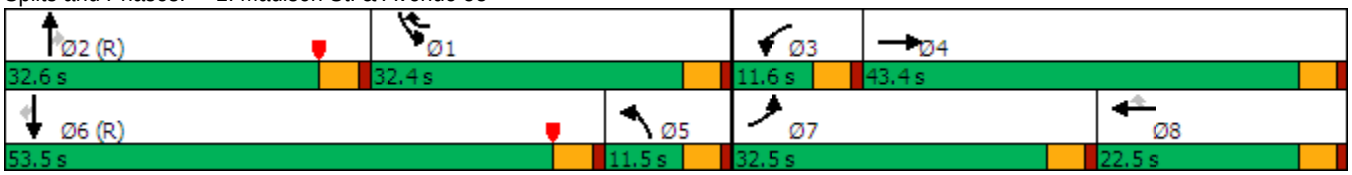
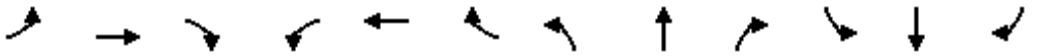
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	322	183	38	55	188	138	40	650	121	320	1080	143
Future Volume (vph)	322	183	38	55	188	138	40	650	121	320	1080	143
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	100		100	180		180	330		160	160		50
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		276			988			288			752	
Travel Time (s)		3.8			13.5			3.9			10.3	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA		Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases						8			2			6
Detector Phase	7	4		3	8	1	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	22.5		11.5	22.5	11.5	11.5	22.5	22.5	11.5	22.5	22.5
Total Split (s)	32.5	43.4		11.6	22.5	32.4	11.5	32.6	32.6	32.4	53.5	53.5
Total Split (%)	27.1%	36.2%		9.7%	18.8%	27.0%	9.6%	27.2%	27.2%	27.0%	44.6%	44.6%
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		Lead	Lag	Lag	Lag	Lead	Lead	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	C-Max	C-Max	None	C-Max	C-Max

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 87.9 (73%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
Natural Cycle: 90
Control Type: Actuated-Coordinated

Splits and Phases: 1: Madison St. & Avenue 58





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	322	183	38	55	188	138	40	650	121	320	1080	143
Future Volume (veh/h)	322	183	38	55	188	138	40	650	121	320	1080	143
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	329	187	39	56	192	141	41	663	123	327	1102	146
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	357	674	138	86	274	633	272	810	361	574	1413	630
Arrive On Green	0.21	0.24	0.24	0.05	0.08	0.08	0.16	0.23	0.23	0.33	0.41	0.41
Sat Flow, veh/h	1734	2862	585	1734	3460	1543	1734	3460	1543	1734	3460	1543
Grp Volume(v), veh/h	329	112	114	56	192	141	41	663	123	327	1102	146
Grp Sat Flow(s),veh/h/ln	1734	1730	1716	1734	1730	1543	1734	1730	1543	1734	1730	1543
Q Serve(g_s), s	22.3	6.3	6.6	3.8	6.5	2.9	2.4	21.8	6.7	18.6	33.2	3.9
Cycle Q Clear(g_c), s	22.3	6.3	6.6	3.8	6.5	2.9	2.4	21.8	6.7	18.6	33.2	3.9
Prop In Lane	1.00		0.34	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	357	407	404	86	274	633	272	810	361	574	1413	630
V/C Ratio(X)	0.92	0.27	0.28	0.65	0.70	0.22	0.15	0.82	0.34	0.57	0.78	0.23
Avail Cap(c_a), veh/h	405	561	556	103	519	743	272	810	361	574	1413	630
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	1.00
Uniform Delay (d), s/veh	46.7	37.5	37.6	56.0	53.9	8.8	43.7	43.5	26.8	33.1	30.8	6.4
Incr Delay (d2), s/veh	24.9	0.4	0.4	10.7	3.3	0.2	0.3	9.0	2.5	1.3	4.3	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.7	2.6	2.7	1.9	2.9	1.0	1.0	9.9	3.1	7.7	13.7	2.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	71.6	37.9	38.0	66.8	57.1	9.0	43.9	52.5	29.4	34.4	35.1	7.3
LnGrp LOS	E	D	D	E	E	A	D	D	C	C	D	A
Approach Vol, veh/h		555			389			827			1575	
Approach Delay, s/veh		57.9			41.1			48.7			32.4	
Approach LOS		E			D			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	44.2	32.6	10.4	32.7	23.3	53.5	29.2	14.0
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	27.9	28.1	7.1	38.9	7.0	49.0	28.0	18.0
Max Q Clear Time (g_c+I1), s	20.6	23.8	5.8	8.6	4.4	35.2	24.3	8.5
Green Ext Time (p_c), s	0.6	1.7	0.0	1.1	0.0	6.3	0.4	1.0

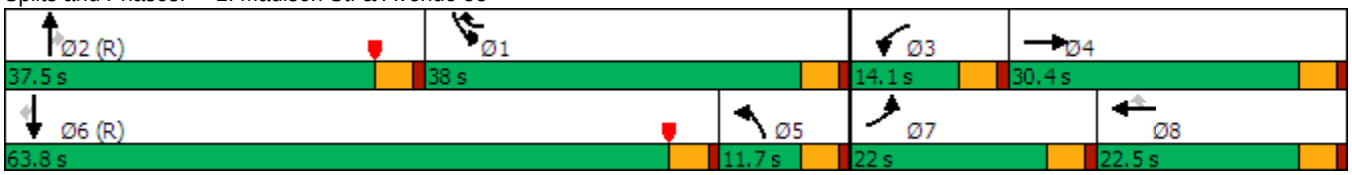
Intersection Summary	
HCM 6th Ctrl Delay	41.7
HCM 6th LOS	D

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	322	183	38	55	188	138	40	650	121	320	1080	143
Future Volume (vph)	322	183	38	55	188	138	40	650	121	320	1080	143
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	100		100	180		180	330		160	160		50
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		276			988			288			752	
Travel Time (s)		3.8			13.5			3.9			10.3	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA		Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases						8			2			6
Detector Phase	7	4		3	8	1	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	22.5		11.5	22.5	11.5	11.5	22.5	22.5	11.5	22.5	22.5
Total Split (s)	22.0	30.4		14.1	22.5	38.0	11.7	37.5	37.5	38.0	63.8	63.8
Total Split (%)	18.3%	25.3%		11.8%	18.8%	31.7%	9.8%	31.3%	31.3%	31.7%	53.2%	53.2%
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		Lead	Lag	Lag	Lag	Lead	Lead	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	C-Max	C-Max	None	C-Max	C-Max

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 87.9 (73%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
Natural Cycle: 90
Control Type: Actuated-Coordinated

Splits and Phases: 1: Madison St. & Avenue 58



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	322	183	38	55	188	138	40	650	121	320	1080	143
Future Volume (veh/h)	322	183	38	55	188	138	40	650	121	320	1080	143
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	329	187	39	56	192	141	41	663	123	327	1102	146
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	390	417	85	86	274	708	279	952	424	659	1710	763
Arrive On Green	0.12	0.15	0.15	0.05	0.08	0.08	0.16	0.28	0.28	0.38	0.49	0.49
Sat Flow, veh/h	3365	2862	585	1734	3460	1543	1734	3460	1543	1734	3460	1543
Grp Volume(v), veh/h	329	112	114	56	192	141	41	663	123	327	1102	146
Grp Sat Flow(s),veh/h/ln	1682	1730	1716	1734	1730	1543	1734	1730	1543	1734	1730	1543
Q Serve(g_s), s	11.5	7.1	7.3	3.8	6.5	1.9	2.4	20.6	6.2	17.3	28.4	3.9
Cycle Q Clear(g_c), s	11.5	7.1	7.3	3.8	6.5	1.9	2.4	20.6	6.2	17.3	28.4	3.9
Prop In Lane	1.00		0.34	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	390	252	250	86	274	708	279	952	424	659	1710	763
V/C Ratio(X)	0.84	0.44	0.46	0.65	0.70	0.20	0.15	0.70	0.29	0.50	0.64	0.19
Avail Cap(c_a), veh/h	491	373	370	139	519	818	279	952	424	659	1710	763
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	1.00
Uniform Delay (d), s/veh	52.0	46.8	46.9	56.0	53.9	8.0	43.3	39.0	23.5	28.4	22.5	6.6
Incr Delay (d2), s/veh	10.4	1.2	1.3	8.2	3.3	0.1	0.2	4.2	1.7	0.6	1.9	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.2	3.0	3.1	1.8	2.9	1.1	1.0	8.9	2.9	6.9	11.0	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	62.4	48.0	48.2	64.2	57.1	8.1	43.5	43.2	25.2	29.0	24.4	7.1
LnGrp LOS	E	D	D	E	E	A	D	D	C	C	C	A
Approach Vol, veh/h		555			389			827			1575	
Approach Delay, s/veh		56.6			40.4			40.6			23.8	
Approach LOS		E			D			D			C	

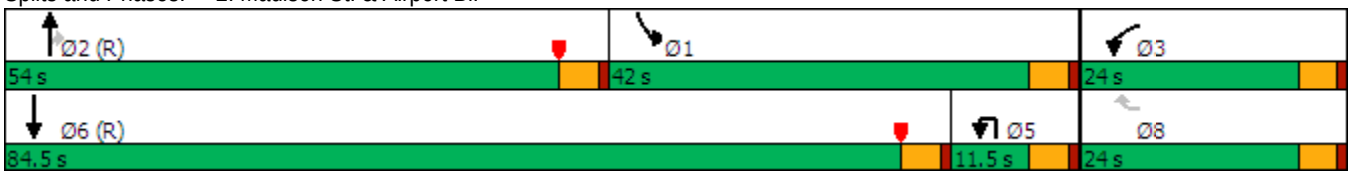
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	50.1	37.5	10.4	22.0	23.8	63.8	18.4	14.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	33.5	33.0	9.6	25.9	7.2	59.3	17.5	18.0
Max Q Clear Time (g_c+I1), s	19.3	22.6	5.8	9.3	4.4	30.4	13.5	8.5
Green Ext Time (p_c), s	0.8	3.2	0.0	0.9	0.0	8.7	0.4	1.0

Intersection Summary	
HCM 6th Ctrl Delay	35.3
HCM 6th LOS	D

Lane Group	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	167	167	1	1090	154	372	1367
Future Volume (vph)	167	167	1	1090	154	372	1367
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150	150	150		50	150	
Storage Lanes	0	0	1		1	1	
Taper Length (ft)	25		140			90	
Right Turn on Red		Yes			Yes		
Link Speed (mph)	50			50			50
Link Distance (ft)	5252			767			818
Travel Time (s)	71.6			10.5			11.2
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)							
Turn Type	Prot	Perm	Prot	NA	Perm	Prot	NA
Protected Phases	3		5	2		1	6
Permitted Phases		8			2		
Detector Phase	3	8	5	2	2	1	6
Switch Phase							
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	20.5	11.5	20.5	20.5	11.5	20.5
Total Split (s)	24.0	24.0	11.5	54.0	54.0	42.0	84.5
Total Split (%)	20.0%	20.0%	9.6%	45.0%	45.0%	35.0%	70.4%
Yellow Time (s)	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
Lost Time Adjust (s)	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag			Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?			Yes	Yes	Yes	Yes	Yes
Recall Mode	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 Yellow	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	

Splits and Phases: 2: Madison St. & Airport Bl.



Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (veh/h)	167	167	1	1090	154	372	1367
Future Volume (veh/h)	167	167	1	1090	154	372	1367
Initial Q (Qb), veh	0	0		0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00			1.00	1.00	
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No
Adj Sat Flow, veh/h/ln	1821	1821		1821	1821	1821	1821
Adj Flow Rate, veh/h	170	170		1112	157	380	1395
Peak Hour Factor	0.98	0.98		0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2		2	2	2	2
Cap, veh/h	229	204		1442	643	609	2773
Arrive On Green	0.13	0.13		0.42	0.42	0.35	0.80
Sat Flow, veh/h	1734	1543		3551	1543	1734	3551
Grp Volume(v), veh/h	170	170		1112	157	380	1395
Grp Sat Flow(s),veh/h/ln	1734	1543		1730	1543	1734	1730
Q Serve(g_s), s	11.3	12.9		33.1	5.1	21.8	16.1
Cycle Q Clear(g_c), s	11.3	12.9		33.1	5.1	21.8	16.1
Prop In Lane	1.00	1.00			1.00	1.00	
Lane Grp Cap(c), veh/h	229	204		1442	643	609	2773
V/C Ratio(X)	0.74	0.83		0.77	0.24	0.62	0.50
Avail Cap(c_a), veh/h	289	257		1442	643	609	2773
HCM Platoon Ratio	1.00	1.00		1.00	1.00	1.00	1.00
Upstream Filter(I)	0.97	0.97		1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.1	50.8		30.1	9.6	32.3	4.0
Incr Delay (d2), s/veh	7.3	16.6		4.1	0.9	2.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.2	5.7		13.6	2.8	9.0	3.6
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	57.4	67.4		34.1	10.6	34.3	4.6
LnGrp LOS	E	E		C	B	C	A
Approach Vol, veh/h	340			1269			1775
Approach Delay, s/veh	62.4			31.2			11.0
Approach LOS	E			C			B

Timer - Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	46.2	54.0				100.2		19.8
Change Period (Y+Rc), s	4.5	4.5				4.5		4.5
Max Green Setting (Gmax), s	37.5	49.5				80.0		19.5
Max Q Clear Time (g_c+I1), s	23.8	35.1				18.1		14.9
Green Ext Time (p_c), s	0.9	6.5				13.5		0.4

Intersection Summary	
HCM 6th Ctrl Delay	23.7
HCM 6th LOS	C

Notes

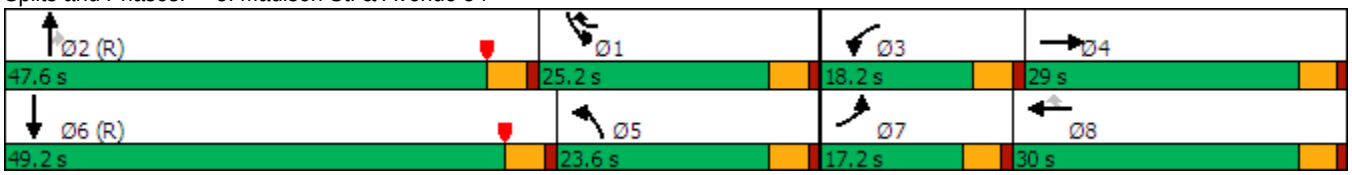
User approved ignoring U-Turning movement.

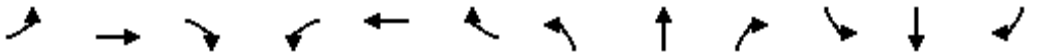
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	84	583	1183	139	319	160	421	964	74	228	1012	57
Future Volume (vph)	84	583	1183	139	319	160	421	964	74	228	1012	57
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	160		150	910		150	160		120	305		150
Storage Lanes	1		1	1		1	2		1	1		0
Taper Length (ft)	80			120			120			100		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		5080			840			924			2398	
Travel Time (s)		63.0			10.4			12.6			32.7	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Free	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases			Free			8			2			
Detector Phase	7	4		3	8	1	5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	
Minimum Split (s)	11.5	22.5		11.5	22.5	11.5	11.5	22.5	22.5	11.5	22.5	
Total Split (s)	17.2	29.0		18.2	30.0	25.2	23.6	47.6	47.6	25.2	49.2	
Total Split (%)	14.3%	24.2%		15.2%	25.0%	21.0%	19.7%	39.7%	39.7%	21.0%	41.0%	
Yellow Time (s)	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	
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)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lag	Lead	Lead	Lag	Lead	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	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 Yellow
Natural Cycle: 90
Control Type: Actuated-Coordinated

Splits and Phases: 3: Madison St. & Avenue 54





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	84	583	1183	139	319	160	421	964	74	228	1012	57
Future Volume (veh/h)	84	583	1183	139	319	160	421	964	74	228	1012	57
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	86	595	0	142	326	163	430	984	76	233	1033	58
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	108	662		168	782	661	637	1243	554	351	1241	70
Arrive On Green	0.06	0.19	0.00	0.10	0.23	0.23	0.19	0.36	0.36	0.20	0.37	0.37
Sat Flow, veh/h	1734	3460	1543	1734	3460	1543	3365	3460	1543	1734	3331	187
Grp Volume(v), veh/h	86	595	0	142	326	163	430	984	76	233	537	554
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1730	1543	1682	1730	1543	1734	1730	1787
Q Serve(g_s), s	5.9	20.2	0.0	9.7	9.7	1.4	14.3	30.6	2.9	14.8	33.8	33.9
Cycle Q Clear(g_c), s	5.9	20.2	0.0	9.7	9.7	1.4	14.3	30.6	2.9	14.8	33.8	33.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.10
Lane Grp Cap(c), veh/h	108	662		168	782	661	637	1243	554	351	644	666
V/C Ratio(X)	0.80	0.90		0.85	0.42	0.25	0.68	0.79	0.14	0.66	0.83	0.83
Avail Cap(c_a), veh/h	184	706		198	782	661	637	1243	554	351	644	666
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.5	47.4	0.0	53.3	39.7	11.2	45.2	34.4	13.9	44.1	34.2	34.2
Incr Delay (d2), s/veh	1.2	1.6	0.0	24.2	0.4	0.2	2.8	5.2	0.5	4.6	12.0	11.7
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	2.5	8.4	0.0	5.2	4.0	1.7	6.0	13.0	1.4	6.6	15.5	15.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.7	49.0	0.0	77.5	40.1	11.4	48.0	39.6	14.4	48.7	46.2	45.9
LnGrp LOS	E	D		E	D	B	D	D	B	D	D	D
Approach Vol, veh/h		681	A		631			1490			1324	
Approach Delay, s/veh		49.9			41.1			40.8			46.5	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	28.8	47.6	16.1	27.5	27.2	49.2	12.0	31.6
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	20.7	43.1	13.7	24.5	19.1	44.7	12.7	25.5
Max Q Clear Time (g_c+I1), s	16.8	32.6	11.7	22.2	16.3	35.9	7.9	11.7
Green Ext Time (p_c), s	0.2	4.6	0.1	0.8	0.5	4.1	0.1	1.9

Intersection Summary	
HCM 6th Ctrl Delay	44.2
HCM 6th LOS	D

Notes

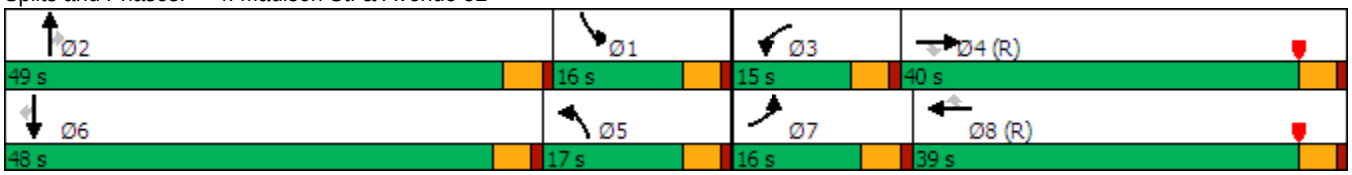
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

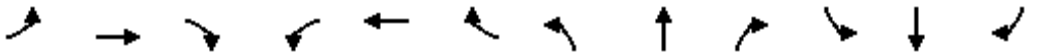
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	100	748	122	87	622	137	236	921	65	173	1009	115
Future Volume (vph)	100	748	122	87	622	137	236	921	65	173	1009	115
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	435		50	200		325	160		160	255		50
Storage Lanes	1		1	1		1	2		1	2		1
Taper Length (ft)	105			120			140			160		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			55			50			50	
Link Distance (ft)		1169			798			1237			1379	
Travel Time (s)		17.7			9.9			16.9			18.8	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	30.5	30.5	11.5	30.5	30.5	11.5	31.5	31.5	11.5	30.5	30.5
Total Split (s)	16.0	40.0	40.0	15.0	39.0	39.0	17.0	49.0	49.0	16.0	48.0	48.0
Total Split (%)	13.3%	33.3%	33.3%	12.5%	32.5%	32.5%	14.2%	40.8%	40.8%	13.3%	40.0%	40.0%
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	Lag	Lead	Lead	Lag	Lead	Lead
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	Max	Max

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 65.5 (55%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow
Natural Cycle: 85
Control Type: Actuated-Coordinated

Splits and Phases: 4: Madison St. & Avenue 52





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	100	748	122	87	622	137	236	921	65	173	1009	115
Future Volume (veh/h)	100	748	122	87	622	137	236	921	65	173	1009	115
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	102	763	124	89	635	140	241	940	66	177	1030	117
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	126	1160	517	111	1130	504	297	1283	572	269	1254	559
Arrive On Green	0.07	0.34	0.34	0.06	0.33	0.33	0.09	0.37	0.37	0.08	0.36	0.36
Sat Flow, veh/h	1734	3460	1543	1734	3460	1543	3365	3460	1543	3365	3460	1543
Grp Volume(v), veh/h	102	763	124	89	635	140	241	940	66	177	1030	117
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1730	1543	1682	1730	1543	1682	1730	1543
Q Serve(g_s), s	7.0	22.6	5.3	6.1	18.2	6.2	8.4	28.2	2.6	6.1	32.4	4.8
Cycle Q Clear(g_c), s	7.0	22.6	5.3	6.1	18.2	6.2	8.4	28.2	2.6	6.1	32.4	4.8
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	126	1160	517	111	1130	504	297	1283	572	269	1254	559
V/C Ratio(X)	0.81	0.66	0.24	0.80	0.56	0.28	0.81	0.73	0.12	0.66	0.82	0.21
Avail Cap(c_a), veh/h	166	1160	517	152	1130	504	350	1283	572	322	1254	559
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	1.00
Uniform Delay (d), s/veh	54.8	34.0	16.4	55.4	33.3	17.7	53.7	32.6	15.1	53.6	34.7	15.6
Incr Delay (d2), s/veh	19.7	2.9	1.1	18.9	2.0	1.4	11.7	3.7	0.4	3.7	6.1	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	9.6	2.5	3.1	7.5	3.0	3.9	11.7	1.2	2.6	13.9	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	74.5	37.0	17.5	74.3	35.3	19.1	65.4	36.3	15.5	57.3	40.8	16.4
LnGrp LOS	E	D	B	E	D	B	E	D	B	E	D	B
Approach Vol, veh/h		989			864			1247			1324	
Approach Delay, s/veh		38.4			36.7			40.8			40.9	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.1	49.0	12.2	44.7	15.1	48.0	13.2	43.7
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	11.5	44.5	10.5	35.5	12.5	43.5	11.5	34.5
Max Q Clear Time (g_c+I1), s	8.1	30.2	8.1	24.6	10.4	34.4	9.0	20.2
Green Ext Time (p_c), s	0.2	5.2	0.0	3.9	0.2	4.5	0.0	3.6

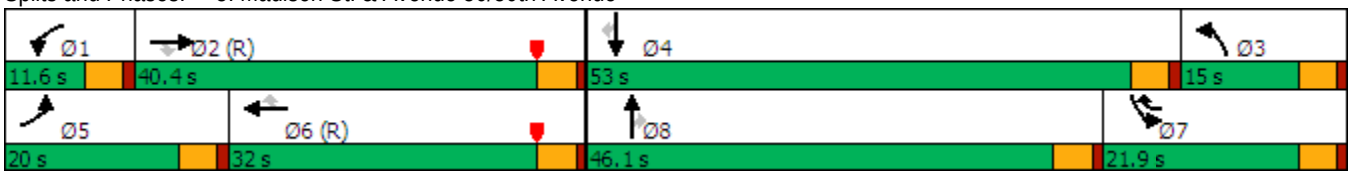
Intersection Summary	
HCM 6th Ctrl Delay	39.5
HCM 6th LOS	D

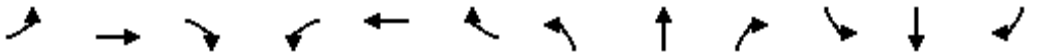
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	165	546	86	39	626	124	225	895	82	296	1250	253
Future Volume (vph)	165	546	86	39	626	124	225	895	82	296	1250	253
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	305		210	300		240	290		220	200		200
Storage Lanes	1		1	1		1	2		1	2		1
Taper Length (ft)	120			90			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			50			50			50	
Link Distance (ft)		579			1049			1270			550	
Travel Time (s)		8.8			14.3			17.3			7.5	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
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)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	30.5	30.5	11.5	30.5	11.5	11.5	30.5	30.5	11.5	30.5	30.5
Total Split (s)	20.0	40.4	40.4	11.6	32.0	21.9	15.0	46.1	46.1	21.9	53.0	53.0
Total Split (%)	16.7%	33.7%	33.7%	9.7%	26.7%	18.3%	12.5%	38.4%	38.4%	18.3%	44.2%	44.2%
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	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	Lag	Lead	Lead	Lag	Lead	Lead
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	Max	Max

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 77.7 (65%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
Natural Cycle: 95
Control Type: Actuated-Coordinated

Splits and Phases: 5: Madison St. & Avenue 50/50th Avenue





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	165	546	86	39	626	124	225	895	82	296	1250	253
Future Volume (veh/h)	165	546	86	39	626	124	225	895	82	296	1250	253
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	168	557	88	40	639	127	230	913	84	302	1276	258
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	194	1104	492	75	865	604	282	1724	535	476	1398	624
Arrive On Green	0.13	0.38	0.38	0.05	0.30	0.30	0.10	0.42	0.42	0.17	0.49	0.49
Sat Flow, veh/h	1734	3460	1543	1734	3460	1543	3365	4972	1543	3365	3460	1543
Grp Volume(v), veh/h	168	557	88	40	639	127	230	913	84	302	1276	258
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1730	1543	1682	1657	1543	1682	1730	1543
Q Serve(g_s), s	11.4	14.8	3.5	2.7	19.9	1.5	8.0	16.5	3.3	10.0	40.9	8.9
Cycle Q Clear(g_c), s	11.4	14.8	3.5	2.7	19.9	1.5	8.0	16.5	3.3	10.0	40.9	8.9
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	194	1104	492	75	865	604	282	1724	535	476	1398	624
V/C Ratio(X)	0.87	0.50	0.18	0.54	0.74	0.21	0.81	0.53	0.16	0.63	0.91	0.41
Avail Cap(c_a), veh/h	224	1104	492	103	865	604	294	1724	535	488	1398	624
HCM Platoon Ratio	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20
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	51.1	29.8	15.6	55.7	38.5	10.3	53.0	27.7	16.2	46.9	28.9	10.2
Incr Delay (d2), s/veh	25.6	1.6	0.8	5.9	5.6	0.8	15.5	1.2	0.6	2.6	10.6	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.1	5.9	1.7	1.3	8.4	1.3	3.8	6.0	1.5	4.1	16.5	4.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	76.7	31.4	16.4	61.6	44.1	11.1	68.6	28.9	16.8	49.5	39.5	12.3
LnGrp LOS	E	C	B	E	D	B	E	C	B	D	D	B
Approach Vol, veh/h		813			806			1227			1836	
Approach Delay, s/veh		39.2			39.7			35.5			37.3	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.7	42.8	14.6	53.0	17.9	34.5	21.5	46.1
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	7.1	35.9	10.5	48.5	15.5	27.5	17.4	41.6
Max Q Clear Time (g_c+I1), s	4.7	16.8	10.0	42.9	13.4	21.9	12.0	18.5
Green Ext Time (p_c), s	0.0	3.5	0.0	3.9	0.1	2.1	0.5	6.2

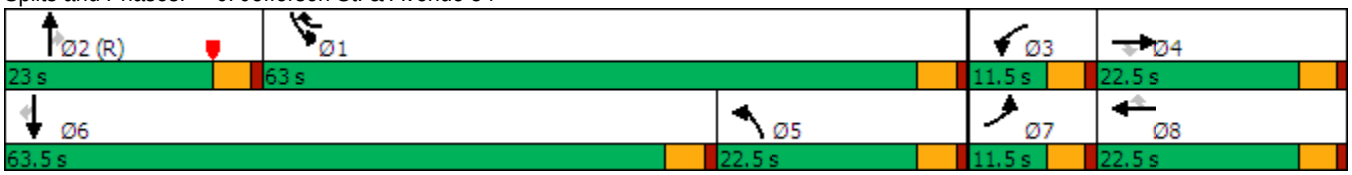
Intersection Summary	
HCM 6th Ctrl Delay	37.6
HCM 6th LOS	D

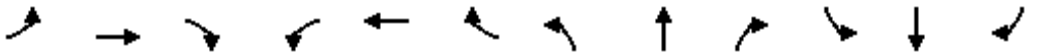
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	10	13	43	8	771	5	249	29	1778	194	27
Future Volume (vph)	8	10	13	43	8	771	5	249	29	1778	194	27
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	110		110	140		140	150		150	240		0
Storage Lanes	0		1	1		0	1		1	2		1
Taper Length (ft)	0			110			90			140		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		531			5080			436			1277	
Travel Time (s)		6.6			63.0			5.4			15.8	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	1	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	22.5	22.5	11.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	11.5	22.5	22.5	11.5	22.5	63.0	22.5	23.0	23.0	63.0	63.5	63.5
Total Split (%)	9.6%	18.8%	18.8%	9.6%	18.8%	52.5%	18.8%	19.2%	19.2%	52.5%	52.9%	52.9%
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	Lag	Lead	Lead	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Max	Max	C-Max	C-Max	Max	Max	Max

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 22.5 (19%), Referenced to phase 2:NBT, Start of Yellow
Natural Cycle: 130
Control Type: Actuated-Coordinated

Splits and Phases: 6: Jefferson St. & Avenue 54

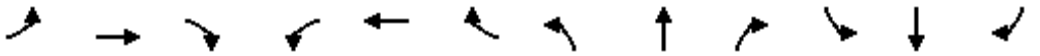




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	10	13	43	8	771	5	249	29	1778	194	27
Future Volume (veh/h)	8	10	13	43	8	771	5	249	29	1778	194	27
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	8	10	13	44	8	787	5	254	30	1814	198	28
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	24	106	90	78	163	1853	442	533	238	1994	1701	759
Arrive On Green	0.01	0.06	0.06	0.04	0.09	0.09	0.26	0.15	0.15	0.59	0.49	0.49
Sat Flow, veh/h	1734	1821	1543	1734	1821	2716	1734	3460	1543	3365	3460	1543
Grp Volume(v), veh/h	8	10	13	44	8	787	5	254	30	1814	198	28
Grp Sat Flow(s),veh/h/ln	1734	1821	1543	1734	1821	1358	1734	1730	1543	1682	1730	1543
Q Serve(g_s), s	0.5	0.6	0.6	3.0	0.5	2.5	0.3	8.0	1.7	57.2	3.7	0.9
Cycle Q Clear(g_c), s	0.5	0.6	0.6	3.0	0.5	2.5	0.3	8.0	1.7	57.2	3.7	0.9
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	24	106	90	78	163	1853	442	533	238	1994	1701	759
V/C Ratio(X)	0.34	0.09	0.14	0.57	0.05	0.42	0.01	0.48	0.13	0.91	0.12	0.04
Avail Cap(c_a), veh/h	101	273	232	101	273	2017	442	533	238	1994	1701	759
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.71	0.71	0.71	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	58.6	53.5	22.6	56.2	50.0	3.3	33.4	46.3	32.2	21.6	16.4	10.8
Incr Delay (d2), s/veh	8.2	0.4	0.7	4.5	0.1	0.1	0.0	3.0	1.1	7.7	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.3	0.4	1.4	0.2	1.4	0.1	3.5	0.8	20.9	1.4	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	66.8	53.9	23.4	60.7	50.0	3.4	33.4	49.4	33.3	29.3	16.6	10.9
LnGrp LOS	E	D	C	E	D	A	C	D	C	C	B	B
Approach Vol, veh/h		31			839			289			2040	
Approach Delay, s/veh		44.4			6.9			47.4			27.8	
Approach LOS		D			A			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	75.6	23.0	9.9	11.5	35.1	63.5	6.1	15.2
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	58.5	18.5	7.0	18.0	18.0	59.0	7.0	18.0
Max Q Clear Time (g_c+I1), s	59.2	10.0	5.0	2.6	2.3	5.7	2.5	4.5
Green Ext Time (p_c), s	0.0	0.9	0.0	0.0	0.0	1.2	0.0	2.8

Intersection Summary	
HCM 6th Ctrl Delay	24.2
HCM 6th LOS	C



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	140	572	664	59	515	428	336	592	60	390	1106	187
Future Volume (vph)	140	572	664	59	515	428	336	592	60	390	1106	187
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Link Speed (mph)		50			50			50			55	
Link Distance (ft)		709			813			334			462	
Travel Time (s)		9.7			11.1			4.6			5.7	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Sign Control		Yield			Yield			Yield			Yield	

Intersection Summary	
Area Type:	Other

Control Type: Roundabout

Club at Coral Mountain TIA (JN:15455)
2040 With Project
AM Peak Hour

Level Of Service Computation Report
FHWA Roundabout Method (Future Volume Alternative)

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Intersection #7 Jefferson St. / Avenue 52

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Average Delay (sec/veh): 5.9 Level Of Service: A

****

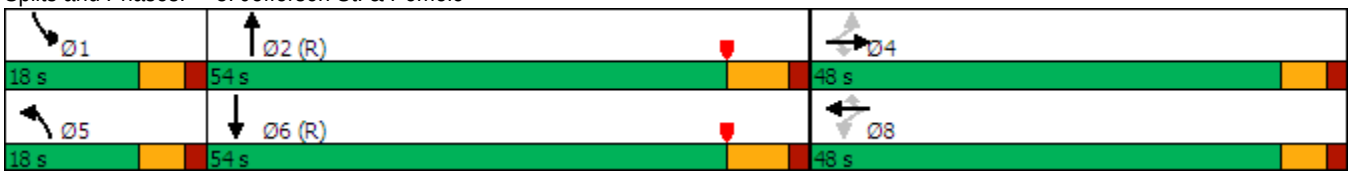
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Yield Sign			Yield Sign			Yield Sign			Yield Sign		
Lanes:	2			2			3			3		
Volume Module:												
Base Vol:	336	592	60	390	1106	187	140	572	664	59	515	428
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	336	592	60	390	1106	187	140	572	664	59	515	428
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	336	592	60	390	1106	187	140	572	664	59	515	428
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.00	0.98	0.98	0.00
PHF Volume:	343	604	61	398	1129	191	143	584	0	60	526	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	343	604	61	398	1129	191	143	584	0	60	526	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
FinalVolume:	343	604	61	398	1129	191	143	584	0	60	526	0
PCE Module:												
AutoPCE:	343	604	61	398	1129	191	143	584	0	60	526	0
TruckPCE:	0	0	0	0	0	0	0	0	0	0	0	0
ComboPCE:	0	0	0	0	0	0	0	0	0	0	0	0
BicyclePCE:	0	0	0	0	0	0	0	0	0	0	0	0
AdjVolume:	343	604	61	398	1129	191	143	584	0	60	526	0

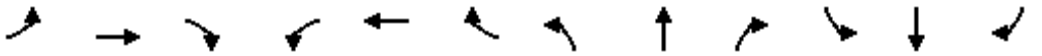
Delay Module: >> Time Period: 0.25 hours <<				
CircVolume:	398	343	1527	947
MaxVolume:	2137	2177	xxxxxx	xxxxxx
PedVolume:	0	0	0	0
AdjMaxVol:	2137	2177	xxxxxx	xxxxxx
ApproachVol:	1008	1717	xxxxxx	xxxxxx
ApproachV/C:	0.47	0.79	1.00	1.00
ApproachDel:	3.2	7.5	xxxxxx	xxxxxx
ApproachLOS:	A	A	*	*
Queue:	2.6	9.6	xxxx	xxxx

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	37	1	2	4	1	16	13	1047	13	40	1657	51
Future Volume (vph)	37	1	2	4	1	16	13	1047	13	40	1657	51
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	0		0	0		0	160		0	180		0
Storage Lanes	0		1	0		1	1		0	1		0
Taper Length (ft)	60			60			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			55			55	
Link Distance (ft)		509			561			1820			1343	
Travel Time (s)		13.9			15.3			22.6			16.6	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						
Detector Phase	4	4	4	8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	
Minimum Split (s)	48.0	48.0	48.0	48.0	48.0	48.0	18.0	40.5		18.0	39.5	
Total Split (s)	48.0	48.0	48.0	48.0	48.0	48.0	18.0	54.0		18.0	54.0	
Total Split (%)	40.0%	40.0%	40.0%	40.0%	40.0%	40.0%	15.0%	45.0%		15.0%	45.0%	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	5.5		4.0	5.5	
All-Red Time (s)	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	
Total Lost Time (s)		6.0	6.0		6.0	6.0	6.0	7.5		6.0	7.5	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Min		None	C-Min	

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 30 (25%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 110	
Control Type: Actuated-Coordinated	

Splits and Phases: 8: Jefferson St. & Pomelo





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	37	1	2	4	1	16	13	1047	13	40	1657	51
Future Volume (veh/h)	37	1	2	4	1	16	13	1047	13	40	1657	51
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	38	1	2	4	1	16	13	1068	13	41	1691	52
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	62	1	182	55	8	182	61	3265	40	129	3391	104
Arrive On Green	0.12	0.12	0.12	0.12	0.12	0.12	0.04	0.64	0.64	0.15	1.00	1.00
Sat Flow, veh/h	19	7	1543	10	67	1543	1734	5063	62	1734	4956	152
Grp Volume(v), veh/h	39	0	2	5	0	16	13	699	382	41	1131	612
Grp Sat Flow(s),veh/h/ln	27	0	1543	76	0	1543	1734	1657	1810	1734	1657	1794
Q Serve(g_s), s	0.2	0.0	0.1	0.0	0.0	1.1	0.9	11.4	11.4	2.5	0.0	0.0
Cycle Q Clear(g_c), s	14.2	0.0	0.1	14.1	0.0	1.1	0.9	11.4	11.4	2.5	0.0	0.0
Prop In Lane	0.97		1.00	0.80		1.00	1.00		0.03	1.00		0.08
Lane Grp Cap(c), veh/h	62	0	182	63	0	182	61	2137	1167	129	2268	1227
V/C Ratio(X)	0.63	0.00	0.01	0.08	0.00	0.09	0.21	0.33	0.33	0.32	0.50	0.50
Avail Cap(c_a), veh/h	388	0	540	406	0	540	173	2137	1167	173	2268	1227
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.47	0.47	0.47
Uniform Delay (d), s/veh	59.7	0.0	46.7	47.6	0.0	47.2	56.3	9.6	9.6	48.3	0.0	0.0
Incr Delay (d2), s/veh	19.9	0.0	0.1	1.1	0.0	0.4	3.7	0.4	0.7	1.4	0.4	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	0.0	0.1	0.2	0.0	0.5	0.4	3.6	4.0	1.1	0.1	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	79.6	0.0	46.8	48.7	0.0	47.6	59.9	10.0	10.3	49.7	0.4	0.7
LnGrp LOS	E	A	D	D	A	D	E	A	B	D	A	A
Approach Vol, veh/h		41			21			1094			1784	
Approach Delay, s/veh		78.0			47.9			10.7			1.6	
Approach LOS		E			D			B			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	14.9	84.8		20.3	10.2	89.5		20.3				
Change Period (Y+Rc), s	6.0	7.5		6.0	6.0	7.5		6.0				
Max Green Setting (Gmax), s	12.0	46.5		42.0	12.0	46.5		42.0				
Max Q Clear Time (g_c+I1), s	4.5	13.4		16.2	2.9	2.0		16.1				
Green Ext Time (p_c), s	0.1	14.3		0.3	0.0	30.1		0.1				

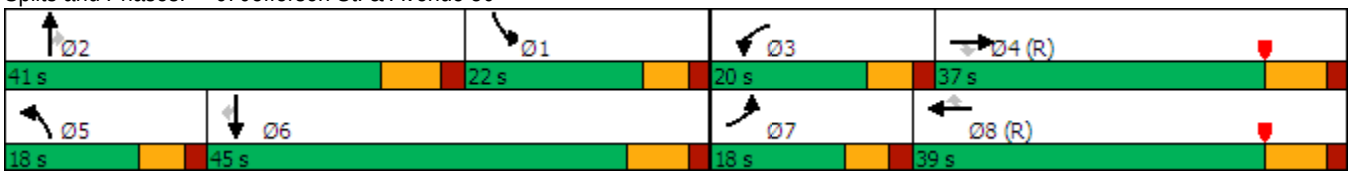
Intersection Summary			
HCM 6th Ctrl Delay		6.4	
HCM 6th LOS		A	

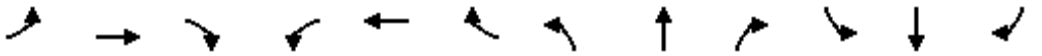
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	256	347	81	236	390	385	140	857	108	359	1440	362
Future Volume (vph)	256	347	81	236	390	385	140	857	108	359	1440	362
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	245		100	105		0	360		220	280		230
Storage Lanes	2		1	2		1	1		1	2		1
Taper Length (ft)	120			60			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			45			55			55	
Link Distance (ft)		693			995			1343			697	
Travel Time (s)		9.5			15.1			16.6			8.6	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Minimum Split (s)	18.0	31.5	31.5	18.0	38.5	38.5	18.0	40.5	40.5	18.0	40.5	40.5
Total Split (s)	18.0	37.0	37.0	20.0	39.0	39.0	18.0	41.0	41.0	22.0	45.0	45.0
Total Split (%)	15.0%	30.8%	30.8%	16.7%	32.5%	32.5%	15.0%	34.2%	34.2%	18.3%	37.5%	37.5%
Yellow Time (s)	4.0	5.5	5.5	4.0	5.5	5.5	4.0	5.5	5.5	4.0	5.5	5.5
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	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	0.0
Total Lost Time (s)	6.0	7.5	7.5	6.0	7.5	7.5	6.0	7.5	7.5	6.0	7.5	7.5
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	Min	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow
Natural Cycle: 115
Control Type: Actuated-Coordinated

Splits and Phases: 9: Jefferson St. & Avenue 50





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	256	347	81	236	390	385	140	857	108	359	1440	362
Future Volume (veh/h)	256	347	81	236	390	385	140	857	108	359	1440	362
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	261	354	83	241	398	393	143	874	110	366	1469	369
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	336	916	408	336	916	408	172	1116	346	584	1547	480
Arrive On Green	0.15	0.40	0.40	0.15	0.40	0.40	0.15	0.34	0.34	0.26	0.47	0.47
Sat Flow, veh/h	3365	3460	1543	3365	3460	1543	1734	4972	1543	3365	4972	1543
Grp Volume(v), veh/h	261	354	83	241	398	393	143	874	110	366	1469	369
Grp Sat Flow(s),veh/h/ln	1682	1730	1543	1682	1730	1543	1734	1657	1543	1682	1657	1543
Q Serve(g_s), s	9.0	8.7	4.2	8.2	10.1	17.7	9.6	19.0	4.6	11.5	34.0	23.9
Cycle Q Clear(g_c), s	9.0	8.7	4.2	8.2	10.1	17.7	9.6	19.0	4.6	11.5	34.0	23.9
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	336	916	408	336	916	408	172	1116	346	584	1547	480
V/C Ratio(X)	0.78	0.39	0.20	0.72	0.43	0.96	0.83	0.78	0.32	0.63	0.95	0.77
Avail Cap(c_a), veh/h	336	916	408	393	916	408	173	1388	431	584	1554	482
HCM Platoon Ratio	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.96	0.96	0.96	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.7	29.2	27.9	49.4	29.6	12.6	50.1	37.2	17.4	41.0	31.1	28.4
Incr Delay (d2), s/veh	10.4	1.2	1.1	3.8	1.5	36.0	25.2	2.7	0.7	1.6	12.9	7.8
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	4.0	3.4	1.6	3.4	4.0	8.6	5.0	6.7	2.3	4.4	12.2	8.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.2	30.5	29.0	53.2	31.1	48.6	75.3	39.8	18.1	42.6	44.0	36.2
LnGrp LOS	E	C	C	D	C	D	E	D	B	D	D	D
Approach Vol, veh/h		698			1032			1127			2204	
Approach Delay, s/veh		41.4			42.9			42.2			42.4	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	28.3	34.4	18.0	39.3	17.9	44.8	18.0	39.3
Change Period (Y+Rc), s	7.5	* 7.5	6.0	7.5	6.0	7.5	6.0	7.5
Max Green Setting (Gmax), s	16.0	* 34	14.0	29.5	12.0	37.5	12.0	31.5
Max Q Clear Time (g_c+I1), s	13.5	21.0	10.2	10.7	11.6	36.0	11.0	19.7
Green Ext Time (p_c), s	0.1	5.9	0.1	4.0	0.0	1.4	0.1	5.4

Intersection Summary	
HCM 6th Ctrl Delay	42.3
HCM 6th LOS	D

Notes

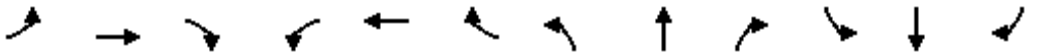
User approved pedestrian interval to be less than phase max green.

* HCM 6th 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)	375	411	1	1	672	270	1	2	1	351	1	789
Future Volume (vph)	375	411	1	1	672	270	1	2	1	351	1	789
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		0	150		150	150		0	150		150
Storage Lanes	2		0	1		1	0		0	2		0
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		40			40			25			40	
Link Distance (ft)		973			661			281			437	
Travel Time (s)		16.6			11.3			7.7			7.4	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA		Prot	NA	Perm	Perm	NA		Prot	NA	pm+ov
Protected Phases	5	2		1	6			8		7	4	5
Permitted Phases						6	8					4
Detector Phase	5	2		1	6	6	8	8		7	4	5
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	11.5	22.5		11.5	22.5	22.5	22.5	22.5		22.5	22.5	11.5
Total Split (s)	41.0	63.5		11.5	34.0	34.0	22.5	22.5		22.5	45.0	41.0
Total Split (%)	34.2%	52.9%		9.6%	28.3%	28.3%	18.8%	18.8%		18.8%	37.5%	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
All-Red Time (s)	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
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5		4.5		4.5	4.5	4.5
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lead		Lag		Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes		Yes
Recall Mode	None	C-Max		None	None	None	Max	Max		Max	Max	None

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:EBT, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	

Splits and Phases: 10: Avenue 60 & Madison St.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	375	411	1	1	672	270	1	2	1	351	1	789
Future Volume (veh/h)	375	411	1	1	672	270	1	2	1	351	1	789
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	383	419	1	1	686	276	1	2	1	358	1	805
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	467	1941	5	3	1513	641	70	125	52	520	615	729
Arrive On Green	0.13	0.55	0.55	0.00	0.42	0.42	0.15	0.15	0.15	0.15	0.34	0.34
Sat Flow, veh/h	3469	3541	8	1734	3642	1543	214	832	349	3469	1821	1543
Grp Volume(v), veh/h	383	205	215	1	686	276	4	0	0	358	1	805
Grp Sat Flow(s),veh/h/ln	1734	1730	1820	1734	1821	1543	1395	0	0	1734	1821	1543
Q Serve(g_s), s	12.9	7.3	7.3	0.1	16.3	9.4	0.0	0.0	0.0	11.7	0.0	40.5
Cycle Q Clear(g_c), s	12.9	7.3	7.3	0.1	16.3	9.4	0.2	0.0	0.0	11.7	0.0	40.5
Prop In Lane	1.00		0.00	1.00		1.00	0.25		0.25	1.00		1.00
Lane Grp Cap(c), veh/h	467	948	997	3	1513	641	247	0	0	520	615	729
V/C Ratio(X)	0.82	0.22	0.22	0.30	0.45	0.43	0.02	0.00	0.00	0.69	0.00	1.10
Avail Cap(c_a), veh/h	1055	948	997	101	1513	641	247	0	0	520	615	729
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	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.5	13.9	13.9	59.8	25.3	9.5	43.5	0.0	0.0	48.3	26.3	31.7
Incr Delay (d2), s/veh	3.6	0.5	0.5	44.3	0.2	0.5	0.1	0.0	0.0	7.3	0.0	65.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.7	2.9	3.0	0.1	6.9	3.2	0.1	0.0	0.0	5.5	0.0	33.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	54.1	14.4	14.4	104.2	25.5	9.9	43.6	0.0	0.0	55.6	26.4	97.4
LnGrp LOS	D	B	B	F	C	A	D	A	A	E	C	F
Approach Vol, veh/h		803			963			4			1164	
Approach Delay, s/veh		33.3			21.1			43.6			84.5	
Approach LOS		C			C			D			F	

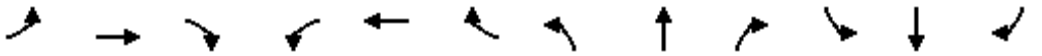
Timer - Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	4.7	70.3		45.0	20.7	54.3	22.5	22.5				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	7.0	59.0		40.5	36.5	29.5	18.0	18.0				
Max Q Clear Time (g_c+I1), s	2.1	9.3		42.5	14.9	18.3	13.7	2.2				
Green Ext Time (p_c), s	0.0	2.5		0.0	1.3	4.1	0.5	0.0				

Intersection Summary												
HCM 6th Ctrl Delay			49.6									
HCM 6th LOS			D									

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	150	225	373	18	268	284	279	545	39	183	434	296
Future Volume (vph)	150	225	373	18	268	284	279	545	39	183	434	296
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		0	150		150	100		150	320		150
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			50			50	
Link Distance (ft)		598			1045			1022			1291	
Travel Time (s)		9.1			15.8			13.9			17.6	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA		Prot	NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases						8						
Detector Phase	7	4		3	8	1	5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0		7.0	7.0	
Minimum Split (s)	11.5	22.5		11.5	22.5	11.5	11.5	22.5		11.5	22.5	
Total Split (s)	21.0	39.5		11.5	30.0	26.5	32.0	42.5		26.5	37.0	
Total Split (%)	17.5%	32.9%		9.6%	25.0%	22.1%	26.7%	35.4%		22.1%	30.8%	
Yellow Time (s)	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	
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)	4.5	4.5		4.5	4.5	4.5	4.5	4.5		4.5	4.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None	None	None	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 Yellow	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	

Splits and Phases: 11: Monroe St. & Avenue 60/60th Avenue



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	150	225	373	18	268	284	279	545	39	183	434	296
Future Volume (veh/h)	150	225	373	18	268	284	279	545	39	183	434	296
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	153	230	381	18	273	290	285	556	40	187	443	302
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	180	464	414	46	347	486	314	1411	101	216	739	500
Arrive On Green	0.10	0.27	0.27	0.03	0.19	0.19	0.18	0.43	0.43	0.12	0.37	0.37
Sat Flow, veh/h	1734	1730	1543	1734	1821	1543	1734	3274	235	1734	1974	1337
Grp Volume(v), veh/h	153	230	381	18	273	290	285	293	303	187	388	357
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1821	1543	1734	1730	1779	1734	1730	1580
Q Serve(g_s), s	10.4	13.5	28.8	1.2	17.1	19.0	19.3	13.9	14.0	12.7	21.7	21.9
Cycle Q Clear(g_c), s	10.4	13.5	28.8	1.2	17.1	19.0	19.3	13.9	14.0	12.7	21.7	21.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.13	1.00		0.85
Lane Grp Cap(c), veh/h	180	464	414	46	347	486	314	746	767	216	648	592
V/C Ratio(X)	0.85	0.50	0.92	0.39	0.79	0.60	0.91	0.39	0.39	0.87	0.60	0.60
Avail Cap(c_a), veh/h	238	505	450	101	387	520	397	746	767	318	648	592
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	1.00
Uniform Delay (d), s/veh	52.9	37.1	42.7	57.5	46.2	34.7	48.1	23.4	23.4	51.6	30.3	30.3
Incr Delay (d2), s/veh	19.3	0.8	23.2	5.4	9.3	1.7	20.8	1.6	1.5	15.3	4.1	4.5
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	5.4	5.6	13.2	0.6	8.4	7.1	9.8	5.7	5.9	6.2	9.3	8.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	72.1	37.9	65.8	62.9	55.6	36.3	68.9	24.9	24.9	66.8	34.3	34.9
LnGrp LOS	E	D	E	E	E	D	E	C	C	E	C	C
Approach Vol, veh/h		764			581			881			932	
Approach Delay, s/veh		58.7			46.2			39.2			41.1	
Approach LOS		E			D			D			D	

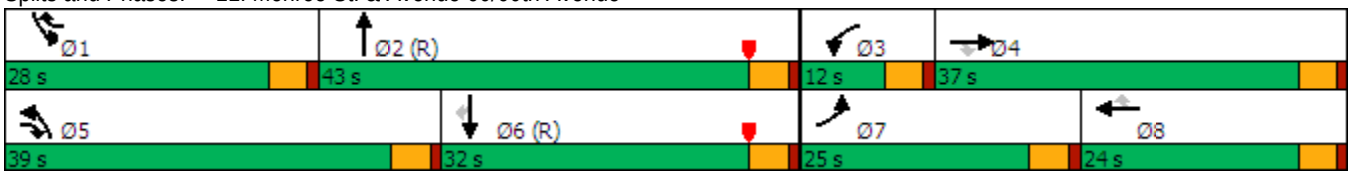
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.4	56.2	7.7	36.7	26.2	49.4	17.0	27.4
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	22.0	38.0	7.0	35.0	27.5	32.5	16.5	25.5
Max Q Clear Time (g_c+I1), s	14.7	16.0	3.2	30.8	21.3	23.9	12.4	21.0
Green Ext Time (p_c), s	0.3	3.1	0.0	1.4	0.4	2.8	0.1	1.1

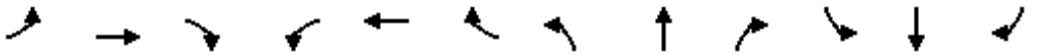
Intersection Summary	
HCM 6th Ctrl Delay	45.7
HCM 6th LOS	D

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	150	225	373	18	268	284	279	545	39	183	434	296
Future Volume (vph)	150	225	373	18	268	284	279	545	39	183	434	296
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		150	150		150	100		150	320		150
Storage Lanes	1		1	1		1	1		0	1		1
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			50			50	
Link Distance (ft)		598			1045			1022			1291	
Travel Time (s)		9.1			15.8			13.9			17.6	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA		Prot	NA	Perm
Protected Phases	7	4	5	3	8	1	5	2		1	6	
Permitted Phases			4			8						6
Detector Phase	7	4	5	3	8	1	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	11.5	22.5	11.5	11.5	22.5	11.5	11.5	22.5		11.5	22.5	22.5
Total Split (s)	25.0	37.0	39.0	12.0	24.0	28.0	39.0	43.0		28.0	32.0	32.0
Total Split (%)	20.8%	30.8%	32.5%	10.0%	20.0%	23.3%	32.5%	35.8%		23.3%	26.7%	26.7%
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	Lead	Lead	Lag	Lead	Lead	Lag		Lead	Lag	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		None	C-Max	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 Yellow	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	

Splits and Phases: 11: Monroe St. & Avenue 60/60th Avenue





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	150	225	373	18	268	284	279	545	39	183	434	296
Future Volume (veh/h)	150	225	373	18	268	284	279	545	39	183	434	296
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	153	230	381	18	273	290	285	556	40	187	443	302
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	181	833	653	46	562	443	317	1500	108	216	1385	618
Arrive On Green	0.10	0.24	0.24	0.03	0.16	0.16	0.18	0.46	0.46	0.12	0.40	0.40
Sat Flow, veh/h	1734	3460	1543	1734	3460	1543	1734	3274	235	1734	3460	1543
Grp Volume(v), veh/h	153	230	381	18	273	290	285	293	303	187	443	302
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1730	1543	1734	1730	1779	1734	1730	1543
Q Serve(g_s), s	10.4	6.5	22.7	1.2	8.6	19.5	19.3	13.3	13.3	12.7	10.6	17.5
Cycle Q Clear(g_c), s	10.4	6.5	22.7	1.2	8.6	19.5	19.3	13.3	13.3	12.7	10.6	17.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.13	1.00		1.00
Lane Grp Cap(c), veh/h	181	833	653	46	562	443	317	793	815	216	1385	618
V/C Ratio(X)	0.84	0.28	0.58	0.39	0.49	0.65	0.90	0.37	0.37	0.86	0.32	0.49
Avail Cap(c_a), veh/h	296	937	700	108	562	443	499	793	815	340	1385	618
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	1.00
Uniform Delay (d), s/veh	52.8	37.1	26.5	57.5	45.7	37.5	48.0	21.2	21.2	51.5	24.7	26.8
Incr Delay (d2), s/veh	11.2	0.2	1.1	5.4	0.7	3.4	12.9	1.3	1.3	13.0	0.6	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	5.0	2.7	8.1	0.6	3.7	7.6	9.1	5.3	5.5	6.1	4.2	6.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	64.0	37.2	27.6	62.9	46.3	41.0	60.9	22.5	22.5	64.5	25.4	29.6
LnGrp LOS	E	D	C	E	D	D	E	C	C	E	C	C
Approach Vol, veh/h		764			581			881			932	
Approach Delay, s/veh		37.8			44.2			34.9			34.6	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.5	59.5	7.7	33.4	26.4	52.5	17.0	24.0
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	23.5	38.5	7.5	32.5	34.5	27.5	20.5	19.5
Max Q Clear Time (g_c+I1), s	14.7	15.3	3.2	24.7	21.3	19.5	12.4	21.5
Green Ext Time (p_c), s	0.3	3.1	0.0	1.7	0.6	2.3	0.2	0.0

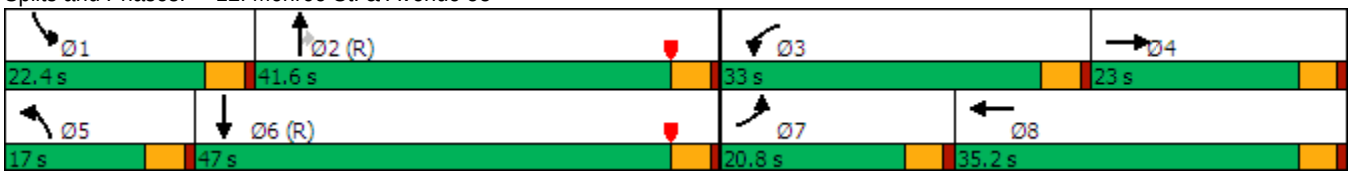
Intersection Summary	
HCM 6th Ctrl Delay	37.2
HCM 6th LOS	D

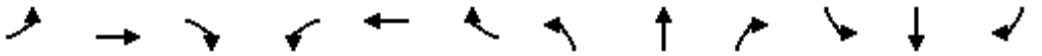
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	121	345	129	344	102	104	139	603	276	134	939	75
Future Volume (vph)	121	345	129	344	102	104	139	603	276	134	939	75
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		150	150		0	150		150	150		150
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			30			50			50	
Link Distance (ft)		670			732			913			1519	
Travel Time (s)		9.1			16.6			12.5			20.7	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA		Prot	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases									2			
Detector Phase	7	4		3	8		5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		7.0	7.0	7.0	7.0	7.0	
Minimum Split (s)	11.5	22.5		11.5	22.5		11.5	22.5	22.5	11.5	22.5	
Total Split (s)	20.8	23.0		33.0	35.2		17.0	41.6	41.6	22.4	47.0	
Total Split (%)	17.3%	19.2%		27.5%	29.3%		14.2%	34.7%	34.7%	18.7%	39.2%	
Yellow Time (s)	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	
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)	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Recall Mode	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 Yellow
Natural Cycle: 90
Control Type: Actuated-Coordinated

Splits and Phases: 12: Monroe St. & Avenue 58





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	121	345	129	344	102	104	139	603	276	134	939	75
Future Volume (veh/h)	121	345	129	344	102	104	139	603	276	134	939	75
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	123	352	132	351	104	106	142	615	282	137	958	77
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	149	381	141	378	495	441	168	1327	592	164	1237	99
Arrive On Green	0.09	0.15	0.15	0.22	0.29	0.29	0.10	0.38	0.38	0.09	0.38	0.38
Sat Flow, veh/h	1734	2474	913	1734	1730	1543	1734	3460	1543	1734	3244	261
Grp Volume(v), veh/h	123	244	240	351	104	106	142	615	282	137	511	524
Grp Sat Flow(s),veh/h/ln	1734	1730	1657	1734	1730	1543	1734	1730	1543	1734	1730	1774
Q Serve(g_s), s	8.4	16.7	17.2	23.8	5.5	6.3	9.7	16.0	16.5	9.3	31.1	31.1
Cycle Q Clear(g_c), s	8.4	16.7	17.2	23.8	5.5	6.3	9.7	16.0	16.5	9.3	31.1	31.1
Prop In Lane	1.00		0.55	1.00		1.00	1.00		1.00	1.00		0.15
Lane Grp Cap(c), veh/h	149	267	255	378	495	441	168	1327	592	164	660	677
V/C Ratio(X)	0.82	0.92	0.94	0.93	0.21	0.24	0.85	0.46	0.48	0.83	0.77	0.77
Avail Cap(c_a), veh/h	236	267	255	412	495	441	181	1327	592	259	660	677
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	1.00
Uniform Delay (d), s/veh	53.9	50.0	50.2	46.0	32.6	32.8	53.3	27.7	27.9	53.4	32.6	32.6
Incr Delay (d2), s/veh	12.3	33.9	39.7	26.3	0.2	0.3	28.2	1.2	2.7	12.4	8.6	8.4
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	4.0	9.4	9.6	13.0	2.3	2.4	5.4	6.5	6.5	4.5	13.8	14.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	66.2	83.8	89.9	72.3	32.8	33.1	81.5	28.9	30.6	65.8	41.2	41.0
LnGrp LOS	E	F	F	E	C	C	F	C	C	E	D	D
Approach Vol, veh/h		607			561			1039			1172	
Approach Delay, s/veh		82.7			57.6			36.6			44.0	
Approach LOS		F			E			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.9	50.5	30.6	23.0	16.1	50.3	14.8	38.8
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	17.9	37.1	28.5	18.5	12.5	42.5	16.3	30.7
Max Q Clear Time (g_c+I1), s	11.3	18.5	25.8	19.2	11.7	33.1	10.4	8.3
Green Ext Time (p_c), s	0.2	4.4	0.3	0.0	0.0	4.0	0.1	1.2

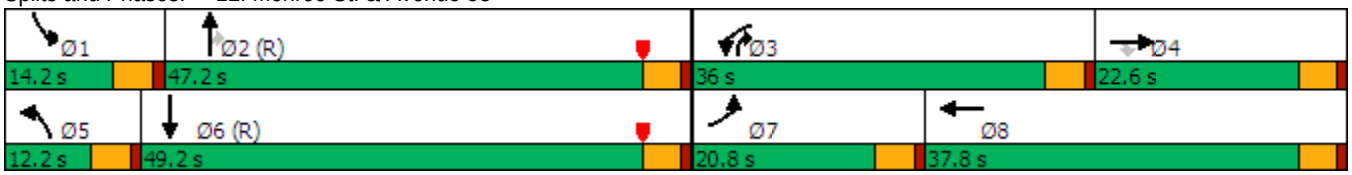
Intersection Summary	
HCM 6th Ctrl Delay	50.9
HCM 6th LOS	D

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	121	345	129	344	102	104	139	603	276	134	939	75
Future Volume (vph)	121	345	129	344	102	104	139	603	276	134	939	75
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		150	150		0	150		150	150		150
Storage Lanes	1		1	1		0	2		1	2		0
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			30			50			50	
Link Distance (ft)		670			732			913			1519	
Travel Time (s)		9.1			16.6			12.5			20.7	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA	pm+ov	Prot	NA	
Protected Phases	7	4		3	8		5	2	3	1	6	
Permitted Phases			4						2			
Detector Phase	7	4	4	3	8		5	2	3	1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0		7.0	7.0	7.0	7.0	7.0	
Minimum Split (s)	11.5	22.5	22.5	11.5	22.5		11.5	22.5	11.5	11.5	22.5	
Total Split (s)	20.8	22.6	22.6	36.0	37.8		12.2	47.2	36.0	14.2	49.2	
Total Split (%)	17.3%	18.8%	18.8%	30.0%	31.5%		10.2%	39.3%	30.0%	11.8%	41.0%	
Yellow Time (s)	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	
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)	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	Lag	Lead	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None		None	C-Max	None	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 Yellow
Natural Cycle: 90
Control Type: Actuated-Coordinated

Splits and Phases: 12: Monroe St. & Avenue 58



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	121	345	129	344	102	104	139	603	276	134	939	75
Future Volume (veh/h)	121	345	129	344	102	104	139	603	276	134	939	75
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	123	352	132	351	104	106	142	615	282	137	958	77
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	149	429	191	381	445	397	195	1553	1032	194	1456	117
Arrive On Green	0.09	0.12	0.12	0.22	0.26	0.26	0.06	0.45	0.45	0.06	0.45	0.45
Sat Flow, veh/h	1734	3460	1543	1734	1730	1543	3365	3460	1543	3365	3244	261
Grp Volume(v), veh/h	123	352	132	351	104	106	142	615	282	137	511	524
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1730	1543	1682	1730	1543	1682	1730	1774
Q Serve(g_s), s	8.4	11.9	9.8	23.8	5.7	6.6	5.0	14.3	8.9	4.8	27.7	27.7
Cycle Q Clear(g_c), s	8.4	11.9	9.8	23.8	5.7	6.6	5.0	14.3	8.9	4.8	27.7	27.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.15
Lane Grp Cap(c), veh/h	149	429	191	381	445	397	195	1553	1032	194	776	796
V/C Ratio(X)	0.82	0.82	0.69	0.92	0.23	0.27	0.73	0.40	0.27	0.71	0.66	0.66
Avail Cap(c_a), veh/h	236	522	233	455	480	428	216	1553	1032	272	776	796
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	1.00
Uniform Delay (d), s/veh	53.9	51.3	50.4	45.8	35.2	35.5	55.6	22.2	8.1	55.5	25.9	25.9
Incr Delay (d2), s/veh	12.3	8.5	6.5	22.0	0.3	0.4	10.6	0.8	0.7	4.8	4.3	4.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	5.5	4.1	12.5	2.5	2.5	2.3	5.6	3.0	2.1	11.5	11.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	66.2	59.8	56.8	67.9	35.5	35.9	66.2	22.9	8.7	60.3	30.2	30.1
LnGrp LOS	E	E	E	E	D	D	E	C	A	E	C	C
Approach Vol, veh/h		607			561			1039			1172	
Approach Delay, s/veh		60.5			55.8			25.0			33.7	
Approach LOS		E			E			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.4	58.4	30.8	19.4	11.4	58.4	14.8	35.4
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	9.7	42.7	31.5	18.1	7.7	44.7	16.3	33.3
Max Q Clear Time (g_c+I1), s	6.8	16.3	25.8	13.9	7.0	29.7	10.4	8.6
Green Ext Time (p_c), s	0.1	4.9	0.6	1.0	0.0	5.2	0.1	1.2

Intersection Summary	
HCM 6th Ctrl Delay	39.5
HCM 6th LOS	D

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	32	391	97	54	224	235	49	789	94	234	936	65
Future Volume (vph)	32	391	97	54	224	235	49	789	94	234	936	65
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	280		150	150		150	105		150	160		50
Storage Lanes	1		0	1		1	1		0	1		1
Taper Length (ft)	60			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		5252			1251			918			726	
Travel Time (s)		71.6			17.1			12.5			9.9	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA		Prot	NA	pm+ov	Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases						8						6
Detector Phase	7	4		3	8	1	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	11.5	22.5		11.5	22.5	11.5	11.5	22.5		11.5	22.5	22.5
Total Split (s)	11.6	28.0		13.0	29.4	30.0	13.8	49.0		30.0	65.2	65.2
Total Split (%)	9.7%	23.3%		10.8%	24.5%	25.0%	11.5%	40.8%		25.0%	54.3%	54.3%
Yellow Time (s)	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
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)	4.5	4.5		4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5
Lead/Lag	Lead	Lag		Lead	Lag	Lead	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	C-Max		None	C-Max	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 Yellow	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	

Splits and Phases: 13: Monroe St. & Airport Bl.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	32	391	97	54	224	235	49	789	94	234	936	65
Future Volume (veh/h)	32	391	97	54	224	235	49	789	94	234	936	65
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	33	399	99	55	229	240	50	805	96	239	955	66
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	67	463	114	85	617	514	82	1488	177	268	2026	904
Arrive On Green	0.04	0.17	0.17	0.05	0.18	0.18	0.05	0.48	0.48	0.15	0.59	0.59
Sat Flow, veh/h	1734	2753	676	1734	3460	1543	1734	3113	371	1734	3460	1543
Grp Volume(v), veh/h	33	249	249	55	229	240	50	447	454	239	955	66
Grp Sat Flow(s),veh/h/ln	1734	1730	1699	1734	1730	1543	1734	1730	1754	1734	1730	1543
Q Serve(g_s), s	2.2	16.8	17.1	3.7	7.0	14.7	3.4	21.8	21.8	16.2	19.0	2.2
Cycle Q Clear(g_c), s	2.2	16.8	17.1	3.7	7.0	14.7	3.4	21.8	21.8	16.2	19.0	2.2
Prop In Lane	1.00		0.40	1.00		1.00	1.00		0.21	1.00		1.00
Lane Grp Cap(c), veh/h	67	291	286	85	617	514	82	827	839	268	2026	904
V/C Ratio(X)	0.49	0.86	0.87	0.65	0.37	0.47	0.61	0.54	0.54	0.89	0.47	0.07
Avail Cap(c_a), veh/h	103	339	333	123	718	559	134	827	839	369	2026	904
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)	0.72	0.72	0.72	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.5	48.5	48.6	56.0	43.4	31.6	56.1	22.0	22.0	49.7	14.2	10.8
Incr Delay (d2), s/veh	3.9	13.0	14.7	8.0	0.4	0.7	7.1	2.5	2.5	17.9	0.8	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	8.0	8.1	1.8	2.9	5.3	1.6	8.8	8.9	8.1	6.8	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.4	61.5	63.3	64.0	43.8	32.3	63.2	24.6	24.5	67.6	15.0	10.9
LnGrp LOS	E	E	E	E	D	C	E	C	C	E	B	B
Approach Vol, veh/h		531			524			951			1260	
Approach Delay, s/veh		62.3			40.6			26.6			24.8	
Approach LOS		E			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	23.1	61.9	10.4	24.7	10.2	74.8	9.2	25.9
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	25.5	44.5	8.5	23.5	9.3	60.7	7.1	24.9
Max Q Clear Time (g_c+I1), s	18.2	23.8	5.7	19.1	5.4	21.0	4.2	16.7
Green Ext Time (p_c), s	0.4	5.0	0.0	1.1	0.0	7.3	0.0	1.3

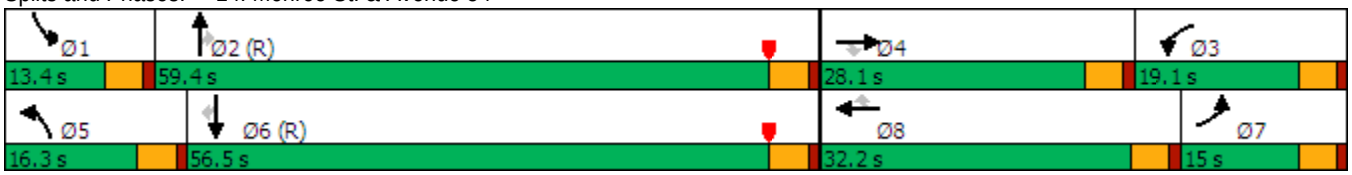
Intersection Summary	
HCM 6th Ctrl Delay	34.0
HCM 6th LOS	C

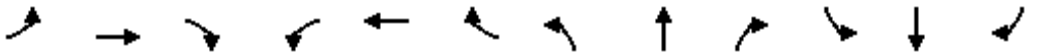
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	169	480	217	108	397	52	79	939	152	51	1134	209
Future Volume (vph)	169	480	217	108	397	52	79	939	152	51	1134	209
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	305		150	150		150	150		150	150		700
Storage Lanes	2		1	1		1	1		1	1		1
Taper Length (ft)	100			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		672			623			677			775	
Travel Time (s)		8.3			7.7			9.2			10.6	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	22.5	22.5	11.5	22.5	22.5	11.5	22.5	22.5	11.5	22.5	22.5
Total Split (s)	15.0	28.1	28.1	19.1	32.2	32.2	16.3	59.4	59.4	13.4	56.5	56.5
Total Split (%)	12.5%	23.4%	23.4%	15.9%	26.8%	26.8%	13.6%	49.5%	49.5%	11.2%	47.1%	47.1%
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	Lag	Lead	Lead	Lag	Lead	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	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	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 Yellow
Natural Cycle: 80
Control Type: Actuated-Coordinated

Splits and Phases: 14: Monroe St. & Avenue 54





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	169	480	217	108	397	52	79	939	152	51	1134	209
Future Volume (veh/h)	169	480	217	108	397	52	79	939	152	51	1134	209
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	172	490	221	110	405	53	81	958	155	52	1157	213
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	346	591	250	135	511	217	102	2047	867	83	2007	850
Arrive On Green	0.10	0.16	0.16	0.08	0.14	0.14	0.06	0.56	0.56	0.05	0.55	0.55
Sat Flow, veh/h	3469	3642	1543	1734	3642	1543	1734	3642	1543	1734	3642	1543
Grp Volume(v), veh/h	172	490	221	110	405	53	81	958	155	52	1157	213
Grp Sat Flow(s),veh/h/ln	1734	1821	1543	1734	1821	1543	1734	1821	1543	1734	1821	1543
Q Serve(g_s), s	5.6	15.6	14.1	7.5	12.9	3.1	5.5	18.8	3.8	3.5	25.1	5.3
Cycle Q Clear(g_c), s	5.6	15.6	14.1	7.5	12.9	3.1	5.5	18.8	3.8	3.5	25.1	5.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	346	591	250	135	511	217	102	2047	867	83	2007	850
V/C Ratio(X)	0.50	0.83	0.88	0.81	0.79	0.24	0.79	0.47	0.18	0.62	0.58	0.25
Avail Cap(c_a), veh/h	346	716	304	211	841	356	171	2047	867	129	2007	850
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	1.00
Uniform Delay (d), s/veh	51.2	48.7	34.7	54.5	49.9	33.7	55.7	15.6	5.4	56.1	17.7	5.2
Incr Delay (d2), s/veh	1.1	6.9	21.9	12.7	2.8	0.6	12.8	0.8	0.5	7.4	1.2	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	7.3	6.5	3.6	5.8	1.4	2.7	7.3	1.8	1.7	9.8	2.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.3	55.5	56.6	67.2	52.7	34.3	68.5	16.4	5.9	63.5	18.9	5.9
LnGrp LOS	D	E	E	E	D	C	E	B	A	E	B	A
Approach Vol, veh/h		883			568			1194			1422	
Approach Delay, s/veh		55.2			53.8			18.6			18.6	
Approach LOS		E			D			B			B	

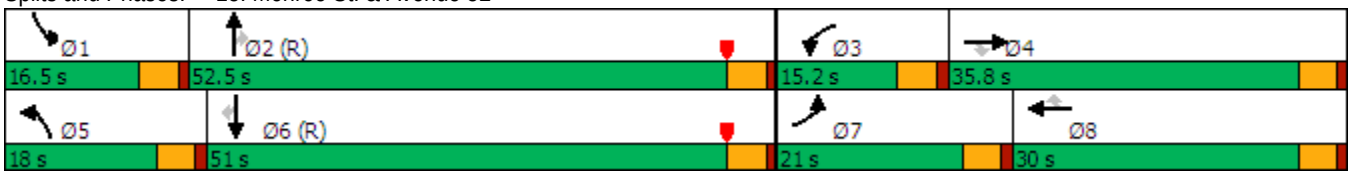
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.3	71.9	13.8	24.0	11.6	70.6	16.5	21.3
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	8.9	54.9	14.6	23.6	11.8	52.0	10.5	27.7
Max Q Clear Time (g_c+I1), s	5.5	20.8	9.5	17.6	7.5	27.1	7.6	14.9
Green Ext Time (p_c), s	0.0	7.6	0.1	1.8	0.0	9.1	0.1	1.9

Intersection Summary	
HCM 6th Ctrl Delay	31.4
HCM 6th LOS	C

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	135	601	213	71	559	178	237	790	51	188	1089	62
Future Volume (vph)	135	601	213	71	559	178	237	790	51	188	1089	62
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	190		200	100		50	150		150	195		150
Storage Lanes	1		1	1		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			50			50	
Link Distance (ft)		817			587			676			1348	
Travel Time (s)		10.1			7.3			9.2			18.4	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	22.5	22.5	11.5	22.5	22.5	11.5	22.5	22.5	11.5	22.5	22.5
Total Split (s)	21.0	35.8	35.8	15.2	30.0	30.0	18.0	52.5	52.5	16.5	51.0	51.0
Total Split (%)	17.5%	29.8%	29.8%	12.7%	25.0%	25.0%	15.0%	43.8%	43.8%	13.8%	42.5%	42.5%
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	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	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 Yellow	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	

Splits and Phases: 15: Monroe St. & Avenue 52



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	135	601	213	71	559	178	237	790	51	188	1089	62
Future Volume (veh/h)	135	601	213	71	559	178	237	790	51	188	1089	62
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	138	613	217	72	570	182	242	806	52	192	1111	63
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	165	821	348	92	669	283	300	1812	768	249	1757	744
Arrive On Green	0.10	0.23	0.23	0.05	0.18	0.18	0.09	0.50	0.50	0.07	0.48	0.48
Sat Flow, veh/h	1734	3642	1543	1734	3642	1543	3365	3642	1543	3365	3642	1543
Grp Volume(v), veh/h	138	613	217	72	570	182	242	806	52	192	1111	63
Grp Sat Flow(s),veh/h/ln	1734	1821	1543	1734	1821	1543	1682	1821	1543	1682	1821	1543
Q Serve(g_s), s	9.4	18.8	15.2	4.9	18.2	13.1	8.5	17.1	2.1	6.7	27.3	2.6
Cycle Q Clear(g_c), s	9.4	18.8	15.2	4.9	18.2	13.1	8.5	17.1	2.1	6.7	27.3	2.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	165	821	348	92	669	283	300	1812	768	249	1757	744
V/C Ratio(X)	0.84	0.75	0.62	0.78	0.85	0.64	0.81	0.44	0.07	0.77	0.63	0.08
Avail Cap(c_a), veh/h	238	950	403	155	774	328	379	1812	768	336	1757	744
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	1.00
Uniform Delay (d), s/veh	53.4	43.3	41.9	56.1	47.4	45.3	53.6	19.5	15.7	54.6	23.1	16.8
Incr Delay (d2), s/veh	15.7	2.8	2.3	13.4	8.1	3.4	9.8	0.8	0.2	7.4	1.7	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.6	8.4	5.7	2.4	8.6	5.1	3.9	6.9	0.7	3.0	11.2	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	69.1	46.1	44.2	69.5	55.6	48.7	63.5	20.3	15.9	62.0	24.9	17.0
LnGrp LOS	E	D	D	E	E	D	E	C	B	E	C	B
Approach Vol, veh/h		968			824			1100			1366	
Approach Delay, s/veh		48.9			55.3			29.6			29.7	
Approach LOS		D			E			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.4	64.2	10.9	31.6	15.2	62.4	15.9	26.5
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	12.0	48.0	10.7	31.3	13.5	46.5	16.5	25.5
Max Q Clear Time (g_c+I1), s	8.7	19.1	6.9	20.8	10.5	29.3	11.4	20.2
Green Ext Time (p_c), s	0.2	5.6	0.0	3.2	0.2	6.9	0.1	1.8

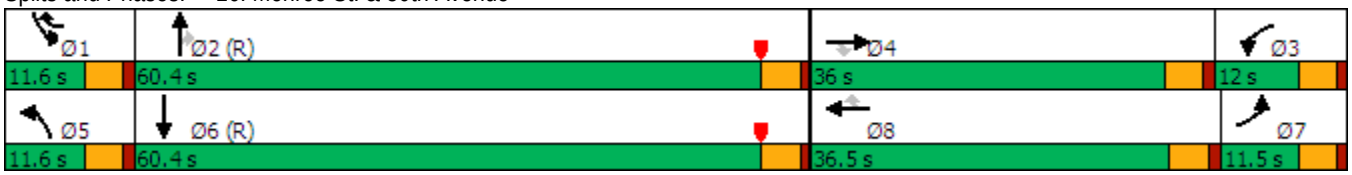
Intersection Summary	
HCM 6th Ctrl Delay	39.0
HCM 6th LOS	D

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	760	101	45	654	130	79	958	67	102	1347	53
Future Volume (vph)	30	760	101	45	654	130	79	958	67	102	1347	53
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	210		120	220		150	200		150	170		150
Storage Lanes	2		1	1		1	2		1	2		0
Taper Length (ft)	120			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		710			640			1322			436	
Travel Time (s)		9.7			8.7			18.0			5.9	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases			4			8			2			
Detector Phase	7	4	4	3	8	1	5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	
Minimum Split (s)	11.5	20.5	20.5	11.5	20.5	11.5	11.5	20.5	20.5	11.5	20.5	
Total Split (s)	11.5	36.0	36.0	12.0	36.5	11.6	11.6	60.4	60.4	11.6	60.4	
Total Split (%)	9.6%	30.0%	30.0%	10.0%	30.4%	9.7%	9.7%	50.3%	50.3%	9.7%	50.3%	
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)	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	0.0	-0.5	-0.5	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.5	4.0	4.0	
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lead	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: 11.5 (10%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
Natural Cycle: 90
Control Type: Actuated-Coordinated

Splits and Phases: 16: Monroe St. & 50th Avenue



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	760	101	45	654	130	79	958	67	102	1347	53
Future Volume (veh/h)	30	760	101	45	654	130	79	958	67	102	1347	53
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	31	776	103	46	667	133	81	978	68	104	1374	54
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	254	888	376	87	803	434	203	1866	784	210	1790	70
Arrive On Green	0.07	0.24	0.24	0.05	0.22	0.22	0.06	0.54	0.53	0.06	0.54	0.54
Sat Flow, veh/h	3469	3642	1543	1734	3642	1543	3469	3642	1543	3469	3481	137
Grp Volume(v), veh/h	31	776	103	46	667	133	81	978	68	104	718	710
Grp Sat Flow(s),veh/h/ln	1734	1821	1543	1734	1821	1543	1734	1821	1543	1734	1821	1797
Q Serve(g_s), s	1.0	24.6	5.3	3.1	21.0	6.1	2.7	20.7	2.0	3.5	37.1	37.3
Cycle Q Clear(g_c), s	1.0	24.6	5.3	3.1	21.0	6.1	2.7	20.7	2.0	3.5	37.1	37.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.08
Lane Grp Cap(c), veh/h	254	888	376	87	803	434	203	1866	784	210	937	924
V/C Ratio(X)	0.12	0.87	0.27	0.53	0.83	0.31	0.40	0.52	0.09	0.49	0.77	0.77
Avail Cap(c_a), veh/h	254	971	412	116	986	512	220	1866	784	220	937	924
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.05	1.05	1.05	1.05	1.05	1.05
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	52.0	43.6	24.9	55.6	44.6	19.9	54.3	18.3	8.2	54.4	21.9	22.0
Incr Delay (d2), s/veh	0.2	8.4	0.4	5.0	5.1	0.4	1.3	1.1	0.2	1.8	6.0	6.1
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	0.4	11.6	2.4	1.4	9.6	2.5	1.2	8.1	0.9	1.5	15.5	15.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.2	52.0	25.3	60.6	49.7	20.3	55.5	19.4	8.4	56.2	27.9	28.1
LnGrp LOS	D	D	C	E	D	C	E	B	A	E	C	C
Approach Vol, veh/h		910			846			1127			1532	
Approach Delay, s/veh		49.0			45.7			21.3			29.9	
Approach LOS		D			D			C			C	

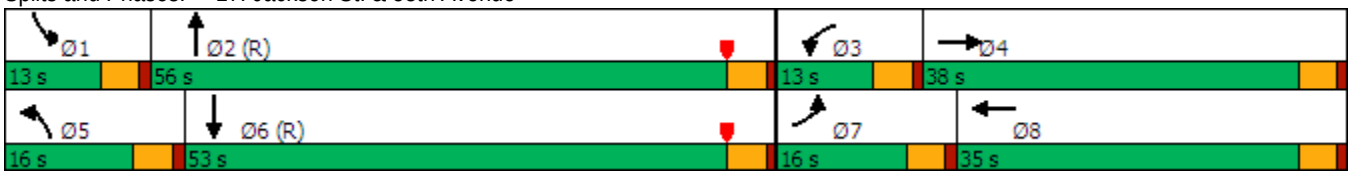
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.3	65.5	10.0	33.3	11.0	65.7	12.8	30.5
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	7.1	55.9	7.5	31.5	7.1	55.9	7.0	32.0
Max Q Clear Time (g_c+I1), s	5.5	22.7	5.1	26.6	4.7	39.3	3.0	23.0
Green Ext Time (p_c), s	0.0	7.4	0.0	2.2	0.0	8.2	0.0	3.0

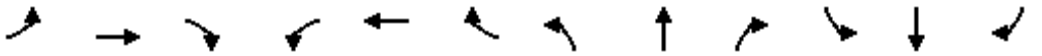
Intersection Summary	
HCM 6th Ctrl Delay	34.7
HCM 6th LOS	C

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	55	531	39	15	361	20	45	708	5	23	769	30
Future Volume (vph)	55	531	39	15	361	20	45	708	5	23	769	30
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		150	150		150	150		150	150		150
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			50			55			55	
Link Distance (ft)		4534			1079			1013			510	
Travel Time (s)		61.8			14.7			12.6			6.3	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	11.5	22.5		11.5	22.5		11.5	22.5		11.5	22.5	
Total Split (s)	16.0	38.0		13.0	35.0		16.0	56.0		13.0	53.0	
Total Split (%)	13.3%	31.7%		10.8%	29.2%		13.3%	46.7%		10.8%	44.2%	
Yellow Time (s)	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	
Lost Time Adjust (s)	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	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	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 Yellow	
Natural Cycle: 70	
Control Type: Actuated-Coordinated	

Splits and Phases: 17: Jackson St. & 58th Avenue

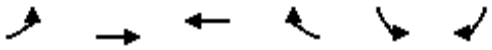




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	55	531	39	15	361	20	45	708	5	23	769	30
Future Volume (veh/h)	55	531	39	15	361	20	45	708	5	23	769	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	56	542	40	15	368	20	46	722	5	23	785	31
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	86	644	47	40	570	31	79	2109	15	54	1982	78
Arrive On Green	0.05	0.20	0.20	0.02	0.17	0.17	0.05	0.60	0.60	0.03	0.58	0.58
Sat Flow, veh/h	1734	3267	241	1734	3338	181	1734	3522	24	1734	3393	134
Grp Volume(v), veh/h	56	286	296	15	190	198	46	355	372	23	400	416
Grp Sat Flow(s),veh/h/ln	1734	1730	1778	1734	1730	1789	1734	1730	1817	1734	1730	1797
Q Serve(g_s), s	3.8	19.1	19.2	1.0	12.3	12.4	3.1	12.4	12.4	1.6	15.0	15.0
Cycle Q Clear(g_c), s	3.8	19.1	19.2	1.0	12.3	12.4	3.1	12.4	12.4	1.6	15.0	15.0
Prop In Lane	1.00		0.14	1.00		0.10	1.00		0.01	1.00		0.07
Lane Grp Cap(c), veh/h	86	341	350	40	295	305	79	1036	1088	54	1011	1050
V/C Ratio(X)	0.65	0.84	0.84	0.38	0.64	0.65	0.58	0.34	0.34	0.42	0.40	0.40
Avail Cap(c_a), veh/h	166	483	496	123	440	455	166	1036	1088	123	1011	1050
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	1.00
Uniform Delay (d), s/veh	56.0	46.4	46.4	57.8	46.4	46.4	56.1	12.1	12.2	57.1	13.5	13.5
Incr Delay (d2), s/veh	8.2	8.9	9.0	5.8	2.3	2.3	6.5	0.9	0.9	5.2	1.2	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	8.7	9.0	0.5	5.3	5.5	1.5	4.4	4.6	0.7	5.4	5.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	64.2	55.3	55.4	63.6	48.7	48.7	62.7	13.1	13.0	62.3	14.7	14.6
LnGrp LOS	E	E	E	E	D	D	E	B	B	E	B	B
Approach Vol, veh/h		638			403			773			839	
Approach Delay, s/veh		56.1			49.3			16.0			15.9	
Approach LOS		E			D			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.2	76.4	7.3	28.1	10.0	74.6	10.4	25.0
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	8.5	51.5	8.5	33.5	11.5	48.5	11.5	30.5
Max Q Clear Time (g_c+I1), s	3.6	14.4	3.0	21.2	5.1	17.0	5.8	14.4
Green Ext Time (p_c), s	0.0	4.1	0.0	2.4	0.0	4.6	0.0	1.7

Intersection Summary	
HCM 6th Ctrl Delay	30.7
HCM 6th LOS	C



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	1	661	1370	33	95	1
Future Volume (vph)	1	661	1370	33	95	1
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Storage Length (ft)	0			150	0	0
Storage Lanes	0			1	1	0
Taper Length (ft)	60				60	
Link Speed (mph)		40	40		25	
Link Distance (ft)		207	1350		380	
Travel Time (s)		3.5	23.0		10.4	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	2%	2%	2%	2%	0%	0%
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	1	661	1370	33	95	1
Future Vol, veh/h	1	661	1370	33	95	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	150	0	-
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	2	2	2	2	0	0
Mvmt Flow	1	674	1398	34	97	1

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1432	0	-	0	2074	1398
Stage 1	-	-	-	-	1398	-
Stage 2	-	-	-	-	676	-
Critical Hdwy	4.12	-	-	-	5.6	6.2
Critical Hdwy Stg 1	-	-	-	-	5	-
Critical Hdwy Stg 2	-	-	-	-	5	-
Follow-up Hdwy	2.218	-	-	-	3	3.3
Pot Cap-1 Maneuver	474	-	-	-	100	174
Stage 1	-	-	-	-	291	-
Stage 2	-	-	-	-	614	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	474	-	-	-	100	174
Mov Cap-2 Maneuver	-	-	-	-	218	-
Stage 1	-	-	-	-	290	-
Stage 2	-	-	-	-	614	-

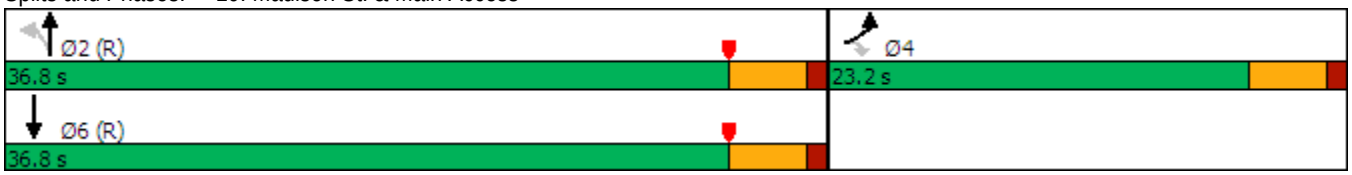
Approach	EB	WB	SB
HCM Control Delay, s	0	0	34.6
HCM LOS			D

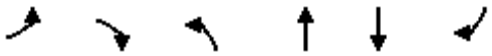
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	474	-	-	-	217
HCM Lane V/C Ratio	0.002	-	-	-	0.451
HCM Control Delay (s)	12.6	0	-	-	34.6
HCM Lane LOS	B	A	-	-	D
HCM 95th %tile Q(veh)	0	-	-	-	2.2

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	276	20	24	507	1048	105
Future Volume (vph)	276	20	24	507	1048	105
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Storage Length (ft)	100	0	150			0
Storage Lanes	1	1	1			0
Taper Length (ft)	90		90			
Right Turn on Red		Yes				Yes
Link Speed (mph)	25			50	50	
Link Distance (ft)	499			880	169	
Travel Time (s)	13.6			12.0	2.3	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)						
Turn Type	Prot	Perm	Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases		4	2			
Detector Phase	4	4	2	2	6	
Switch Phase						
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	
Total Split (s)	23.2	23.2	36.8	36.8	36.8	
Total Split (%)	38.7%	38.7%	61.3%	61.3%	61.3%	
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 Optimize?						
Recall Mode	None	None	C-Max	C-Max	C-Max	

Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Yellow	
Natural Cycle: 50	
Control Type: Actuated-Coordinated	

Splits and Phases: 19: Madison St. & Main Access





Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	276	20	24	507	1048	105
Future Volume (veh/h)	276	20	24	507	1048	105
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	282	20	24	517	1069	107
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	342	304	347	2259	2073	207
Arrive On Green	0.20	0.20	0.65	0.65	0.65	0.65
Sat Flow, veh/h	1734	1543	477	3551	3267	318
Grp Volume(v), veh/h	282	20	24	517	582	594
Grp Sat Flow(s),veh/h/ln	1734	1543	477	1730	1730	1764
Q Serve(g_s), s	9.4	0.6	1.7	3.7	10.6	10.6
Cycle Q Clear(g_c), s	9.4	0.6	12.2	3.7	10.6	10.6
Prop In Lane	1.00	1.00	1.00			0.18
Lane Grp Cap(c), veh/h	342	304	347	2259	1129	1151
V/C Ratio(X)	0.82	0.07	0.07	0.23	0.52	0.52
Avail Cap(c_a), veh/h	541	481	347	2259	1129	1151
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	23.1	19.6	8.7	4.3	5.5	5.5
Incr Delay (d2), s/veh	5.8	0.1	0.4	0.2	1.7	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.1	0.2	0.2	0.7	2.3	2.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	28.8	19.7	9.0	4.5	7.1	7.1
LnGrp LOS	C	B	A	A	A	A
Approach Vol, veh/h	302			541	1176	
Approach Delay, s/veh	28.2			4.7	7.1	
Approach LOS	C			A	A	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		43.7		16.3		43.7
Change Period (Y+Rc), s		4.5		4.5		4.5
Max Green Setting (Gmax), s		32.3		18.7		32.3
Max Q Clear Time (g_c+I1), s		14.2		11.4		12.6
Green Ext Time (p_c), s		3.1		0.6		7.0

Intersection Summary	
HCM 6th Ctrl Delay	9.6
HCM 6th LOS	A

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	543	4	13	358	6	3
Future Volume (vph)	543	4	13	358	6	3
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Storage Length (ft)		0	50		0	0
Storage Lanes		0	1		1	0
Taper Length (ft)			60		60	
Link Speed (mph)	50			50	25	
Link Distance (ft)	403			335	383	
Travel Time (s)	5.5			4.6	10.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
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	543	4	13	358	6	3
Future Vol, veh/h	543	4	13	358	6	3
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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	590	4	14	389	7	3

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	594	0	815	297
Stage 1	-	-	-	-	592	-
Stage 2	-	-	-	-	223	-
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	-	-	978	-	315	699
Stage 1	-	-	-	-	516	-
Stage 2	-	-	-	-	793	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	978	-	311	699
Mov Cap-2 Maneuver	-	-	-	-	414	-
Stage 1	-	-	-	-	516	-
Stage 2	-	-	-	-	782	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	12.7
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	479	-	-	978	-
HCM Lane V/C Ratio	0.02	-	-	0.014	-
HCM Control Delay (s)	12.7	-	-	8.7	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	539	7	0	371	0	4
Future Volume (vph)	539	7	0	371	0	4
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Link Speed (mph)	50			50	25	
Link Distance (ft)	335			276	233	
Travel Time (s)	4.6			3.8	6.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

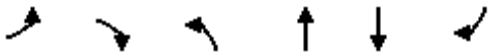
Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	539	7	0	371	0	4
Future Vol, veh/h	539	7	0	371	0	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	586	8	0	403	0	4

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	297
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	699
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	699
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	10.2
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	699	-	-	-
HCM Lane V/C Ratio	0.006	-	-	-
HCM Control Delay (s)	10.2	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q(veh)	0	-	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	10	0	783	1143	14
Future Volume (vph)	0	10	0	783	1143	14
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Link Speed (mph)	25			50	50	
Link Distance (ft)	210			224	288	
Travel Time (s)	5.7			3.1	3.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

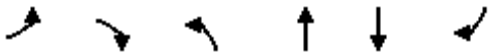
Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	10	0	783	1143	14
Future Vol, veh/h	0	10	0	783	1143	14
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	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	11	0	851	1242	15

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	629	-	0	-	0
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	425	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	425	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.7	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	425	-	-
HCM Lane V/C Ratio	-	0.026	-	-
HCM Control Delay (s)	-	13.7	-	-
HCM Lane LOS	-	B	-	-
HCM 95th %tile Q(veh)	-	0.1	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	1	1	1	647	1141	1
Future Volume (vph)	1	1	1	647	1141	1
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Storage Length (ft)	0	0	150			0
Storage Lanes	1	0	1			0
Taper Length (ft)	90		90			
Link Speed (mph)	25			40	40	
Link Distance (ft)	306			596	577	
Travel Time (s)	8.3			10.2	9.8	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	1	1	1	647	1141	1
Future Vol, veh/h	1	1	1	647	1141	1
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	98	98	98	98	98	98
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	1	1	660	1164	1

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1497	583	1165	0	-	0
Stage 1	1165	-	-	-	-	-
Stage 2	332	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	113	456	595	-	-	-
Stage 1	259	-	-	-	-	-
Stage 2	699	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	113	456	595	-	-	-
Mov Cap-2 Maneuver	113	-	-	-	-	-
Stage 1	258	-	-	-	-	-
Stage 2	699	-	-	-	-	-

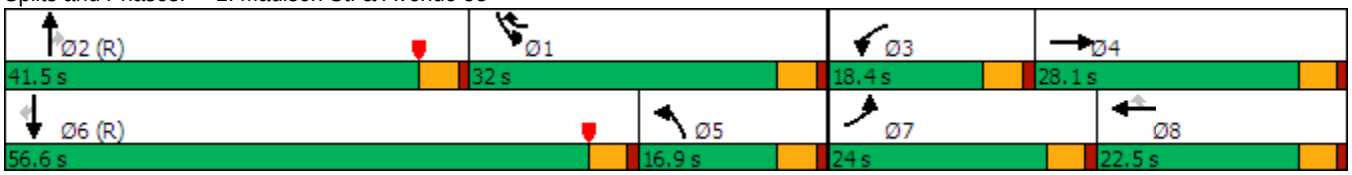
Approach	EB	NB	SB
HCM Control Delay, s	25.1	0	0
HCM LOS	D		

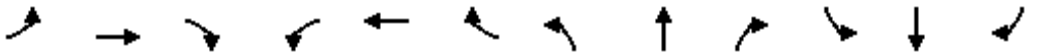
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	595	-	181	-	-
HCM Lane V/C Ratio	0.002	-	0.011	-	-
HCM Control Delay (s)	11.1	-	25.1	-	-
HCM Lane LOS	B	-	D	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	292	227	45	138	269	684	80	1120	85	413	1045	350
Future Volume (vph)	292	227	45	138	269	684	80	1120	85	413	1045	350
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	100		100	180		180	330		160	160		50
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		276			988			288			752	
Travel Time (s)		3.8			13.5			3.9			10.3	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA		Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases						8			2			6
Detector Phase	7	4		3	8	1	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	22.5		11.5	22.5	11.5	11.5	22.5	22.5	11.5	22.5	22.5
Total Split (s)	24.0	28.1		18.4	22.5	32.0	16.9	41.5	41.5	32.0	56.6	56.6
Total Split (%)	20.0%	23.4%		15.3%	18.8%	26.7%	14.1%	34.6%	34.6%	26.7%	47.2%	47.2%
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		Lead	Lag	Lag	Lag	Lead	Lead	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	C-Max	C-Max	None	C-Max	C-Max

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 87.9 (73%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 130	
Control Type: Actuated-Coordinated	

Splits and Phases: 1: Madison St. & Avenue 58





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	292	227	45	138	269	684	80	1120	85	413	1045	350
Future Volume (veh/h)	292	227	45	138	269	684	80	1120	85	413	1045	350
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	298	232	46	141	274	698	82	1143	87	421	1066	357
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	282	608	118	167	500	585	189	1067	476	407	1502	670
Arrive On Green	0.16	0.21	0.21	0.10	0.14	0.14	0.11	0.31	0.31	0.23	0.43	0.43
Sat Flow, veh/h	1734	2887	563	1734	3460	1543	1734	3460	1543	1734	3460	1543
Grp Volume(v), veh/h	298	137	141	141	274	698	82	1143	87	421	1066	357
Grp Sat Flow(s),veh/h/ln	1734	1730	1720	1734	1730	1543	1734	1730	1543	1734	1730	1543
Q Serve(g_s), s	19.5	8.2	8.4	9.6	8.8	14.7	5.3	37.0	3.7	28.2	30.2	11.9
Cycle Q Clear(g_c), s	19.5	8.2	8.4	9.6	8.8	14.7	5.3	37.0	3.7	28.2	30.2	11.9
Prop In Lane	1.00		0.33	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	282	364	362	167	500	585	189	1067	476	407	1502	670
V/C Ratio(X)	1.06	0.38	0.39	0.84	0.55	1.19	0.43	1.07	0.18	1.03	0.71	0.53
Avail Cap(c_a), veh/h	282	364	362	201	519	594	189	1067	476	407	1502	670
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	1.00
Uniform Delay (d), s/veh	50.3	40.6	40.7	53.3	47.7	15.4	50.0	41.5	17.2	45.9	27.8	8.4
Incr Delay (d2), s/veh	69.5	0.6	0.7	23.3	1.1	102.8	1.6	48.8	0.8	53.6	2.9	3.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.6	3.4	3.5	5.1	3.8	24.0	2.3	22.1	1.9	17.6	12.2	3.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	119.8	41.3	41.4	76.6	48.8	118.2	51.6	90.3	18.1	99.5	30.6	11.4
LnGrp LOS	F	D	D	E	D	F	D	F	B	F	C	B
Approach Vol, veh/h		576			1113			1312			1844	
Approach Delay, s/veh		81.9			95.9			83.1			42.6	
Approach LOS		F			F			F			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	32.7	41.5	16.1	29.8	17.6	56.6	24.0	21.8
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	27.5	37.0	13.9	23.6	12.4	52.1	19.5	18.0
Max Q Clear Time (g_c+I1), s	30.2	39.0	11.6	10.4	7.3	32.2	21.5	16.7
Green Ext Time (p_c), s	0.0	0.0	0.1	1.1	0.1	8.2	0.0	0.7

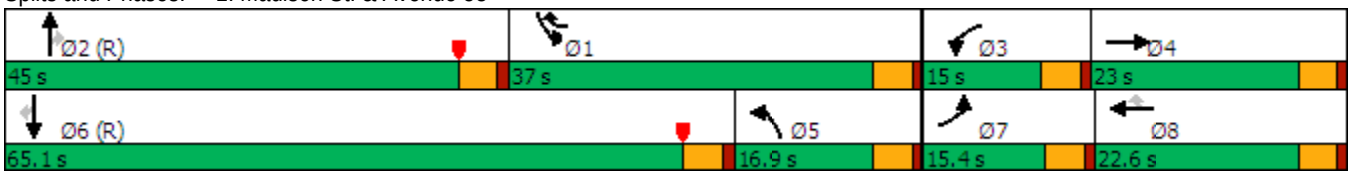
Intersection Summary	
HCM 6th Ctrl Delay	70.5
HCM 6th LOS	E

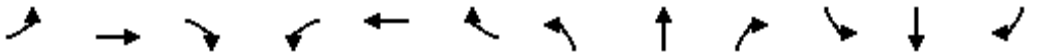
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	292	227	45	138	269	684	80	1120	85	413	1045	350
Future Volume (vph)	292	227	45	138	269	684	80	1120	85	413	1045	350
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	100		100	180		180	330		160	160		50
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		276			988			288			752	
Travel Time (s)		3.8			13.5			3.9			10.3	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA		Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases						8			2			6
Detector Phase	7	4		3	8	1	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	22.5		11.5	22.5	11.5	11.5	22.5	22.5	11.5	22.5	22.5
Total Split (s)	15.4	23.0		15.0	22.6	37.0	16.9	45.0	45.0	37.0	65.1	65.1
Total Split (%)	12.8%	19.2%		12.5%	18.8%	30.8%	14.1%	37.5%	37.5%	30.8%	54.3%	54.3%
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		Lead	Lag	Lag	Lag	Lead	Lead	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	C-Max	C-Max	None	C-Max	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 Yellow
Natural Cycle: 120
Control Type: Actuated-Coordinated

Splits and Phases: 1: Madison St. & Avenue 58





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	292	227	45	138	269	684	80	1120	85	413	1045	350
Future Volume (veh/h)	292	227	45	138	269	684	80	1120	85	413	1045	350
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	298	232	46	141	274	698	82	1143	87	421	1066	357
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	315	228	45	152	522	651	179	1168	521	470	1747	779
Arrive On Green	0.09	0.15	0.15	0.09	0.15	0.15	0.10	0.34	0.34	0.27	0.50	0.50
Sat Flow, veh/h	3469	1476	293	1734	3460	1543	1734	3460	1543	1734	3460	1543
Grp Volume(v), veh/h	298	0	278	141	274	698	82	1143	87	421	1066	357
Grp Sat Flow(s),veh/h/ln	1734	0	1768	1734	1730	1543	1734	1730	1543	1734	1730	1543
Q Serve(g_s), s	10.3	0.0	18.5	9.7	8.8	11.5	5.3	39.2	3.6	28.0	26.4	11.9
Cycle Q Clear(g_c), s	10.3	0.0	18.5	9.7	8.8	11.5	5.3	39.2	3.6	28.0	26.4	11.9
Prop In Lane	1.00		0.17	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	315	0	273	152	522	651	179	1168	521	470	1747	779
V/C Ratio(X)	0.95	0.00	1.02	0.93	0.52	1.07	0.46	0.98	0.17	0.90	0.61	0.46
Avail Cap(c_a), veh/h	315	0	273	152	522	651	179	1168	521	470	1747	779
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.3	0.0	50.8	54.4	47.0	16.4	50.6	39.3	15.9	42.1	21.2	8.5
Incr Delay (d2), s/veh	36.5	0.0	59.6	52.3	1.0	56.3	1.8	21.7	0.7	19.5	1.6	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.9	0.0	12.4	6.3	3.7	20.0	2.3	19.1	1.8	14.0	10.2	3.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	90.8	0.0	110.4	106.7	48.0	72.7	52.5	61.0	16.6	61.7	22.8	10.4
LnGrp LOS	F	A	F	F	D	F	D	E	B	E	C	B
Approach Vol, veh/h		576			1113			1312			1844	
Approach Delay, s/veh		100.2			70.9			57.6			29.3	
Approach LOS		F			E			E			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	37.0	45.0	15.0	23.0	16.9	65.1	15.4	22.6
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	32.5	40.5	10.5	18.5	12.4	60.6	10.9	18.1
Max Q Clear Time (g_c+I1), s	30.0	41.2	11.7	20.5	7.3	28.4	12.3	13.5
Green Ext Time (p_c), s	0.4	0.0	0.0	0.0	0.1	9.7	0.0	1.9

Intersection Summary	
HCM 6th Ctrl Delay	54.9
HCM 6th LOS	D

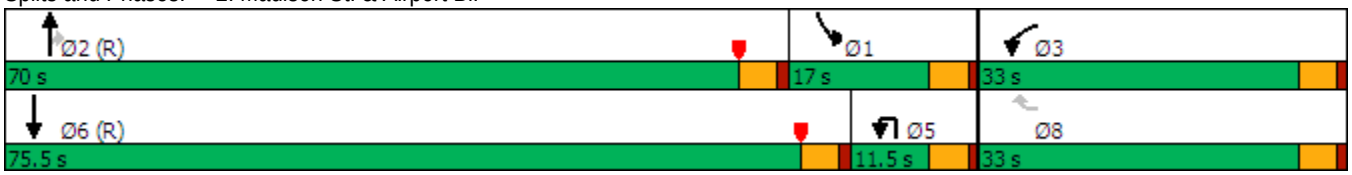
Notes

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

Lane Group	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	365	332	1	1712	313	146	1414
Future Volume (vph)	365	332	1	1712	313	146	1414
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150	150	150		50	150	
Storage Lanes	0	0	1		1	1	
Taper Length (ft)	25		140			90	
Right Turn on Red		Yes			Yes		
Link Speed (mph)	50			50			50
Link Distance (ft)	5252			767			818
Travel Time (s)	71.6			10.5			11.2
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)							
Turn Type	Prot	Perm	Prot	NA	Perm	Prot	NA
Protected Phases	3		5	2		1	6
Permitted Phases		8			2		
Detector Phase	3	8	5	2	2	1	6
Switch Phase							
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	20.5	11.5	20.5	20.5	11.5	20.5
Total Split (s)	33.0	33.0	11.5	70.0	70.0	17.0	75.5
Total Split (%)	27.5%	27.5%	9.6%	58.3%	58.3%	14.2%	62.9%
Yellow Time (s)	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
Lost Time Adjust (s)	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag			Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?			Yes	Yes	Yes	Yes	Yes
Recall Mode	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 Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	

Splits and Phases: 2: Madison St. & Airport Bl.



Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (veh/h)	365	332	1	1712	313	146	1414
Future Volume (veh/h)	365	332	1	1712	313	146	1414
Initial Q (Qb), veh	0	0		0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00			1.00	1.00	
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No
Adj Sat Flow, veh/h/ln	1821	1821		1821	1821	1821	1821
Adj Flow Rate, veh/h	372	339		1747	319	149	1443
Peak Hour Factor	0.98	0.98		0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2		2	2	2	2
Cap, veh/h	412	366		1903	849	195	2408
Arrive On Green	0.24	0.24		0.55	0.55	0.11	0.70
Sat Flow, veh/h	1734	1543		3551	1543	1734	3551
Grp Volume(v), veh/h	372	339		1747	319	149	1443
Grp Sat Flow(s),veh/h/ln	1734	1543		1730	1543	1734	1730
Q Serve(g_s), s	25.0	25.8		55.1	4.3	10.0	26.1
Cycle Q Clear(g_c), s	25.0	25.8		55.1	4.3	10.0	26.1
Prop In Lane	1.00	1.00			1.00	1.00	
Lane Grp Cap(c), veh/h	412	366		1903	849	195	2408
V/C Ratio(X)	0.90	0.93		0.92	0.38	0.76	0.60
Avail Cap(c_a), veh/h	419	373		1903	849	195	2408
HCM Platoon Ratio	1.00	1.00		1.00	1.00	1.00	1.00
Upstream Filter(I)	0.71	0.71		1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.4	44.7		24.5	1.5	51.7	9.5
Incr Delay (d2), s/veh	17.1	22.3		8.6	1.3	16.2	1.1
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.2	11.7		22.0	3.9	5.1	8.2
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	61.6	67.0		33.1	2.8	67.9	10.6
LnGrp LOS	E	E		C	A	E	B
Approach Vol, veh/h	711			2066			1592
Approach Delay, s/veh	64.1			28.4			16.0
Approach LOS	E			C			B

Timer - Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	17.5	70.0				87.5		32.5
Change Period (Y+Rc), s	4.5	4.5				4.5		4.5
Max Green Setting (Gmax), s	12.5	65.5				71.0		28.5
Max Q Clear Time (g_c+I1), s	12.0	57.1				28.1		27.8
Green Ext Time (p_c), s	0.0	6.7				13.4		0.2

Intersection Summary	
HCM 6th Ctrl Delay	29.7
HCM 6th LOS	C

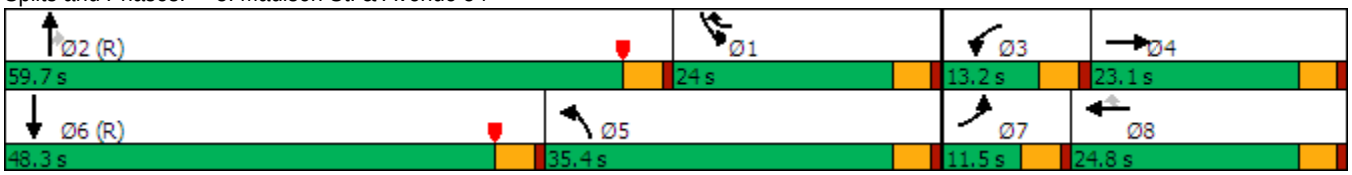
Notes

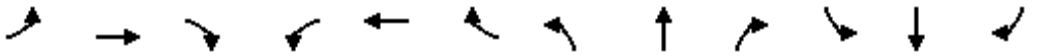
User approved ignoring U-Turning movement.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	84	521	1231	114	450	470	804	1503	229	263	969	51
Future Volume (vph)	84	521	1231	114	450	470	804	1503	229	263	969	51
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	160		150	910		150	160		120	305		150
Storage Lanes	1		1	1		1	2		1	1		0
Taper Length (ft)	80			120			120			100		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		5080			840			924			2398	
Travel Time (s)		63.0			10.4			12.6			32.7	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Free	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases			Free			8			2			
Detector Phase	7	4		3	8	1	5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	
Minimum Split (s)	11.5	22.5		11.5	22.5	11.5	11.5	22.5	22.5	11.5	22.5	
Total Split (s)	11.5	23.1		13.2	24.8	24.0	35.4	59.7	59.7	24.0	48.3	
Total Split (%)	9.6%	19.3%		11.0%	20.7%	20.0%	29.5%	49.8%	49.8%	20.0%	40.3%	
Yellow Time (s)	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	
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)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lag	Lead	Lead	Lag	Lead	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	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 Yellow	
Natural Cycle: 110	
Control Type: Actuated-Coordinated	

Splits and Phases: 3: Madison St. & Avenue 54





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	84	521	1231	114	450	470	804	1503	229	263	969	51
Future Volume (veh/h)	84	521	1231	114	450	470	804	1503	229	263	969	51
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	86	532	0	116	459	480	820	1534	234	268	989	52
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	101	536		126	585	512	866	1592	710	282	1220	64
Arrive On Green	0.06	0.15	0.00	0.07	0.17	0.17	0.26	0.46	0.46	0.16	0.36	0.36
Sat Flow, veh/h	1734	3460	1543	1734	3460	1543	3365	3460	1543	1734	3344	176
Grp Volume(v), veh/h	86	532	0	116	459	480	820	1534	234	268	512	529
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1730	1543	1682	1730	1543	1734	1730	1789
Q Serve(g_s), s	5.9	18.4	0.0	8.0	15.2	12.6	28.7	51.6	8.4	18.4	32.0	32.0
Cycle Q Clear(g_c), s	5.9	18.4	0.0	8.0	15.2	12.6	28.7	51.6	8.4	18.4	32.0	32.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.10
Lane Grp Cap(c), veh/h	101	536		126	585	512	866	1592	710	282	631	653
V/C Ratio(X)	0.85	0.99		0.92	0.78	0.94	0.95	0.96	0.33	0.95	0.81	0.81
Avail Cap(c_a), veh/h	101	536		126	585	512	866	1592	710	282	631	653
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.0	50.6	0.0	55.3	47.8	24.6	43.7	31.4	10.9	49.8	34.4	34.4
Incr Delay (d2), s/veh	6.3	9.9	0.0	56.9	6.9	25.2	18.9	15.4	1.2	40.4	10.8	10.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	8.3	0.0	5.3	6.8	15.8	13.6	23.0	3.9	10.8	14.5	14.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	62.3	60.5	0.0	112.2	54.7	49.8	62.6	46.9	12.1	90.1	45.2	44.8
LnGrp LOS	E	E		F	D	D	E	D	B	F	D	D
Approach Vol, veh/h		618	A		1055			2588			1309	
Approach Delay, s/veh		60.7			58.8			48.7			54.2	
Approach LOS		E			E			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	24.0	59.7	13.2	23.1	35.4	48.3	11.5	24.8
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	19.5	55.2	8.7	18.6	30.9	43.8	7.0	20.3
Max Q Clear Time (g_c+I1), s	20.4	53.6	10.0	20.4	30.7	34.0	7.9	17.2
Green Ext Time (p_c), s	0.0	1.3	0.0	0.0	0.1	4.1	0.0	1.4

Intersection Summary	
HCM 6th Ctrl Delay	53.3
HCM 6th LOS	D

Notes

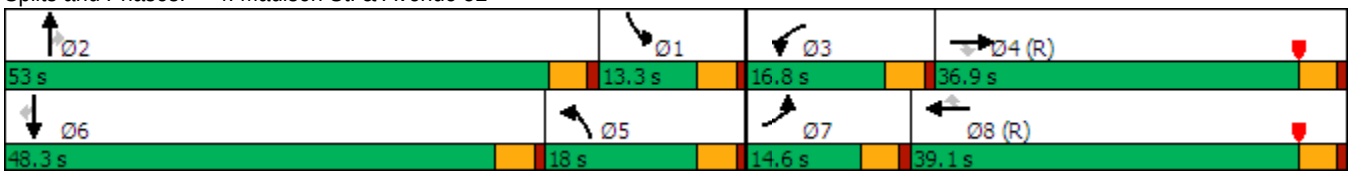
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

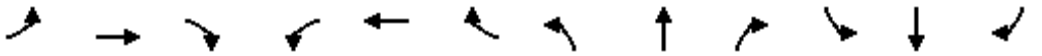
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	135	696	139	123	940	224	285	1395	180	223	979	139
Future Volume (vph)	135	696	139	123	940	224	285	1395	180	223	979	139
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	435		50	200		325	160		160	255		50
Storage Lanes	1		1	1		1	2		1	2		1
Taper Length (ft)	105			120			140			160		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			55			50			50	
Link Distance (ft)		1169			798			1237			1379	
Travel Time (s)		17.7			9.9			16.9			18.8	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	30.5	30.5	11.5	30.5	30.5	11.5	31.5	31.5	11.5	30.5	30.5
Total Split (s)	14.6	36.9	36.9	16.8	39.1	39.1	18.0	53.0	53.0	13.3	48.3	48.3
Total Split (%)	12.2%	30.8%	30.8%	14.0%	32.6%	32.6%	15.0%	44.2%	44.2%	11.1%	40.3%	40.3%
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	Lag	Lead	Lead	Lag	Lead	Lead
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	Max	Max

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 65.5 (55%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow
Natural Cycle: 125
Control Type: Actuated-Coordinated

Splits and Phases: 4: Madison St. & Avenue 52





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	135	696	139	123	940	224	285	1395	180	223	979	139
Future Volume (veh/h)	135	696	139	123	940	224	285	1395	180	223	979	139
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	138	710	142	126	959	229	291	1423	184	228	999	142
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	146	987	440	151	998	445	379	1398	624	247	1263	563
Arrive On Green	0.08	0.29	0.29	0.09	0.29	0.29	0.11	0.40	0.40	0.07	0.36	0.36
Sat Flow, veh/h	1734	3460	1543	1734	3460	1543	3365	3460	1543	3365	3460	1543
Grp Volume(v), veh/h	138	710	142	126	959	229	291	1423	184	228	999	142
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1730	1543	1682	1730	1543	1682	1730	1543
Q Serve(g_s), s	9.5	22.1	6.4	8.6	32.7	11.8	10.1	48.5	7.0	8.1	30.9	5.8
Cycle Q Clear(g_c), s	9.5	22.1	6.4	8.6	32.7	11.8	10.1	48.5	7.0	8.1	30.9	5.8
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	146	987	440	151	998	445	379	1398	624	247	1263	563
V/C Ratio(X)	0.95	0.72	0.32	0.83	0.96	0.51	0.77	1.02	0.29	0.92	0.79	0.25
Avail Cap(c_a), veh/h	146	987	440	178	998	445	379	1398	624	247	1263	563
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	1.00
Uniform Delay (d), s/veh	54.7	38.6	18.4	53.9	42.0	22.4	51.7	35.7	12.8	55.3	34.0	15.0
Incr Delay (d2), s/veh	58.0	4.5	1.9	24.4	20.5	4.2	9.3	28.5	1.2	37.3	5.1	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.4	9.7	3.2	4.6	15.9	4.5	4.6	24.4	3.4	4.6	13.1	2.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	112.7	43.1	20.3	78.3	62.6	26.6	61.0	64.3	14.0	92.6	39.1	16.0
LnGrp LOS	F	D	C	E	E	C	E	F	B	F	D	B
Approach Vol, veh/h		990			1314			1898			1369	
Approach Delay, s/veh		49.5			57.8			58.9			45.6	
Approach LOS		D			E			E			D	

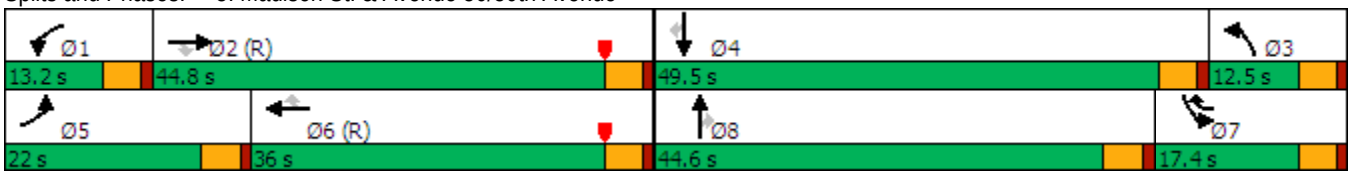
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.3	53.0	15.0	38.7	18.0	48.3	14.6	39.1
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	8.8	48.5	12.3	32.4	13.5	43.8	10.1	34.6
Max Q Clear Time (g_c+I1), s	10.1	50.5	10.6	24.1	12.1	32.9	11.5	34.7
Green Ext Time (p_c), s	0.0	0.0	0.0	3.1	0.1	5.0	0.0	0.0

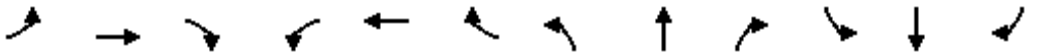
Intersection Summary	
HCM 6th Ctrl Delay	53.7
HCM 6th LOS	D

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	264	822	195	78	909	439	204	1546	73	352	1257	277
Future Volume (vph)	264	822	195	78	909	439	204	1546	73	352	1257	277
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	305		210	300		240	290		220	200		200
Storage Lanes	1		1	1		1	2		1	2		1
Taper Length (ft)	120			90			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			50			50			50	
Link Distance (ft)		579			1049			1270			550	
Travel Time (s)		8.8			14.3			17.3			7.5	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
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)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	22.0	44.8	44.8	13.2	36.0	11.5	12.5	44.2	44.2	11.5	49.5	49.5
Total Split (s)	22.0	44.8	44.8	13.2	36.0	17.4	12.5	44.6	44.6	17.4	49.5	49.5
Total Split (%)	18.3%	37.3%	37.3%	11.0%	30.0%	14.5%	10.4%	37.2%	37.2%	14.5%	41.3%	41.3%
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	Lag	Lead	Lead	Lag	Lead	Lead
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	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 Yellow	
Natural Cycle: 120	
Control Type: Actuated-Coordinated	

Splits and Phases: 5: Madison St. & Avenue 50/50th Avenue





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	264	822	195	78	909	439	204	1546	73	352	1257	277
Future Volume (veh/h)	264	822	195	78	909	439	204	1546	73	352	1257	277
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	269	839	199	80	928	448	208	1578	74	359	1283	283
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	253	1213	541	100	908	571	224	1661	516	362	1298	579
Arrive On Green	0.18	0.42	0.42	0.07	0.31	0.31	0.08	0.40	0.40	0.13	0.45	0.45
Sat Flow, veh/h	1734	3460	1543	1734	3460	1543	3365	4972	1543	3365	3460	1543
Grp Volume(v), veh/h	269	839	199	80	928	448	208	1578	74	359	1283	283
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1730	1543	1682	1657	1543	1682	1730	1543
Q Serve(g_s), s	17.5	23.8	8.3	5.5	31.5	13.1	7.4	36.8	2.9	12.8	44.1	10.0
Cycle Q Clear(g_c), s	17.5	23.8	8.3	5.5	31.5	13.1	7.4	36.8	2.9	12.8	44.1	10.0
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	253	1213	541	100	908	571	224	1661	516	362	1298	579
V/C Ratio(X)	1.06	0.69	0.37	0.80	1.02	0.78	0.93	0.95	0.14	0.99	0.99	0.49
Avail Cap(c_a), veh/h	253	1213	541	126	908	571	224	1661	516	362	1298	579
HCM Platoon Ratio	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20
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	49.5	29.5	15.7	55.1	41.1	15.5	54.9	35.0	16.0	52.2	32.7	10.4
Incr Delay (d2), s/veh	74.4	3.3	1.9	23.9	35.5	10.4	40.5	13.0	0.6	45.2	22.4	2.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.3	9.4	3.8	3.0	16.6	6.5	4.2	15.1	1.4	7.3	20.0	5.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	123.9	32.7	17.6	79.0	76.6	25.9	95.4	48.0	16.6	97.4	55.2	13.3
LnGrp LOS	F	C	B	E	F	C	F	D	B	F	E	B
Approach Vol, veh/h		1307			1456			1860			1925	
Approach Delay, s/veh		49.2			61.1			52.0			56.9	
Approach LOS		D			E			D			E	

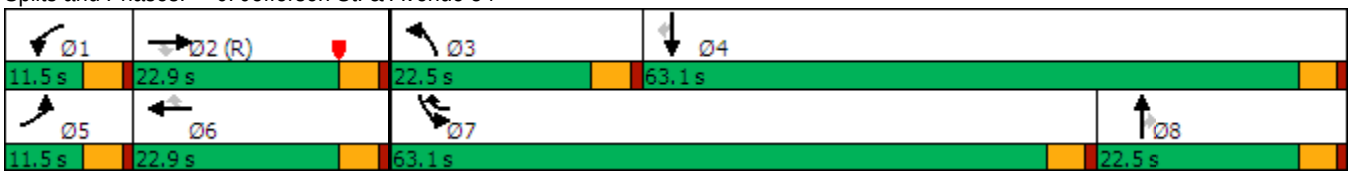
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.4	46.6	12.5	49.5	22.0	36.0	17.4	44.6
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	8.7	40.3	8.0	45.0	17.5	31.5	12.9	40.1
Max Q Clear Time (g_c+I1), s	7.5	25.8	9.4	46.1	19.5	33.5	14.8	38.8
Green Ext Time (p_c), s	0.0	5.2	0.0	0.0	0.0	0.0	0.0	1.0

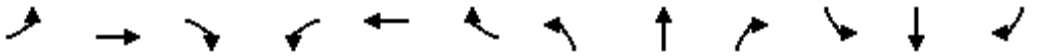
Intersection Summary	
HCM 6th Ctrl Delay	54.9
HCM 6th LOS	D

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	31	24	2	34	11	1395	6	251	53	1747	315	2
Future Volume (vph)	31	24	2	34	11	1395	6	251	53	1747	315	2
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	110		110	140		140	150		150	240		0
Storage Lanes	0		1	1		0	1		1	2		1
Taper Length (ft)	0			110			90			140		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		531			5080			436			1277	
Travel Time (s)		6.6			63.0			5.4			15.8	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
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)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	22.5	22.5	11.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	11.5	22.9	22.9	11.5	22.9	63.1	22.5	22.5	22.5	63.1	63.1	63.1
Total Split (%)	9.6%	19.1%	19.1%	9.6%	19.1%	52.6%	18.8%	18.8%	18.8%	52.6%	52.6%	52.6%
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	None	Max	Max	Max	Max	Max	Max	Max

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:EBT, Start of Yellow	
Natural Cycle: 130	
Control Type: Actuated-Coordinated	

Splits and Phases: 6: Jefferson St. & Avenue 54

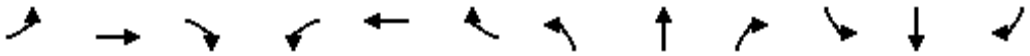




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	31	24	2	34	11	1395	6	251	53	1747	315	2
Future Volume (veh/h)	31	24	2	34	11	1395	6	251	53	1747	315	2
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	32	24	2	35	11	1423	6	256	54	1783	321	2
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	66	312	265	70	316	1797	260	519	232	1643	1690	754
Arrive On Green	0.04	0.17	0.17	0.04	0.17	0.17	0.15	0.15	0.15	0.49	0.49	0.49
Sat Flow, veh/h	1734	1821	1543	1734	1821	2716	1734	3460	1543	3365	3460	1543
Grp Volume(v), veh/h	32	24	2	35	11	1423	6	256	54	1783	321	2
Grp Sat Flow(s),veh/h/ln	1734	1821	1543	1734	1821	1358	1734	1730	1543	1682	1730	1543
Q Serve(g_s), s	2.2	1.3	0.1	2.4	0.6	20.8	0.4	8.1	3.7	58.6	6.3	0.1
Cycle Q Clear(g_c), s	2.2	1.3	0.1	2.4	0.6	20.8	0.4	8.1	3.7	58.6	6.3	0.1
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	66	312	265	70	316	1797	260	519	232	1643	1690	754
V/C Ratio(X)	0.48	0.08	0.01	0.50	0.03	0.79	0.02	0.49	0.23	1.09	0.19	0.00
Avail Cap(c_a), veh/h	101	312	265	101	316	1797	260	519	232	1643	1690	754
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.5	41.7	41.2	56.4	41.2	14.4	43.5	46.8	44.9	30.7	17.3	15.7
Incr Delay (d2), s/veh	5.3	0.5	0.1	1.8	0.0	0.8	0.2	3.3	2.3	49.2	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.6	0.1	1.0	0.3	11.1	0.2	3.6	1.5	32.2	2.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	61.9	42.2	41.3	58.3	41.3	15.3	43.7	50.1	47.3	79.9	17.6	15.7
LnGrp LOS	E	D	D	E	D	B	D	D	D	F	B	B
Approach Vol, veh/h		58			1469			316			2106	
Approach Delay, s/veh		53.0			16.5			49.5			70.3	
Approach LOS		D			B			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.3	25.1	22.5	63.1	9.1	25.3	63.1	22.5
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	7.0	18.4	18.0	58.6	7.0	18.4	58.6	18.0
Max Q Clear Time (g_c+I1), s	4.4	3.3	2.4	8.3	4.2	22.8	60.6	10.1
Green Ext Time (p_c), s	0.0	0.0	0.0	1.9	0.0	0.0	0.0	0.9

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



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	122	553	547	34	885	565	593	1046	99	258	1179	216
Future Volume (vph)	122	553	547	34	885	565	593	1046	99	258	1179	216
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Link Speed (mph)		50			50			50			55	
Link Distance (ft)		709			813			334			462	
Travel Time (s)		9.7			11.1			4.6			5.7	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Sign Control		Yield			Yield			Yield			Yield	

Intersection Summary	
Area Type:	Other

Control Type: Roundabout

Club at Coral Mountain TIA (JN:15455)
2040 With Project
PM Peak Hour

Level Of Service Computation Report
FHWA Roundabout Method (Future Volume Alternative)

Intersection #7 Jefferson St. / Avenue 52

Average Delay (sec/veh): 9.1 Level Of Service: A

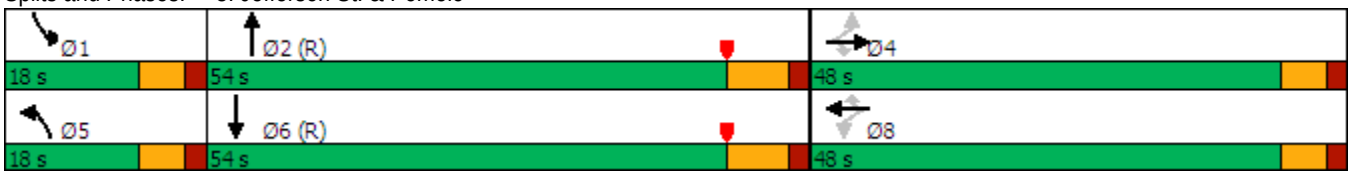
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Yield Sign			Yield Sign			Yield Sign			Yield Sign		
Lanes:	2			2			3			3		
Volume Module:												
Base Vol:	593	1046	99	258	1179	216	122	553	547	34	885	565
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	593	1046	99	258	1179	216	122	553	547	34	885	565
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	593	1046	99	258	1179	216	122	553	547	34	885	565
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.00	0.98	0.98	0.00
PHF Volume:	605	1067	101	263	1203	220	124	564	0	35	903	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	605	1067	101	263	1203	220	124	564	0	35	903	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
FinalVolume:	605	1067	101	263	1203	220	124	564	0	35	903	0
PCE Module:												
AutoPCE:	605	1067	101	263	1203	220	124	564	0	35	903	0
TruckPCE:	0	0	0	0	0	0	0	0	0	0	0	0
ComboPCE:	0	0	0	0	0	0	0	0	0	0	0	0
BicyclePCE:	0	0	0	0	0	0	0	0	0	0	0	0
AdjVolume:	605	1067	101	263	1203	220	124	564	0	35	903	0

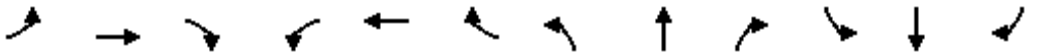
Delay Module: >> Time Period: 0.25 hours <<				
CircVolume:	263	605	1466	1672
MaxVolume:	2234	1988	xxxxxx	xxxxxx
PedVolume:	0	0	0	0
AdjMaxVol:	2234	1988	xxxxxx	xxxxxx
ApproachVol:	1773	1687	xxxxxx	xxxxxx
ApproachV/C:	0.79	0.85	1.00	1.00
ApproachDel:	7.4	10.8	xxxxxx	xxxxxx
ApproachLOS:	A	B	*	*
Queue:	9.9	12.6	xxxx	xxxx

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	66	2	21	9	1	42	3	1834	7	23	1673	68
Future Volume (vph)	66	2	21	9	1	42	3	1834	7	23	1673	68
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	0		0	0		0	160		0	180		0
Storage Lanes	0		1	0		1	1		0	1		0
Taper Length (ft)	60			60			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			55			55	
Link Distance (ft)		509			561			1820			1343	
Travel Time (s)		13.9			15.3			22.6			16.6	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						
Detector Phase	4	4	4	8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	
Minimum Split (s)	48.0	48.0	48.0	48.0	48.0	48.0	18.0	40.5		18.0	39.5	
Total Split (s)	48.0	48.0	48.0	48.0	48.0	48.0	18.0	54.0		18.0	54.0	
Total Split (%)	40.0%	40.0%	40.0%	40.0%	40.0%	40.0%	15.0%	45.0%		15.0%	45.0%	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	5.5		4.0	5.5	
All-Red Time (s)	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	
Total Lost Time (s)		6.0	6.0		6.0	6.0	6.0	7.5		6.0	7.5	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Min		None	C-Min	

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 30 (25%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 110	
Control Type: Actuated-Coordinated	

Splits and Phases: 8: Jefferson St. & Pomelo





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	66	2	21	9	1	42	3	1834	7	23	1673	68
Future Volume (veh/h)	66	2	21	9	1	42	3	1834	7	23	1673	68
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	67	2	21	9	1	43	3	1871	7	23	1707	69
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	73	1	514	66	4	514	17	2304	9	93	2425	98
Arrive On Green	0.33	0.33	0.33	0.33	0.33	0.33	0.01	0.45	0.45	0.11	0.99	0.99
Sat Flow, veh/h	41	4	1543	28	13	1543	1734	5113	19	1734	4902	198
Grp Volume(v), veh/h	69	0	21	10	0	43	3	1213	665	23	1154	622
Grp Sat Flow(s),veh/h/ln	45	0	1543	41	0	1543	1734	1657	1818	1734	1657	1785
Q Serve(g_s), s	1.2	0.0	1.1	0.6	0.0	2.3	0.2	38.0	38.0	1.5	1.5	1.5
Cycle Q Clear(g_c), s	40.0	0.0	1.1	39.7	0.0	2.3	0.2	38.0	38.0	1.5	1.5	1.5
Prop In Lane	0.97		1.00	0.90		1.00	1.00		0.01	1.00		0.11
Lane Grp Cap(c), veh/h	74	0	514	71	0	514	17	1494	819	93	1640	883
V/C Ratio(X)	0.93	0.00	0.04	0.14	0.00	0.08	0.18	0.81	0.81	0.25	0.70	0.70
Avail Cap(c_a), veh/h	97	0	540	94	0	540	173	1494	819	173	1640	883
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.54	0.54	0.54
Uniform Delay (d), s/veh	59.3	0.0	27.0	46.2	0.0	27.4	59.0	28.6	28.6	51.4	0.3	0.3
Incr Delay (d2), s/veh	69.5	0.0	0.1	1.9	0.0	0.1	10.9	4.9	8.6	1.6	1.4	2.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.5	0.0	0.4	0.3	0.0	0.9	0.1	14.7	17.0	0.6	0.5	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	128.9	0.0	27.1	48.1	0.0	27.6	69.8	33.5	37.2	52.9	1.7	2.9
LnGrp LOS	F	A	C	D	A	C	E	C	D	D	A	A
Approach Vol, veh/h		90			53			1881			1799	
Approach Delay, s/veh		105.1			31.5			34.8			2.8	
Approach LOS		F			C			C			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.4	60.8		46.8	7.1	66.0		46.8				
Change Period (Y+Rc), s	6.0	7.5		6.0	6.0	7.5		6.0				
Max Green Setting (Gmax), s	12.0	46.5		42.0	12.0	46.5		42.0				
Max Q Clear Time (g_c+I1), s	3.5	40.0		42.0	2.2	3.5		41.7				
Green Ext Time (p_c), s	0.0	6.0		0.0	0.0	30.0		0.0				

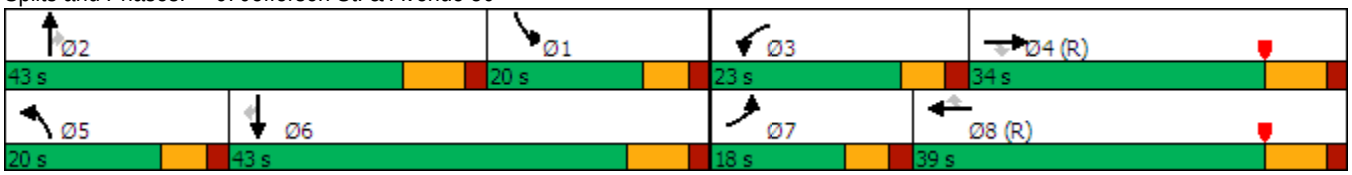
Intersection Summary			
HCM 6th Ctrl Delay		21.4	
HCM 6th LOS		C	

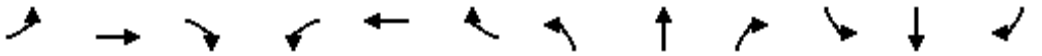
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	362	506	152	382	584	300	159	1498	285	408	1246	285
Future Volume (vph)	362	506	152	382	584	300	159	1498	285	408	1246	285
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	245		100	105		0	360		220	280		230
Storage Lanes	2		1	2		1	1		1	2		1
Taper Length (ft)	120			60			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			45			55			55	
Link Distance (ft)		693			995			1343			697	
Travel Time (s)		9.5			15.1			16.6			8.6	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Minimum Split (s)	18.0	31.5	31.5	18.0	38.5	38.5	18.0	40.5	40.5	18.0	40.5	40.5
Total Split (s)	18.0	34.0	34.0	23.0	39.0	39.0	20.0	43.0	43.0	20.0	43.0	43.0
Total Split (%)	15.0%	28.3%	28.3%	19.2%	32.5%	32.5%	16.7%	35.8%	35.8%	16.7%	35.8%	35.8%
Yellow Time (s)	4.0	5.5	5.5	4.0	5.5	5.5	4.0	5.5	5.5	4.0	5.5	5.5
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	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	0.0
Total Lost Time (s)	6.0	7.5	7.5	6.0	7.5	7.5	6.0	7.5	7.5	6.0	7.5	7.5
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	Min	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow
Natural Cycle: 125
Control Type: Actuated-Coordinated

Splits and Phases: 9: Jefferson St. & Avenue 50





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	362	506	152	382	584	300	159	1498	285	408	1246	285
Future Volume (veh/h)	362	506	152	382	584	300	159	1498	285	408	1246	285
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	369	516	155	390	596	306	162	1529	291	416	1271	291
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	336	760	339	439	865	386	186	1471	457	393	1579	490
Arrive On Green	0.15	0.33	0.33	0.20	0.38	0.38	0.16	0.44	0.44	0.17	0.48	0.48
Sat Flow, veh/h	3365	3460	1543	3365	3460	1543	1734	4972	1543	3365	4972	1543
Grp Volume(v), veh/h	369	516	155	390	596	306	162	1529	291	416	1271	291
Grp Sat Flow(s),veh/h/ln	1682	1730	1543	1682	1730	1543	1734	1657	1543	1682	1657	1543
Q Serve(g_s), s	12.0	15.5	9.5	13.5	17.4	14.3	10.9	35.5	11.5	14.0	26.1	16.5
Cycle Q Clear(g_c), s	12.0	15.5	9.5	13.5	17.4	14.3	10.9	35.5	11.5	14.0	26.1	16.5
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	336	760	339	439	865	386	186	1471	457	393	1579	490
V/C Ratio(X)	1.10	0.68	0.46	0.89	0.69	0.79	0.87	1.04	0.64	1.06	0.80	0.59
Avail Cap(c_a), veh/h	336	764	341	477	908	405	202	1471	457	393	1579	490
HCM Platoon Ratio	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.82	0.82	0.82	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.0	36.6	34.6	47.4	33.6	16.0	49.5	33.4	12.2	49.5	28.3	25.8
Incr Delay (d2), s/veh	77.5	4.8	4.4	16.5	4.5	15.4	23.8	32.3	2.8	62.1	3.3	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.2	6.2	3.7	6.1	6.8	5.7	5.5	15.5	3.5	8.6	8.3	5.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	128.5	41.4	39.0	63.9	38.0	31.3	73.3	65.7	15.0	111.6	31.6	28.1
LnGrp LOS	F	D	D	E	D	C	E	F	B	F	C	C
Approach Vol, veh/h		1040			1292			1982			1978	
Approach Delay, s/veh		72.0			44.2			58.9			47.9	
Approach LOS		E			D			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	21.5	43.0	21.6	33.9	18.9	45.6	18.0	37.5
Change Period (Y+Rc), s	7.5	* 7.5	6.0	7.5	6.0	7.5	6.0	7.5
Max Green Setting (Gmax), s	14.0	* 36	17.0	26.5	14.0	35.5	12.0	31.5
Max Q Clear Time (g_c+I1), s	16.0	37.5	15.5	17.5	12.9	28.1	14.0	19.4
Green Ext Time (p_c), s	0.0	0.0	0.1	4.0	0.0	5.6	0.0	6.4

Intersection Summary	
HCM 6th Ctrl Delay	54.6
HCM 6th LOS	D

Notes

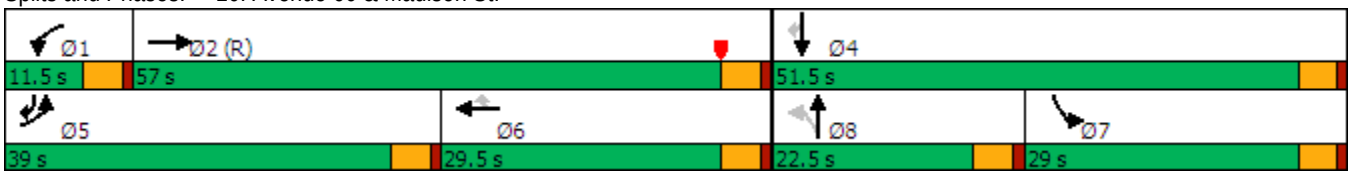
User approved pedestrian interval to be less than phase max green.

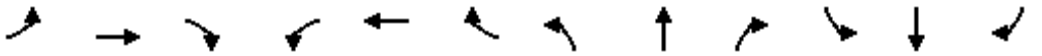
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	967	790	2	2	699	300	2	2	2	684	2	401
Future Volume (vph)	967	790	2	2	699	300	2	2	2	684	2	401
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		0	150		150	150		0	150		150
Storage Lanes	2		0	1		1	0		0	2		0
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		40			40			25			40	
Link Distance (ft)		1137			661			281			437	
Travel Time (s)		19.4			11.3			7.7			7.4	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA		Prot	NA	Perm	Perm	NA		Prot	NA	pm+ov
Protected Phases	5	2		1	6			8		7	4	5
Permitted Phases						6	8					4
Detector Phase	5	2		1	6	6	8	8		7	4	5
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	11.5	22.5		11.5	22.5	22.5	22.5	22.5		22.5	22.5	11.5
Total Split (s)	39.0	57.0		11.5	29.5	29.5	22.5	22.5		29.0	51.5	39.0
Total Split (%)	32.5%	47.5%		9.6%	24.6%	24.6%	18.8%	18.8%		24.2%	42.9%	32.5%
Yellow Time (s)	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
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)	4.5	4.5		4.5	4.5	4.5		4.5		4.5	4.5	4.5
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lead		Lag		Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes		Yes
Recall Mode	None	C-Max		None	None	None	Max	Max		Max	Max	None

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:EBT, Start of Yellow	
Natural Cycle: 120	
Control Type: Actuated-Coordinated	

Splits and Phases: 10: Avenue 60 & Madison St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	967	790	2	2	699	300	2	2	2	684	2	401
Future Volume (veh/h)	967	790	2	2	699	300	2	2	2	684	2	401
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	987	806	2	2	713	306	2	2	2	698	2	409
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	997	1742	4	7	759	322	93	90	71	708	713	1048
Arrive On Green	0.29	0.49	0.49	0.00	0.21	0.21	0.15	0.15	0.15	0.20	0.39	0.39
Sat Flow, veh/h	3469	3541	9	1734	3642	1543	352	600	476	3469	1821	1543
Grp Volume(v), veh/h	987	394	414	2	713	306	6	0	0	698	2	409
Grp Sat Flow(s),veh/h/ln	1734	1730	1820	1734	1821	1543	1429	0	0	1734	1821	1543
Q Serve(g_s), s	34.0	18.0	18.0	0.1	23.1	15.2	0.0	0.0	0.0	24.1	0.1	13.9
Cycle Q Clear(g_c), s	34.0	18.0	18.0	0.1	23.1	15.2	0.4	0.0	0.0	24.1	0.1	13.9
Prop In Lane	1.00		0.00	1.00		1.00	0.33		0.33	1.00		1.00
Lane Grp Cap(c), veh/h	997	851	895	7	759	322	254	0	0	708	713	1048
V/C Ratio(X)	0.99	0.46	0.46	0.31	0.94	0.95	0.02	0.00	0.00	0.99	0.00	0.39
Avail Cap(c_a), veh/h	997	851	895	101	759	322	254	0	0	708	713	1048
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	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.6	20.0	20.0	59.6	46.8	19.7	43.5	0.0	0.0	47.6	22.2	8.4
Incr Delay (d2), s/veh	25.9	1.8	1.7	24.4	19.5	37.4	0.2	0.0	0.0	30.5	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	17.7	7.4	7.7	0.1	12.3	8.8	0.2	0.0	0.0	13.1	0.0	4.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	68.5	21.8	21.8	84.0	66.2	57.1	43.7	0.0	0.0	78.1	22.2	9.5
LnGrp LOS	E	C	C	F	E	E	D	A	A	E	C	A
Approach Vol, veh/h		1795			1021			6			1109	
Approach Delay, s/veh		47.5			63.5			43.7			52.7	
Approach LOS		D			E			D			D	

Timer - Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.0	63.5		51.5	39.0	29.5	29.0	22.5				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	7.0	52.5		47.0	34.5	25.0	24.5	18.0				
Max Q Clear Time (g_c+I1), s	2.1	20.0		15.9	36.0	25.1	26.1	2.4				
Green Ext Time (p_c), s	0.0	5.2		1.5	0.0	0.0	0.0	0.0				

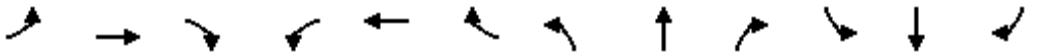
Intersection Summary			
HCM 6th Ctrl Delay		53.1	
HCM 6th LOS		D	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	272	576	583	43	418	324	322	1060	32	381	618	234
Future Volume (vph)	272	576	583	43	418	324	322	1060	32	381	618	234
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		0	150		150	100		150	320		150
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			50			50	
Link Distance (ft)		598			1045			1022			1291	
Travel Time (s)		9.1			15.8			13.9			17.6	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA		Prot	NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases						8						
Detector Phase	7	4		3	8	1	5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0		7.0	7.0	
Minimum Split (s)	11.5	22.5		11.5	22.5	11.5	11.5	22.5		11.5	22.5	
Total Split (s)	21.0	39.5		11.5	30.0	28.0	28.6	41.0		28.0	40.4	
Total Split (%)	17.5%	32.9%		9.6%	25.0%	23.3%	23.8%	34.2%		23.3%	33.7%	
Yellow Time (s)	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	
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)	4.5	4.5		4.5	4.5	4.5	4.5	4.5		4.5	4.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None	None	None	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 Yellow
Natural Cycle: 130
Control Type: Actuated-Coordinated

Splits and Phases: 11: Monroe St. & Avenue 60/60th Avenue



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	272	576	583	43	418	324	322	1060	32	381	618	234
Future Volume (veh/h)	272	576	583	43	418	324	322	1060	32	381	618	234
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	278	588	595	44	427	331	329	1082	33	389	631	239
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	238	528	471	78	387	630	348	1043	32	340	734	278
Arrive On Green	0.14	0.31	0.31	0.04	0.21	0.21	0.20	0.30	0.30	0.20	0.30	0.30
Sat Flow, veh/h	1734	1730	1543	1734	1821	1543	1734	3428	105	1734	2455	929
Grp Volume(v), veh/h	278	588	595	44	427	331	329	546	569	389	445	425
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1821	1543	1734	1730	1802	1734	1730	1654
Q Serve(g_s), s	16.5	36.6	36.6	3.0	25.5	19.4	22.4	36.5	36.5	23.5	29.1	29.1
Cycle Q Clear(g_c), s	16.5	36.6	36.6	3.0	25.5	19.4	22.4	36.5	36.5	23.5	29.1	29.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.06	1.00		0.56
Lane Grp Cap(c), veh/h	238	528	471	78	387	630	348	526	548	340	518	495
V/C Ratio(X)	1.17	1.11	1.26	0.57	1.10	0.53	0.94	1.04	1.04	1.15	0.86	0.86
Avail Cap(c_a), veh/h	238	528	471	101	387	630	348	526	548	340	518	495
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	1.00
Uniform Delay (d), s/veh	51.8	41.7	41.7	56.2	47.3	26.7	47.3	41.8	41.8	48.3	39.7	39.7
Incr Delay (d2), s/veh	110.4	74.3	134.7	6.3	76.7	0.8	34.0	49.3	48.6	94.3	16.8	17.5
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	14.3	25.8	30.9	1.4	19.4	6.9	12.6	21.9	22.7	18.6	14.1	13.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	162.2	116.0	176.4	62.5	123.9	27.5	81.3	91.1	90.3	142.6	56.4	57.1
LnGrp LOS	F	F	F	E	F	C	F	F	F	F	E	E
Approach Vol, veh/h		1461			802			1444			1259	
Approach Delay, s/veh		149.4			80.8			88.6			83.3	
Approach LOS		F			F			F			F	

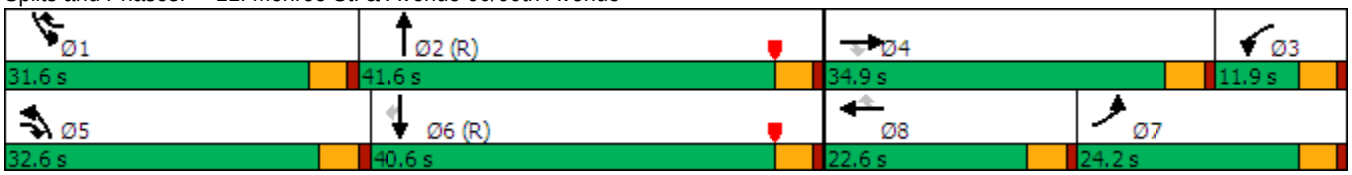
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	28.0	41.0	9.9	41.1	28.6	40.4	21.0	30.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	23.5	36.5	7.0	35.0	24.1	35.9	16.5	25.5
Max Q Clear Time (g_c+I1), s	25.5	38.5	5.0	38.6	24.4	31.1	18.5	27.5
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	2.1	0.0	0.0

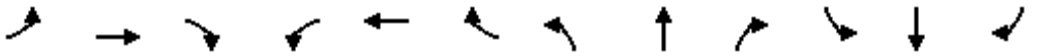
Intersection Summary	
HCM 6th Ctrl Delay	103.9
HCM 6th LOS	F

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	272	576	583	43	418	324	322	1060	32	381	618	234
Future Volume (vph)	272	576	583	43	418	324	322	1060	32	381	618	234
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		150	150		150	100		150	320		150
Storage Lanes	1		1	1		0	1		0	1		1
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			50			50	
Link Distance (ft)		598			1045			1022			1291	
Travel Time (s)		9.1			15.8			13.9			17.6	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA		Prot	NA	Perm
Protected Phases	7	4	5	3	8	1	5	2		1	6	
Permitted Phases			4			8						6
Detector Phase	7	4	5	3	8	1	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	11.5	22.5	11.5	11.5	22.5	11.5	11.5	22.5		11.5	22.5	22.5
Total Split (s)	24.2	34.9	32.6	11.9	22.6	31.6	32.6	41.6		31.6	40.6	40.6
Total Split (%)	20.2%	29.1%	27.2%	9.9%	18.8%	26.3%	27.2%	34.7%		26.3%	33.8%	33.8%
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	Lag	Lead	Lead	Lag	Lead	Lead	Lead	Lag		Lead	Lag	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		None	C-Max	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 Yellow	
Natural Cycle: 120	
Control Type: Actuated-Coordinated	

Splits and Phases: 11: Monroe St. & Avenue 60/60th Avenue





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	272	576	583	43	418	324	322	1060	32	381	618	234
Future Volume (veh/h)	272	576	583	43	418	324	322	1060	32	381	618	234
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	278	588	595	44	427	331	329	1082	33	389	631	239
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	285	875	708	94	494	569	357	1115	34	392	1229	521
Arrive On Green	0.16	0.25	0.25	0.05	0.14	0.14	0.21	0.32	0.32	0.23	0.34	0.34
Sat Flow, veh/h	1734	3460	1543	1734	3460	1543	1734	3516	107	1734	3642	1543
Grp Volume(v), veh/h	278	588	595	44	427	331	329	560	555	389	631	239
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1730	1543	1734	1821	1802	1734	1821	1543
Q Serve(g_s), s	19.1	18.4	28.2	3.0	14.5	11.6	22.3	36.4	36.4	26.9	16.7	9.3
Cycle Q Clear(g_c), s	19.1	18.4	28.2	3.0	14.5	11.6	22.3	36.4	36.4	26.9	16.7	9.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.06	1.00		1.00
Lane Grp Cap(c), veh/h	285	875	708	94	494	569	357	578	571	392	1229	521
V/C Ratio(X)	0.98	0.67	0.84	0.47	0.86	0.58	0.92	0.97	0.97	0.99	0.51	0.46
Avail Cap(c_a), veh/h	285	877	708	107	522	581	406	578	571	392	1229	521
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	1.00
Uniform Delay (d), s/veh	49.9	40.4	14.5	55.1	50.3	12.7	46.7	40.4	40.4	46.4	31.9	12.7
Incr Delay (d2), s/veh	46.7	2.0	9.0	3.6	13.5	1.4	24.7	30.8	31.1	43.6	1.5	2.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.7	7.8	10.4	1.4	7.0	3.7	11.7	20.3	20.1	15.8	7.3	3.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	96.6	42.4	23.5	58.6	63.8	14.1	71.4	71.2	71.5	89.9	33.4	15.6
LnGrp LOS	F	D	C	E	E	B	E	E	E	F	C	B
Approach Vol, veh/h		1461			802			1444			1259	
Approach Delay, s/veh		45.0			43.0			71.4			47.5	
Approach LOS		D			D			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	31.6	42.6	11.0	34.8	29.2	45.0	24.2	21.6
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	27.1	37.1	7.4	30.4	28.1	36.1	19.7	18.1
Max Q Clear Time (g_c+I1), s	28.9	38.4	5.0	30.2	24.3	18.7	21.1	16.5
Green Ext Time (p_c), s	0.0	0.0	0.0	0.1	0.4	4.3	0.0	0.7

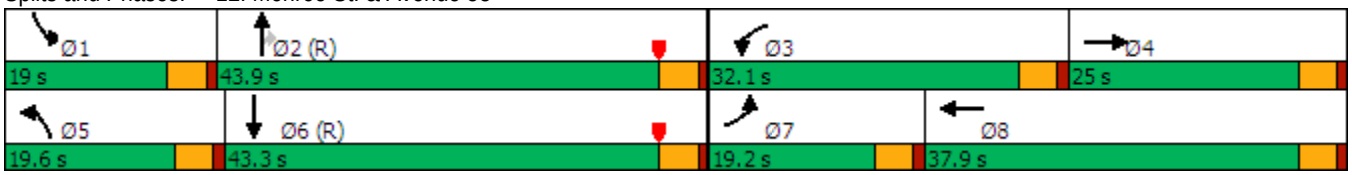
Intersection Summary	
HCM 6th Ctrl Delay	53.0
HCM 6th LOS	D

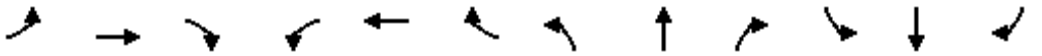
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	150	512	99	412	511	190	211	1096	280	206	926	149
Future Volume (vph)	150	512	99	412	511	190	211	1096	280	206	926	149
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		150	150		0	150		150	150		150
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			30			50			50	
Link Distance (ft)		670			732			913			1519	
Travel Time (s)		9.1			16.6			12.5			20.7	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA		Prot	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases									2			
Detector Phase	7	4		3	8		5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		7.0	7.0	7.0	7.0	7.0	
Minimum Split (s)	11.5	22.5		11.5	22.5		11.5	22.5	22.5	11.5	22.5	
Total Split (s)	19.2	25.0		32.1	37.9		19.6	43.9	43.9	19.0	43.3	
Total Split (%)	16.0%	20.8%		26.8%	31.6%		16.3%	36.6%	36.6%	15.8%	36.1%	
Yellow Time (s)	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	
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)	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Recall Mode	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 Yellow
Natural Cycle: 120
Control Type: Actuated-Coordinated

Splits and Phases: 12: Monroe St. & Avenue 58





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	150	512	99	412	511	190	211	1096	280	206	926	149
Future Volume (veh/h)	150	512	99	412	511	190	211	1096	280	206	926	149
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	153	522	101	420	521	194	215	1118	286	210	945	152
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	179	494	95	399	735	272	218	1136	507	210	965	155
Arrive On Green	0.10	0.17	0.17	0.23	0.30	0.30	0.13	0.33	0.33	0.12	0.32	0.32
Sat Flow, veh/h	1734	2893	557	1734	2471	916	1734	3460	1543	1734	2985	480
Grp Volume(v), veh/h	153	311	312	420	364	351	215	1118	286	210	548	549
Grp Sat Flow(s),veh/h/ln	1734	1730	1721	1734	1730	1656	1734	1730	1543	1734	1730	1735
Q Serve(g_s), s	10.4	20.5	20.5	27.6	22.5	22.7	14.8	38.5	18.3	14.5	37.6	37.6
Cycle Q Clear(g_c), s	10.4	20.5	20.5	27.6	22.5	22.7	14.8	38.5	18.3	14.5	37.6	37.6
Prop In Lane	1.00		0.32	1.00		0.55	1.00		1.00	1.00		0.28
Lane Grp Cap(c), veh/h	179	296	294	399	515	493	218	1136	507	210	559	561
V/C Ratio(X)	0.85	1.05	1.06	1.05	0.71	0.71	0.99	0.98	0.56	1.00	0.98	0.98
Avail Cap(c_a), veh/h	212	296	294	399	515	493	218	1136	507	210	559	561
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	1.00
Uniform Delay (d), s/veh	52.9	49.8	49.8	46.2	37.5	37.6	52.3	40.0	33.2	52.8	40.2	40.2
Incr Delay (d2), s/veh	24.0	67.0	69.4	59.6	4.4	4.8	56.5	23.1	4.5	62.7	33.2	33.3
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	5.6	14.0	14.1	18.4	10.1	9.8	9.6	19.0	7.5	9.7	20.2	20.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	76.9	116.7	119.1	105.8	42.0	42.4	108.8	63.1	37.7	115.4	73.4	73.5
LnGrp LOS	E	F	F	F	D	D	F	E	D	F	E	E
Approach Vol, veh/h		776			1135			1619			1307	
Approach Delay, s/veh		109.8			65.7			64.7			80.2	
Approach LOS		F			E			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.0	43.9	32.1	25.0	19.6	43.3	16.9	40.2
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	14.5	39.4	27.6	20.5	15.1	38.8	14.7	33.4
Max Q Clear Time (g_c+I1), s	16.5	40.5	29.6	22.5	16.8	39.6	12.4	24.7
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.1	3.0

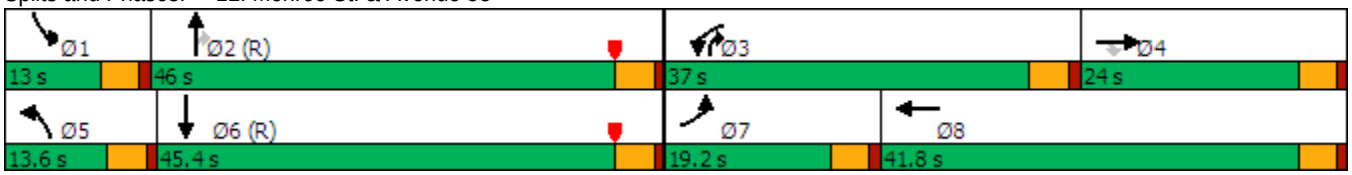
Intersection Summary	
HCM 6th Ctrl Delay	76.4
HCM 6th LOS	E

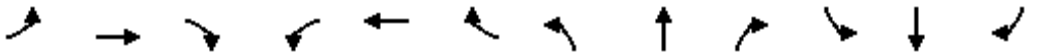
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	150	512	99	412	511	190	211	1096	280	206	926	149
Future Volume (vph)	150	512	99	412	511	190	211	1096	280	206	926	149
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		150	150		0	150		150	150		150
Storage Lanes	1		1	1		0	2		1	2		0
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			30			50			50	
Link Distance (ft)		670			732			913			1519	
Travel Time (s)		9.1			16.6			12.5			20.7	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA	pm+ov	Prot	NA	
Protected Phases	7	4		3	8		5	2	3	1	6	
Permitted Phases			4						2			
Detector Phase	7	4	4	3	8		5	2	3	1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0		7.0	7.0	7.0	7.0	7.0	
Minimum Split (s)	11.5	22.5	22.5	11.5	22.5		11.5	22.5	11.5	11.5	22.5	
Total Split (s)	19.2	24.0	24.0	37.0	41.8		13.6	46.0	37.0	13.0	45.4	
Total Split (%)	16.0%	20.0%	20.0%	30.8%	34.8%		11.3%	38.3%	30.8%	10.8%	37.8%	
Yellow Time (s)	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	
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)	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	Lag	Lead	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None		None	C-Max	None	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 Yellow
Natural Cycle: 100
Control Type: Actuated-Coordinated

Splits and Phases: 12: Monroe St. & Avenue 58





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	150	512	99	412	511	190	211	1096	280	206	926	149
Future Volume (veh/h)	150	512	99	412	511	190	211	1096	280	206	926	149
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	153	522	101	420	521	194	215	1118	286	210	945	152
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	179	562	251	445	780	289	255	1311	952	238	1086	175
Arrive On Green	0.10	0.16	0.16	0.26	0.32	0.32	0.08	0.36	0.36	0.07	0.35	0.35
Sat Flow, veh/h	1734	3460	1543	1734	2471	916	3365	3642	1543	3365	3061	492
Grp Volume(v), veh/h	153	522	101	420	364	351	215	1118	286	210	562	535
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1730	1656	1682	1821	1543	1682	1821	1733
Q Serve(g_s), s	10.4	17.9	7.0	28.5	21.9	22.1	7.6	34.0	10.5	7.4	34.5	34.6
Cycle Q Clear(g_c), s	10.4	17.9	7.0	28.5	21.9	22.1	7.6	34.0	10.5	7.4	34.5	34.6
Prop In Lane	1.00		1.00	1.00		0.55	1.00		1.00	1.00		0.28
Lane Grp Cap(c), veh/h	179	562	251	445	546	523	255	1311	952	238	646	615
V/C Ratio(X)	0.85	0.93	0.40	0.94	0.67	0.67	0.84	0.85	0.30	0.88	0.87	0.87
Avail Cap(c_a), veh/h	212	562	251	470	546	523	255	1311	952	238	646	615
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	1.00
Uniform Delay (d), s/veh	52.9	49.6	45.0	43.7	35.6	35.6	54.7	35.5	10.8	55.2	36.1	36.1
Incr Delay (d2), s/veh	24.0	21.9	1.0	27.1	3.1	3.3	21.8	7.2	0.8	29.4	14.8	15.5
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	5.6	9.1	2.8	15.5	9.7	9.3	3.9	15.5	3.7	4.0	17.1	16.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	76.9	71.5	46.1	70.8	38.6	38.9	76.5	42.7	11.6	84.6	50.9	51.6
LnGrp LOS	E	E	D	E	D	D	E	D	B	F	D	D
Approach Vol, veh/h		776			1135			1619			1307	
Approach Delay, s/veh		69.2			50.7			41.7			56.6	
Approach LOS		E			D			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.0	47.7	35.3	24.0	13.6	47.1	16.9	42.4
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	8.5	41.5	32.5	19.5	9.1	40.9	14.7	37.3
Max Q Clear Time (g_c+I1), s	9.4	36.0	30.5	19.9	9.6	36.6	12.4	24.1
Green Ext Time (p_c), s	0.0	3.5	0.3	0.0	0.0	2.4	0.1	3.8

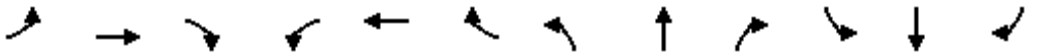
Intersection Summary	
HCM 6th Ctrl Delay	52.2
HCM 6th LOS	D

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	71	325	54	119	491	367	102	1317	94	276	1096	130
Future Volume (vph)	71	325	54	119	491	367	102	1317	94	276	1096	130
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	280		150	150		150	105		150	160		50
Storage Lanes	1		0	1		1	1		0	1		1
Taper Length (ft)	60			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		5252			1251			918			726	
Travel Time (s)		71.6			17.1			12.5			9.9	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA		Prot	NA	pm+ov	Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases						8						6
Detector Phase	7	4		3	8	1	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	11.5	22.5		11.5	22.5	11.5	11.5	22.5		11.5	22.5	22.5
Total Split (s)	11.8	22.6		14.4	25.2	26.0	18.5	57.0		26.0	64.5	64.5
Total Split (%)	9.8%	18.8%		12.0%	21.0%	21.7%	15.4%	47.5%		21.7%	53.8%	53.8%
Yellow Time (s)	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
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)	4.5	4.5		4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5
Lead/Lag	Lead	Lag		Lead	Lag	Lead	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	C-Max		None	C-Max	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 Yellow
Natural Cycle: 110
Control Type: Actuated-Coordinated

Splits and Phases: 13: Monroe St. & Airport Bl.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	71	325	54	119	491	367	102	1317	94	276	1096	130
Future Volume (veh/h)	71	325	54	119	491	367	102	1317	94	276	1096	130
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	72	332	55	121	501	374	104	1344	96	282	1118	133
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	92	426	70	143	597	539	128	1467	104	307	1905	849
Arrive On Green	0.05	0.14	0.14	0.08	0.17	0.17	0.07	0.45	0.45	0.18	0.55	0.55
Sat Flow, veh/h	1734	2975	488	1734	3460	1543	1734	3276	233	1734	3460	1543
Grp Volume(v), veh/h	72	192	195	121	501	374	104	708	732	282	1118	133
Grp Sat Flow(s),veh/h/ln	1734	1730	1733	1734	1730	1543	1734	1730	1779	1734	1730	1543
Q Serve(g_s), s	4.9	12.8	13.1	8.3	16.8	20.7	7.1	45.9	46.3	19.2	25.8	5.1
Cycle Q Clear(g_c), s	4.9	12.8	13.1	8.3	16.8	20.7	7.1	45.9	46.3	19.2	25.8	5.1
Prop In Lane	1.00		0.28	1.00		1.00	1.00		0.13	1.00		1.00
Lane Grp Cap(c), veh/h	92	247	248	143	597	539	128	775	797	307	1905	849
V/C Ratio(X)	0.78	0.77	0.79	0.85	0.84	0.69	0.81	0.91	0.92	0.92	0.59	0.16
Avail Cap(c_a), veh/h	106	261	261	143	597	539	202	775	797	311	1905	849
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.85	0.85	0.85	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.1	49.6	49.7	54.3	48.0	33.5	54.7	31.0	31.1	48.6	17.9	13.3
Incr Delay (d2), s/veh	24.1	11.1	12.3	34.8	10.3	3.8	12.4	17.1	17.4	31.0	1.3	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	6.1	6.3	4.9	7.8	9.4	3.4	21.2	22.0	10.6	9.6	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	80.3	60.7	61.9	89.1	58.4	37.4	67.1	48.1	48.5	79.6	19.2	13.7
LnGrp LOS	F	E	E	F	E	D	E	D	D	E	B	B
Approach Vol, veh/h		459			996			1544			1533	
Approach Delay, s/veh		64.3			54.2			49.6			29.9	
Approach LOS		E			D			D			C	

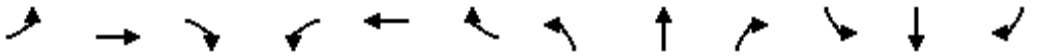
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	25.7	58.2	14.4	21.7	13.4	70.6	10.9	25.2
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	21.5	52.5	9.9	18.1	14.0	60.0	7.3	20.7
Max Q Clear Time (g_c+I1), s	21.2	48.3	10.3	15.1	9.1	27.8	6.9	22.7
Green Ext Time (p_c), s	0.0	2.9	0.0	0.6	0.1	9.1	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	45.4
HCM 6th LOS	D

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	215	609	205	147	820	206	115	1594	48	177	1156	92
Future Volume (vph)	215	609	205	147	820	206	115	1594	48	177	1156	92
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	305		150	150		150	150		150	150		700
Storage Lanes	2		1	1		1	1		1	1		1
Taper Length (ft)	100			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		672			623			677			775	
Travel Time (s)		8.3			7.7			9.2			10.6	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	22.5	22.5	11.5	22.5	22.5	11.5	22.5	22.5	11.5	22.5	22.5
Total Split (s)	12.4	29.0	29.0	15.4	32.0	32.0	19.6	58.6	58.6	17.0	56.0	56.0
Total Split (%)	10.3%	24.2%	24.2%	12.8%	26.7%	26.7%	16.3%	48.8%	48.8%	14.2%	46.7%	46.7%
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	Lag	Lead	Lead	Lag	Lead	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	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	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 Yellow	
Natural Cycle: 110	
Control Type: Actuated-Coordinated	

Splits and Phases: 14: Monroe St. & Avenue 54



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	215	609	205	147	820	206	115	1594	48	177	1156	92
Future Volume (veh/h)	215	609	205	147	820	206	115	1594	48	177	1156	92
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	219	621	209	150	837	210	117	1627	49	181	1180	94
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	228	700	297	178	835	354	143	1642	696	181	1722	730
Arrive On Green	0.07	0.19	0.19	0.10	0.23	0.23	0.08	0.45	0.45	0.10	0.47	0.47
Sat Flow, veh/h	3469	3642	1543	1734	3642	1543	1734	3642	1543	1734	3642	1543
Grp Volume(v), veh/h	219	621	209	150	837	210	117	1627	49	181	1180	94
Grp Sat Flow(s),veh/h/ln	1734	1821	1543	1734	1821	1543	1734	1821	1543	1734	1821	1543
Q Serve(g_s), s	7.6	19.9	12.2	10.2	27.5	11.2	8.0	53.2	1.5	12.5	30.3	3.0
Cycle Q Clear(g_c), s	7.6	19.9	12.2	10.2	27.5	11.2	8.0	53.2	1.5	12.5	30.3	3.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	228	700	297	178	835	354	143	1642	696	181	1722	730
V/C Ratio(X)	0.96	0.89	0.70	0.84	1.00	0.59	0.82	0.99	0.07	1.00	0.69	0.13
Avail Cap(c_a), veh/h	228	744	315	178	835	354	218	1642	696	181	1722	730
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	1.00
Uniform Delay (d), s/veh	55.9	47.2	29.4	52.9	46.3	24.3	54.2	32.7	8.5	53.8	24.7	9.5
Incr Delay (d2), s/veh	47.9	12.1	6.5	28.6	31.8	2.7	13.5	20.1	0.2	67.4	2.2	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.7	9.8	4.8	5.7	15.4	4.1	3.9	25.9	0.8	8.6	12.6	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	103.8	59.3	35.9	81.4	78.1	27.0	67.7	52.8	8.7	121.2	26.9	9.9
LnGrp LOS	F	E	D	F	F	C	E	D	A	F	C	A
Approach Vol, veh/h		1049			1197			1793			1455	
Approach Delay, s/veh		64.0			69.5			52.6			37.5	
Approach LOS		E			E			D			D	

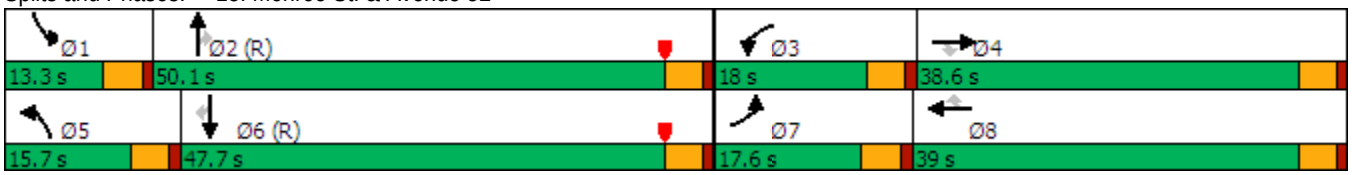
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.0	58.6	16.8	27.6	14.4	61.2	12.4	32.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	12.5	54.1	10.9	24.5	15.1	51.5	7.9	27.5
Max Q Clear Time (g_c+I1), s	14.5	55.2	12.2	21.9	10.0	32.3	9.6	29.5
Green Ext Time (p_c), s	0.0	0.0	0.0	1.1	0.1	7.9	0.0	0.0

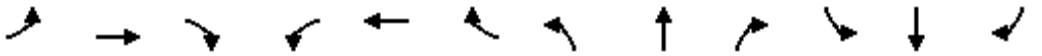
Intersection Summary	
HCM 6th Ctrl Delay	54.5
HCM 6th LOS	D

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	179	647	266	95	1034	287	229	1331	144	225	1089	138
Future Volume (vph)	179	647	266	95	1034	287	229	1331	144	225	1089	138
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	190		200	100		50	150		150	195		150
Storage Lanes	1		1	1		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			50			50	
Link Distance (ft)		817			587			676			1348	
Travel Time (s)		10.1			7.3			9.2			18.4	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	22.5	22.5	11.5	22.5	22.5	11.5	22.5	22.5	11.5	22.5	22.5
Total Split (s)	17.6	38.6	38.6	18.0	39.0	39.0	15.7	50.1	50.1	13.3	47.7	47.7
Total Split (%)	14.7%	32.2%	32.2%	15.0%	32.5%	32.5%	13.1%	41.8%	41.8%	11.1%	39.8%	39.8%
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	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	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 Yellow	
Natural Cycle: 120	
Control Type: Actuated-Coordinated	

Splits and Phases: 15: Monroe St. & Avenue 52





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	179	647	266	95	1034	287	229	1331	144	225	1089	138
Future Volume (veh/h)	179	647	266	95	1034	287	229	1331	144	225	1089	138
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	183	660	271	97	1055	293	234	1358	147	230	1111	141
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	189	1191	505	121	1047	444	288	1384	586	247	1339	568
Arrive On Green	0.11	0.33	0.33	0.07	0.29	0.29	0.09	0.38	0.38	0.07	0.37	0.37
Sat Flow, veh/h	1734	3642	1543	1734	3642	1543	3365	3642	1543	3365	3642	1543
Grp Volume(v), veh/h	183	660	271	97	1055	293	234	1358	147	230	1111	141
Grp Sat Flow(s),veh/h/ln	1734	1821	1543	1734	1821	1543	1682	1821	1543	1682	1821	1543
Q Serve(g_s), s	12.6	17.9	17.2	6.6	34.5	20.0	8.2	44.2	7.8	8.2	33.3	7.6
Cycle Q Clear(g_c), s	12.6	17.9	17.2	6.6	34.5	20.0	8.2	44.2	7.8	8.2	33.3	7.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	189	1191	505	121	1047	444	288	1384	586	247	1339	568
V/C Ratio(X)	0.97	0.55	0.54	0.80	1.01	0.66	0.81	0.98	0.25	0.93	0.83	0.25
Avail Cap(c_a), veh/h	189	1191	505	195	1047	444	314	1384	586	247	1339	568
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	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	53.2	33.2	33.0	55.0	42.8	37.6	53.9	36.8	25.5	55.3	34.5	26.4
Incr Delay (d2), s/veh	55.5	0.6	1.1	11.7	29.7	3.6	13.9	20.1	1.0	39.2	6.1	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	8.2	7.5	6.2	3.2	18.8	7.6	3.9	22.1	2.9	4.7	14.9	2.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	108.7	33.7	34.1	66.7	72.4	41.2	67.8	56.9	26.5	94.5	40.6	27.4
LnGrp LOS	F	C	C	E	F	D	E	E	C	F	D	C
Approach Vol, veh/h		1114			1445			1739			1482	
Approach Delay, s/veh		46.1			65.7			55.8			47.7	
Approach LOS		D			E			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.3	50.1	12.8	43.8	14.8	48.6	17.6	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	8.8	45.6	13.5	34.1	11.2	43.2	13.1	34.5
Max Q Clear Time (g_c+I1), s	10.2	46.2	8.6	19.9	10.2	35.3	14.6	36.5
Green Ext Time (p_c), s	0.0	0.0	0.1	4.1	0.1	4.4	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	54.3
HCM 6th LOS	D

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	59	972	209	70	1124	132	209	1577	116	158	1344	47
Future Volume (vph)	59	972	209	70	1124	132	209	1577	116	158	1344	47
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	210		120	220		150	200		150	170		150
Storage Lanes	2		1	1		1	2		1	2		0
Taper Length (ft)	120			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		710			640			1322			436	
Travel Time (s)		9.7			8.7			18.0			5.9	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases			4			8			2			
Detector Phase	7	4	4	3	8	1	5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	
Minimum Split (s)	11.5	20.5	20.5	11.5	20.5	11.5	11.5	20.5	20.5	11.5	20.5	
Total Split (s)	11.5	41.1	41.1	11.5	41.1	11.5	12.2	55.9	55.9	11.5	55.2	
Total Split (%)	9.6%	34.3%	34.3%	9.6%	34.3%	9.6%	10.2%	46.6%	46.6%	9.6%	46.0%	
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)	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	0.0	-0.5	-0.5	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.5	4.0	4.0	
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lead	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

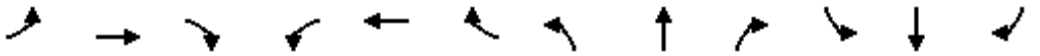
Actuated Cycle Length: 120

Offset: 11.5 (10%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 130

Control Type: Actuated-Coordinated

Splits and Phases: 16: Monroe St. & 50th Avenue



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	59	972	209	70	1124	132	209	1577	116	158	1344	47
Future Volume (veh/h)	59	972	209	70	1124	132	209	1577	116	158	1344	47
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	60	992	213	71	1147	135	213	1609	118	161	1371	48
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	189	1090	462	112	1126	574	237	1604	673	217	1520	53
Arrive On Green	0.05	0.30	0.30	0.06	0.31	0.31	0.07	0.46	0.46	0.07	0.46	0.45
Sat Flow, veh/h	3469	3642	1543	1734	3642	1543	3469	3642	1543	3469	3498	122
Grp Volume(v), veh/h	60	992	213	71	1147	135	213	1609	118	161	713	706
Grp Sat Flow(s),veh/h/ln	1734	1821	1543	1734	1821	1543	1734	1821	1543	1734	1821	1799
Q Serve(g_s), s	2.0	31.5	10.7	4.8	37.1	5.4	7.3	52.8	4.1	5.5	43.4	43.6
Cycle Q Clear(g_c), s	2.0	31.5	10.7	4.8	37.1	5.4	7.3	52.8	4.1	5.5	43.4	43.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.07
Lane Grp Cap(c), veh/h	189	1090	462	112	1126	574	237	1604	673	217	791	782
V/C Ratio(X)	0.32	0.91	0.46	0.63	1.02	0.24	0.90	1.00	0.18	0.74	0.90	0.90
Avail Cap(c_a), veh/h	217	1126	477	112	1126	574	237	1604	673	217	791	782
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.05	1.05	1.05	1.05	1.05	1.05
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	54.6	40.5	21.6	54.8	41.5	15.0	55.3	32.3	11.4	55.1	30.2	30.3
Incr Delay (d2), s/veh	0.9	10.7	0.7	11.2	31.6	0.2	32.9	23.2	0.6	12.9	15.4	15.8
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	0.9	14.9	3.7	2.4	20.6	2.1	4.2	26.0	1.9	2.7	20.5	20.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.5	51.2	22.3	65.9	73.0	15.2	88.2	55.5	12.0	68.0	45.6	46.1
LnGrp LOS	E	D	C	E	F	B	F	F	B	E	D	D
Approach Vol, veh/h		1265			1353			1940			1580	
Approach Delay, s/veh		46.6			66.9			56.4			48.1	
Approach LOS		D			E			E			D	

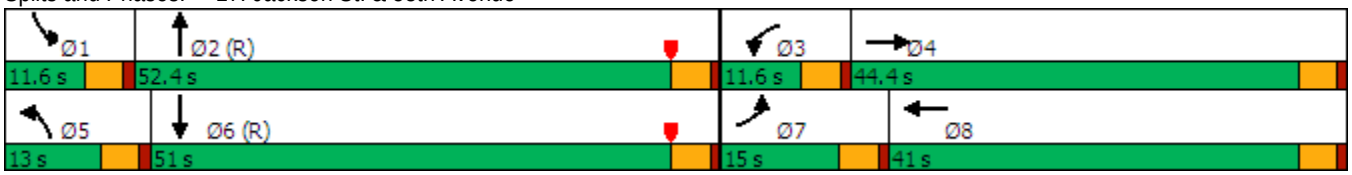
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.5	56.8	11.7	39.9	12.2	56.1	10.6	41.1
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	7.0	51.4	7.0	36.6	7.7	50.7	7.0	36.6
Max Q Clear Time (g_c+I1), s	7.5	54.8	6.8	33.5	9.3	45.6	4.0	39.1
Green Ext Time (p_c), s	0.0	0.0	0.0	1.9	0.0	3.5	0.0	0.0

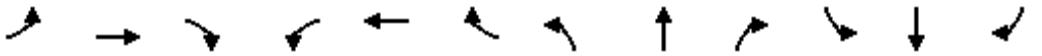
Intersection Summary	
HCM 6th Ctrl Delay	54.5
HCM 6th LOS	D

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	78	634	28	18	830	36	67	1028	32	11	883	90
Future Volume (vph)	78	634	28	18	830	36	67	1028	32	11	883	90
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		150	150		150	150		150	150		150
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			50			55			55	
Link Distance (ft)		4534			1079			1013			510	
Travel Time (s)		61.8			14.7			12.6			6.3	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	11.5	22.5		11.5	22.5		11.5	22.5		11.5	22.5	
Total Split (s)	15.0	44.4		11.6	41.0		13.0	52.4		11.6	51.0	
Total Split (%)	12.5%	37.0%		9.7%	34.2%		10.8%	43.7%		9.7%	42.5%	
Yellow Time (s)	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	
Lost Time Adjust (s)	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	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	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 Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	

Splits and Phases: 17: Jackson St. & 58th Avenue

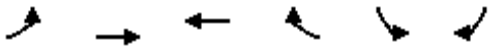




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	78	634	28	18	830	36	67	1028	32	11	883	90
Future Volume (veh/h)	78	634	28	18	830	36	67	1028	32	11	883	90
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	80	647	29	18	847	37	68	1049	33	11	901	92
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	101	1045	47	46	938	41	91	1699	53	31	1463	149
Arrive On Green	0.06	0.31	0.31	0.03	0.28	0.28	0.05	0.50	0.50	0.02	0.46	0.46
Sat Flow, veh/h	1734	3373	151	1734	3377	148	1734	3424	108	1734	3169	324
Grp Volume(v), veh/h	80	332	344	18	434	450	68	530	552	11	492	501
Grp Sat Flow(s),veh/h/ln	1734	1730	1794	1734	1730	1795	1734	1730	1802	1734	1730	1763
Q Serve(g_s), s	5.5	19.6	19.7	1.2	29.0	29.0	4.6	26.7	26.7	0.8	25.7	25.7
Cycle Q Clear(g_c), s	5.5	19.6	19.7	1.2	29.0	29.0	4.6	26.7	26.7	0.8	25.7	25.7
Prop In Lane	1.00		0.08	1.00		0.08	1.00		0.06	1.00		0.18
Lane Grp Cap(c), veh/h	101	536	556	46	481	499	91	858	894	31	799	814
V/C Ratio(X)	0.79	0.62	0.62	0.39	0.90	0.90	0.75	0.62	0.62	0.35	0.62	0.62
Avail Cap(c_a), veh/h	152	575	596	103	526	546	123	858	894	103	799	814
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	1.00
Uniform Delay (d), s/veh	55.8	35.4	35.4	57.5	41.8	41.8	56.1	22.0	22.0	58.2	24.3	24.3
Incr Delay (d2), s/veh	15.2	1.8	1.8	5.4	17.9	17.4	15.7	3.3	3.2	6.7	3.5	3.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	8.2	8.5	0.6	14.1	14.6	2.3	10.6	11.0	0.4	10.4	10.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	71.0	37.2	37.1	62.9	59.6	59.1	71.8	25.3	25.2	65.0	27.8	27.8
LnGrp LOS	E	D	D	E	E	E	E	C	C	E	C	C
Approach Vol, veh/h		756			902			1150			1004	
Approach Delay, s/veh		40.7			59.4			28.0			28.2	
Approach LOS		D			E			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.6	64.0	7.7	41.7	10.8	59.9	11.5	37.8
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	7.1	47.9	7.1	39.9	8.5	46.5	10.5	36.5
Max Q Clear Time (g_c+I1), s	2.8	28.7	3.2	21.7	6.6	27.7	7.5	31.0
Green Ext Time (p_c), s	0.0	5.9	0.0	3.4	0.0	5.3	0.0	2.3

Intersection Summary	
HCM 6th Ctrl Delay	38.0
HCM 6th LOS	D



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	1	1679	963	104	59	1
Future Volume (vph)	1	1679	963	104	59	1
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Storage Length (ft)	0			150	0	0
Storage Lanes	0			1	1	0
Taper Length (ft)	60				60	
Link Speed (mph)		40	40		25	
Link Distance (ft)		207	1226		380	
Travel Time (s)		3.5	20.9		10.4	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	1	1679	963	104	59	1
Future Vol, veh/h	1	1679	963	104	59	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	150	0	-
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	1713	983	106	60	1

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1089	0	-	0	2698	983
Stage 1	-	-	-	-	983	-
Stage 2	-	-	-	-	1715	-
Critical Hdwy	4.12	-	-	-	5.1	6.22
Critical Hdwy Stg 1	-	-	-	-	4.6	-
Critical Hdwy Stg 2	-	-	-	-	4.5	-
Follow-up Hdwy	2.218	-	-	-	3	3.318
Pot Cap-1 Maneuver	641	-	-	-	66	302
Stage 1	-	-	-	-	501	-
Stage 2	-	-	-	-	264	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	641	-	-	-	64	302
Mov Cap-2 Maneuver	-	-	-	-	182	-
Stage 1	-	-	-	-	485	-
Stage 2	-	-	-	-	264	-

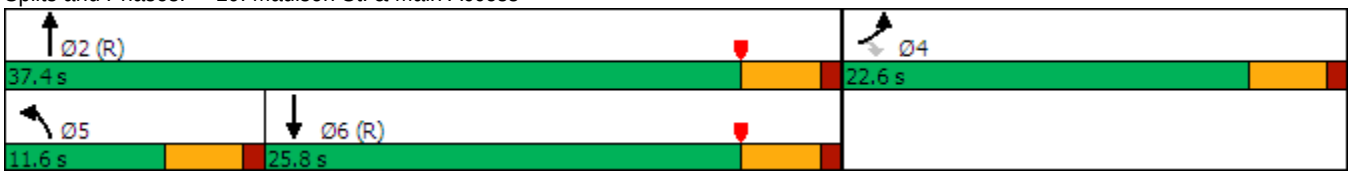
Approach	EB	WB	SB
HCM Control Delay, s	0	0	34.3
HCM LOS			D

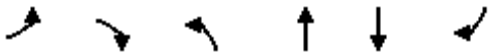
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	641	-	-	-	183
HCM Lane V/C Ratio	0.002	-	-	-	0.335
HCM Control Delay (s)	10.6	0	-	-	34.3
HCM Lane LOS	B	A	-	-	D
HCM 95th %tile Q(veh)	0	-	-	-	1.4

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	203	17	56	1060	893	299
Future Volume (vph)	203	17	56	1060	893	299
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Storage Length (ft)	100	0	150			0
Storage Lanes	1	1	1			0
Taper Length (ft)	90		90			
Right Turn on Red		Yes				Yes
Link Speed (mph)	25			50	50	
Link Distance (ft)	499			880	169	
Travel Time (s)	13.6			12.0	2.3	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)						
Turn Type	Prot	Perm	Prot	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases		4				
Detector Phase	4	4	5	2	6	
Switch Phase						
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	
Minimum Split (s)	22.5	22.5	11.5	22.5	22.5	
Total Split (s)	22.6	22.6	11.6	37.4	25.8	
Total Split (%)	37.7%	37.7%	19.3%	62.3%	43.0%	
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	None	None	C-Max	C-Max	

Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	

Splits and Phases: 19: Madison St. & Main Access





Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	203	17	56	1060	893	299
Future Volume (veh/h)	203	17	56	1060	893	299
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	207	17	57	1082	911	305
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	263	234	124	2416	1406	469
Arrive On Green	0.15	0.15	0.07	0.70	0.55	0.55
Sat Flow, veh/h	1734	1543	1734	3551	2639	850
Grp Volume(v), veh/h	207	17	57	1082	617	599
Grp Sat Flow(s),veh/h/ln	1734	1543	1734	1730	1730	1668
Q Serve(g_s), s	6.9	0.6	1.9	8.2	14.9	15.1
Cycle Q Clear(g_c), s	6.9	0.6	1.9	8.2	14.9	15.1
Prop In Lane	1.00	1.00	1.00			0.51
Lane Grp Cap(c), veh/h	263	234	124	2416	954	920
V/C Ratio(X)	0.79	0.07	0.46	0.45	0.65	0.65
Avail Cap(c_a), veh/h	523	466	205	2416	954	920
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	24.5	21.8	26.7	4.0	9.4	9.4
Incr Delay (d2), s/veh	5.2	0.1	2.6	0.6	3.4	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	3.1	0.5	0.8	1.2	4.5	4.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	29.7	22.0	29.4	4.6	12.8	13.0
LnGrp LOS	C	C	C	A	B	B
Approach Vol, veh/h	224			1139	1216	
Approach Delay, s/veh	29.1			5.8	12.9	
Approach LOS	C			A	B	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		46.4		13.6	8.8	37.6
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		32.9		18.1	7.1	21.3
Max Q Clear Time (g_c+I1), s		10.2		8.9	3.9	17.1
Green Ext Time (p_c), s		7.3		0.4	0.0	2.6

Intersection Summary	
HCM 6th Ctrl Delay	11.2
HCM 6th LOS	B

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	550	8	28	671	25	13
Future Volume (vph)	550	8	28	671	25	13
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Storage Length (ft)		0	50		0	0
Storage Lanes		0	1		1	0
Taper Length (ft)			60		60	
Link Speed (mph)	50			50	25	
Link Distance (ft)	403			335	383	
Travel Time (s)	5.5			4.6	10.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
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	550	8	28	671	25	13
Future Vol, veh/h	550	8	28	671	25	13
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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	598	9	30	729	27	14

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	607	0	1028	304
Stage 1	-	-	-	-	603	-
Stage 2	-	-	-	-	425	-
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	-	-	967	-	230	692
Stage 1	-	-	-	-	509	-
Stage 2	-	-	-	-	627	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	967	-	223	692
Mov Cap-2 Maneuver	-	-	-	-	353	-
Stage 1	-	-	-	-	509	-
Stage 2	-	-	-	-	608	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	14.4
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	424	-	-	967	-
HCM Lane V/C Ratio	0.097	-	-	0.031	-
HCM Control Delay (s)	14.4	-	-	8.8	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.3	-	-	0.1	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	547	16	0	699	0	17
Future Volume (vph)	547	16	0	699	0	17
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Link Speed (mph)	50			50	25	
Link Distance (ft)	335			276	233	
Travel Time (s)	4.6			3.8	6.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

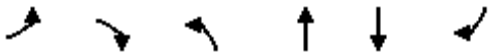
Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	547	16	0	699	0	17
Future Vol, veh/h	547	16	0	699	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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	595	17	0	760	0	18

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	306
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	690
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	690
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	690	-	-	-
HCM Lane V/C Ratio	0.027	-	-	-
HCM Control Delay (s)	10.4	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q(veh)	0.1	-	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	35	0	1263	1157	34
Future Volume (vph)	0	35	0	1263	1157	34
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Link Speed (mph)	25			50	50	
Link Distance (ft)	210			224	288	
Travel Time (s)	5.7			3.1	3.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

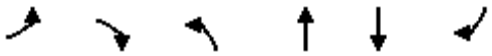
Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	35	0	1263	1157	34
Future Vol, veh/h	0	35	0	1263	1157	34
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	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	38	0	1373	1258	37

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	648	-	0	-	0
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	413	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	413	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	413	-	-
HCM Lane V/C Ratio	-	0.092	-	-
HCM Control Delay (s)	-	14.6	-	-
HCM Lane LOS	-	B	-	-
HCM 95th %tile Q(veh)	-	0.3	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	1	1	1	1269	1086	1
Future Volume (vph)	1	1	1	1269	1086	1
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Storage Length (ft)	0	0	150			0
Storage Lanes	1	0	1			0
Taper Length (ft)	90		90			
Link Speed (mph)	25			40	40	
Link Distance (ft)	306			596	521	
Travel Time (s)	8.3			10.2	8.9	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	1	1	1	1269	1086	1
Future Vol, veh/h	1	1	1	1269	1086	1
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	98	98	98	98	98	98
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	1	1	1295	1108	1

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1759	555	1109	0	-	0
Stage 1	1109	-	-	-	-	-
Stage 2	650	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	76	475	625	-	-	-
Stage 1	277	-	-	-	-	-
Stage 2	481	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	76	475	625	-	-	-
Mov Cap-2 Maneuver	76	-	-	-	-	-
Stage 1	276	-	-	-	-	-
Stage 2	481	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	32.9	0	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	625	-	131	-	-
HCM Lane V/C Ratio	0.002	-	0.016	-	-
HCM Control Delay (s)	10.8	-	32.9	-	-
HCM Lane LOS	B	-	D	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection: 18: Avenue 60 & S. Access

Movement	EB	B91	B91	SB
Directions Served	LT	T		LR
Maximum Queue (ft)	5	403	82	172
Average Queue (ft)	1	90	0	95
95th Queue (ft)	8	396	0	217
Link Distance (ft)	184	451	451	338
Upstream Blk Time (%)		1	0	
Queuing Penalty (veh)		4	0	
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 19: Madison St. & Main Access

Movement	EB	EB	NB	NB	NB	SB	SB	B51	B51
Directions Served	L	R	L	T	T	T	TR	T	T
Maximum Queue (ft)	170	105	44	66	47	164	171	38	59
Average Queue (ft)	119	30	18	39	22	112	114	7	12
95th Queue (ft)	185	108	49	73	52	191	198	40	57
Link Distance (ft)		452		848	848	105	105	173	173
Upstream Blk Time (%)						6	6		
Queuing Penalty (veh)						36	37		
Storage Bay Dist (ft)	100		150						
Storage Blk Time (%)	10	0							
Queuing Penalty (veh)	2	0							

Intersection: 20: Project Access 1 & Avenue 58

Movement	WB	NB
Directions Served	L	LR
Maximum Queue (ft)	20	31
Average Queue (ft)	5	8
95th Queue (ft)	23	30
Link Distance (ft)		336
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	50	
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 21: Project Access 2 & Avenue 58

Movement	EB	NB
Directions Served	T	R
Maximum Queue (ft)	55	18
Average Queue (ft)	12	3
95th Queue (ft)	58	18
Link Distance (ft)	286	173
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 22: Madison St. & Project Access 3

Movement	EB	NB	NB
Directions Served	R	T	T
Maximum Queue (ft)	32	93	58
Average Queue (ft)	6	19	10
95th Queue (ft)	29	81	60
Link Distance (ft)	164	173	173
Upstream Blk Time (%)		0	
Queuing Penalty (veh)		1	
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 23: Madison St. & Golf Course S. Access

Movement	EB	NB
Directions Served	LR	L
Maximum Queue (ft)	5	5
Average Queue (ft)	1	1
95th Queue (ft)	8	8
Link Distance (ft)	260	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		150
Storage Blk Time (%)		
Queuing Penalty (veh)		

Zone Summary

Zone wide Queuing Penalty: 80

Intersection: 18: Avenue 60 & S. Access

Movement	EB	B91	SB
Directions Served	LT	T	LR
Maximum Queue (ft)	200	72	308
Average Queue (ft)	71	0	225
95th Queue (ft)	218	0	400
Link Distance (ft)	184	451	338
Upstream Blk Time (%)	6	0	25
Queuing Penalty (veh)	0	0	0
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 19: Madison St. & Main Access

Movement	EB	EB	NB	NB	NB	SB	SB	B51	B51
Directions Served	L	R	L	T	T	T	TR	T	T
Maximum Queue (ft)	158	74	94	195	184	178	182	97	125
Average Queue (ft)	105	22	50	108	90	125	148	20	45
95th Queue (ft)	172	105	126	248	234	195	220	83	124
Link Distance (ft)		452		848	848	105	105	173	173
Upstream Blk Time (%)						11	17		
Queuing Penalty (veh)						73	113		
Storage Bay Dist (ft)	100		150						
Storage Blk Time (%)	10			6					
Queuing Penalty (veh)	2			3					

Intersection: 20: Project Access 1 & Avenue 58

Movement	EB	WB	NB
Directions Served	TR	L	LR
Maximum Queue (ft)	19	33	45
Average Queue (ft)	3	9	23
95th Queue (ft)	19	32	51
Link Distance (ft)	368		336
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)		50	
Storage Blk Time (%)		0	
Queuing Penalty (veh)		0	

Intersection: 21: Project Access 2 & Avenue 58

Movement	EB	EB	NB
Directions Served	T	TR	R
Maximum Queue (ft)	94	204	41
Average Queue (ft)	27	101	19
95th Queue (ft)	119	277	48
Link Distance (ft)	286	286	187
Upstream Blk Time (%)		2	
Queuing Penalty (veh)		6	
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 22: Madison St. & Project Access 3

Movement	EB	NB	NB	B51	B51
Directions Served	R	T	T	T	T
Maximum Queue (ft)	50	234	233	133	109
Average Queue (ft)	25	189	174	58	51
95th Queue (ft)	50	297	299	175	169
Link Distance (ft)	164	173	173	105	105
Upstream Blk Time (%)		22	21	9	8
Queuing Penalty (veh)		140	133	56	49
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 23: Madison St. & Golf Course S. Access

Movement	EB
Directions Served	LR
Maximum Queue (ft)	10
Average Queue (ft)	1
95th Queue (ft)	12
Link Distance (ft)	257
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Zone Summary

Zone wide Queuing Penalty: 576

May 31, 2023

Mr. John Gamlin
CM Wave Development, LLC
2440 Junction Place, Suite 200
Boulder, CO 81301

CLUB AT CORAL MOUNTAIN SUPPLEMENTAL VMT ASSESSMENT

Dear Mr. John Gamlin:

The firm of Urban Crossroads, Inc. is pleased to submit this Supplemental Assessment of vehicle miles traveled (VMT) for the proposed Club at Coral Mountain development ("Project"), which is located on the southwest corner of re-aligned Madison Street at 58th Avenue in the City of La Quinta. This letter provides information regarding Project residential and non-residential VMT generated by the Alternative 2 "Existing Entitlements" scenario presented in the CORAL MOUNTAIN ALTERNATIVES TRIP GENERATION AND AIR QUALITY AND GREENHOUSE GAS COMPARISON letter prepared by Urban Crossroads, Inc. (May 2021).

The 2021 Trip Generation Alternatives letter indicated that Alternative 2 is anticipated to have a higher daily VMT and per capita VMT because it generates more daily trips and lacks the full complement of prior proposed land uses (no C-T Zone, surf wave basin, or hotel).

The Project does not change existing General Plan land use or zoning designations for the site, consistent with the approved Andalusia Specific Plan and Alternative 2 analyzed in the Final Environmental Impact Report Coral Mountain Resort (SCH #2021020310). A Specific Plan Amendment is proposed to adjust the location and layout of open space–recreation and low density residential areas with minor adjustments to the respective acreages of existing land use designations.

The Project consists of a commercial corner (60,000 square feet of retail), an 18-hole golf course, and up to 750 residential units. The Project site plan is shown on Exhibit 1. A supplemental LOS assessment has been prepared in a separate document.

To ensure that this supplemental VMT assessment is consistent with technical studies prepared for Final Environmental Impact Report Coral Mountain Resort (SCH #2021020310), the "without Project" datasets are consistent with those presented in the February 2021 Coral Mountain Specific Plan Vehicle Miles Traveled (VMT) Analysis.

BACKGROUND

Changes to California Environmental Quality Act (CEQA) Guidelines were adopted in December 2018, which require all lead agencies to adopt VMT as a replacement for automobile delay-based level of service (LOS) as the measure for identifying transportation impacts for land use projects.

This statewide mandate went into effect July 1, 2020. To aid in this transition, the Governor's Office of Planning and Research (OPR) released a Technical Advisory on Evaluating Transportation Impacts in CEQA (December of 2018) (**Technical Advisory**) (1). Based on OPR's Technical Advisory, the City of La Quinta adopted Vehicle Miles Traveled Analysis Policy (July 2021) (2) (**City Guidelines**), which documents the City's VMT analysis methodology and approved impact thresholds.

VMT ANALYSIS METHODOLOGY

The City Guidelines are consistent with the VMT analysis methodology recommended by OPR. As outlined in the La Quinta Guidelines, a Mixed-Use project such as Coral Mountain, which includes both residential and non-residential uses has each type of uses analyzed independently, applying the following significance thresholds for each land use component:

- For Residential Uses, VMT per resident exceeding a level of (1) 15 percent below the Citywide per resident VMT OR (2) 15 percent below regional VMT per resident, whichever is more stringent.
- For Retail or related uses such as a golf course, a net increase in the total existing VMT for the region.

PROJECT SCREENING

Consistent with City Guidelines, projects that meet certain screening thresholds based on their location and project type may be presumed to result in a less than significant transportation impact. The following screening criteria are described within the City Guidelines:

- Step 1: Project Type Screening
- Step 2: Transit Priority Area (TPA) Screening
- Step 3: Low VMT Area Screening

A land use project need only meet one of the above screening criteria to result in a less than significant impact. For the purposes of this supplemental assessment, the VMT screening process has been conducted using the Riverside County Transportation Analysis Model (RIVTAM). As noted in the February 2021 Coral Mountain Specific Plan Vehicle Miles Traveled (VMT) Analysis, the La Quinta Guidelines allow retail projects of less than 70,000 square feet to be screened out. Because the retail component of the Project is less than 70,000 square feet, the retail portion of the Project is screened out.

As noted in the February 2021 Coral Mountain Specific Plan Vehicle Miles Traveled (VMT) Analysis, the site location is not within a TPA. The Project is located in RIVTAM traffic analysis zone (TAZ) 4742, which also is not a low VMT generating TAZ. Exhibit 2 shows the Project area RIVTAM traffic analysis zones.

Since none of the project level screening criteria were met for residential and golf uses, a full project level VMT analysis has been prepared.

PROJECT VMT ASSESSMENT

Consistent with the February 2021 Coral Mountain Specific Plan Vehicle Miles Traveled (VMT) Analysis, Project VMT has been calculated using RIVTAM. Socioeconomic data (SED) and other model inputs are associated with each TAZ. Out of several different variables in the model SED, the VMT analysis mainly focused on population, households and employment that are used in the trip generation component. The model runs a series of complex steps to estimate daily trip productions and attractions by various trip purposes for each TAZ.

Productions and attractions are computed by RIVTAM for each trip purpose, and trip lengths are derived for each zone pair from the respective skim matrices in the model to compute the production and attraction VMT by purpose.

Adjustments in socio-economic data (SED) (i.e., population and employment) have been made to a separate TAZ within the RIVTAM model to reflect the Project's proposed population and employment uses. Separate TAZs are used to isolate the Project's VMT.

Table 1 summarizes the service population (population and employment) estimates for the Project. It should be noted that the employment estimates have been developed from land use to employment generation factors from the Riverside County General Plan but modified for the specific Project characteristics.

TABLE 1: POPULATION AND EMPLOYMENT ESTIMATES

Land Use	Estimated Service Population
Residential	1,875 Residents
Golf Facilities	113 Employees
Commercial Retail	240 Employees
Total:	2,228 Service Population

Adjustments to population and employment factors for the Project TAZs were made to the RIVTAM base year model (2012) and the cumulative year model (2040). Each model was then run with the updated SED factors included for the Project TAZs.

PROJECT RESIDENTIAL VMT CALCULATION

Consistent with recommendations contained in the La Quinta Guidelines, the residential calculation of VMT is based upon the home-based project-generated VMT per population. This calculation focuses on the occupants of dwelling units within the Project land uses, whereas golf employees and patrons are evaluated separately using the boundary method discussed below. Table 2 shows the home-based VMT associated with the Project for both baseline and cumulative conditions. VMT estimates are provided for both the base year model (2012) and cumulative year model (2040), and linear interpolation was used to determine the Project's home-based baseline (2020) VMT.

TABLE 2: BASELINE AND CUMULATIVE PROJECT RESIDENTIAL HOME-BASED VMT

	Project 2012	Project 2040	Project 2020 (interpolated)
Residents	1,875	1,875	1,875
VMT	23,992	26,232	24,632
VMT / Resident	12.80	13.99	13.14

For baseline (2020) conditions, the residential portion of the Project generates 24,632 Home-Based VMT. There are an estimated 1,875 Project residents. The result is approximately 13.14 home-based VMT / Capita for the 2020 Baseline with Project conditions. In addition, the cumulative (2040) Project scenario results in approximately 13.99 VMT / SP.

For comparison purposes, Citywide home-based VMT estimates have been also developed from the "with Project" RIVTAM model run for baseline conditions. Once total home-based VMT for the area is calculated, total area VMT is then normalized by dividing by the population as shown on Table 3.

TABLE 3: BASE YEAR CITYWIDE HOME-BASED VMT

Category	City of La Quinta
VMT	544,993
Population	42,000
VMT / Resident	12.98

The estimates of baseline residential home-based Project VMT / Capita are compared to the City of La Quinta VMT of 12.98 home-based VMT / Capita. The City of La Quinta guidelines indicate that residential VMT exceeding the threshold of 15 percent below the Citywide VMT per resident (11.03 VMT / capita) represents a Project impact. The Project home-based VMT / Capita of 13.14 is greater than the City VMT / Capita threshold, indicating a potentially significant VMT impact.

PROJECT GOLF COURSE IMPACT ON VMT

As noted above, the VMT analysis methodology for non-residential uses focuses on the net increase in the total existing VMT for the region. The golf facilities portion of the project consists of approximately 113 employees.

Travel activity associated with total link-level VMT was extracted from the "without Project employment" and "with Project employment" RIVTAM model run for 2012 and 2040 conditions, then interpolated for baseline (2020) conditions. This methodology is commonly referred to as "boundary method" and includes the total VMT for all vehicle trips with one or both trip ends within a specific geographic area.

The "boundary method" VMT per service population for the CVAG subregion is utilized to normalize VMT into a standard unit for comparison purposes, focusing on the total population and employment in the Coachella Valley. Once total VMT for the area is calculated, total area VMT is then normalized by dividing by the respective service population (i.e., population and employment of the Coachella Valley) as shown on Table 4.

To determine whether there is a significant impact using the boundary method, CVAG area VMT with the project employment is compared to without project conditions.

TABLE 4: BASE YEAR SUB-REGIONAL LINK-LEVEL VMT

	Without Project Employment	With Project Employment
VMT Interacting with CVAG Area	15,173,739	15,179,349
CVAG Area Population	510,550	510,550
CVAG Area Employment	193,090	193,203
VMT / Service Population	21.56	21.57

The CVAG subregion VMT / SP without Project employment is estimated at 21.56, whereas with the Project employment, the CVAG subregion VMT is estimated at 21.57. The project's effect on VMT (for non-residential uses) is considered significant because it results in a cumulative link-level boundary CVAG VMT per service population increase under the plus project condition compared to the no project condition.

PROJECT DESIGN FEATURES FOR VMT REDUCTION

Transportation demand management (TDM) strategies have been evaluated for the purpose of reducing VMT impacts determined to be potentially significant. The Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity (CAPCOA, 2021) provides information on individual measures for potential reduction in VMT.

Consistent with the February 2021 Coral Mountain Specific Plan Vehicle Miles Traveled (VMT) Analysis, reductions in project-generated VMT could be realized via a combination of design elements to enhance bicycle / golf cart / pedestrian accommodations and internal site connections between the commercial corner, golf clubhouse, and residences. However, the effectiveness of these strategies to reduce single-occupant auto travel are reduced in comparison to the full complement of prior proposed land uses (no C-T Zone, surf wave basin, or hotel).

The Project will include improved design elements to enhance walkability and connectivity. Improved street network characteristics within the Project include sidewalk coverage, building setbacks, street widths, pedestrian crossings, presence of street trees, and a host of other physical variables that differentiate pedestrian- and golf cart- oriented environments from auto-oriented environments.

The Project will provide a pedestrian access network that internally links all uses and connects to all existing or planned external streets and pedestrian facilities contiguous with the project site. The Project will minimize barriers to pedestrian and golf cart access and interconnectivity.

The Project's implementation of these measures could provide for a potential reduction in Project home based VMT of 3%. Project design features could therefore potentially reduce the project home-based VMT per capita of 13.14 to 12.75, which is still higher than the City's threshold of 11.03 VMT per capita. In addition, the golf-related VMT / SP of 21.57 impact is not eliminated by the 3% VMT reduction.

CONCLUSION

The Project evaluated in this supplemental assessment does not change existing General Plan land use or zoning designations for the site, consistent with the approved Andalusia Specific Plan and Alternative 2 analyzed in the Final Environmental Impact Report Coral Mountain Resort (SCH #2021020310). It consists of a commercial corner (60,000 square feet of retail), an 18-hole golf course, and up to 750 residential units.

In summary, travel demand modeling of VMT for the Project based upon City of La Quinta guidelines indicates a potential impact for residential uses and golf uses. With project design features, the VMT could potentially be reduced, but the VMT impacts are not eliminated, as anticipated in the CORAL MOUNTAIN ALTERNATIVES TRIP GENERATION AND AIR QUALITY AND GREENHOUSE GAS COMPARISON letter prepared by Urban Crossroads, Inc. (May 2021).

If you have any questions, please contact Marlie at (714) 585-0574 or John at (949) 375-2435.

Respectfully submitted,

URBAN CROSSROADS, INC.

John Kain

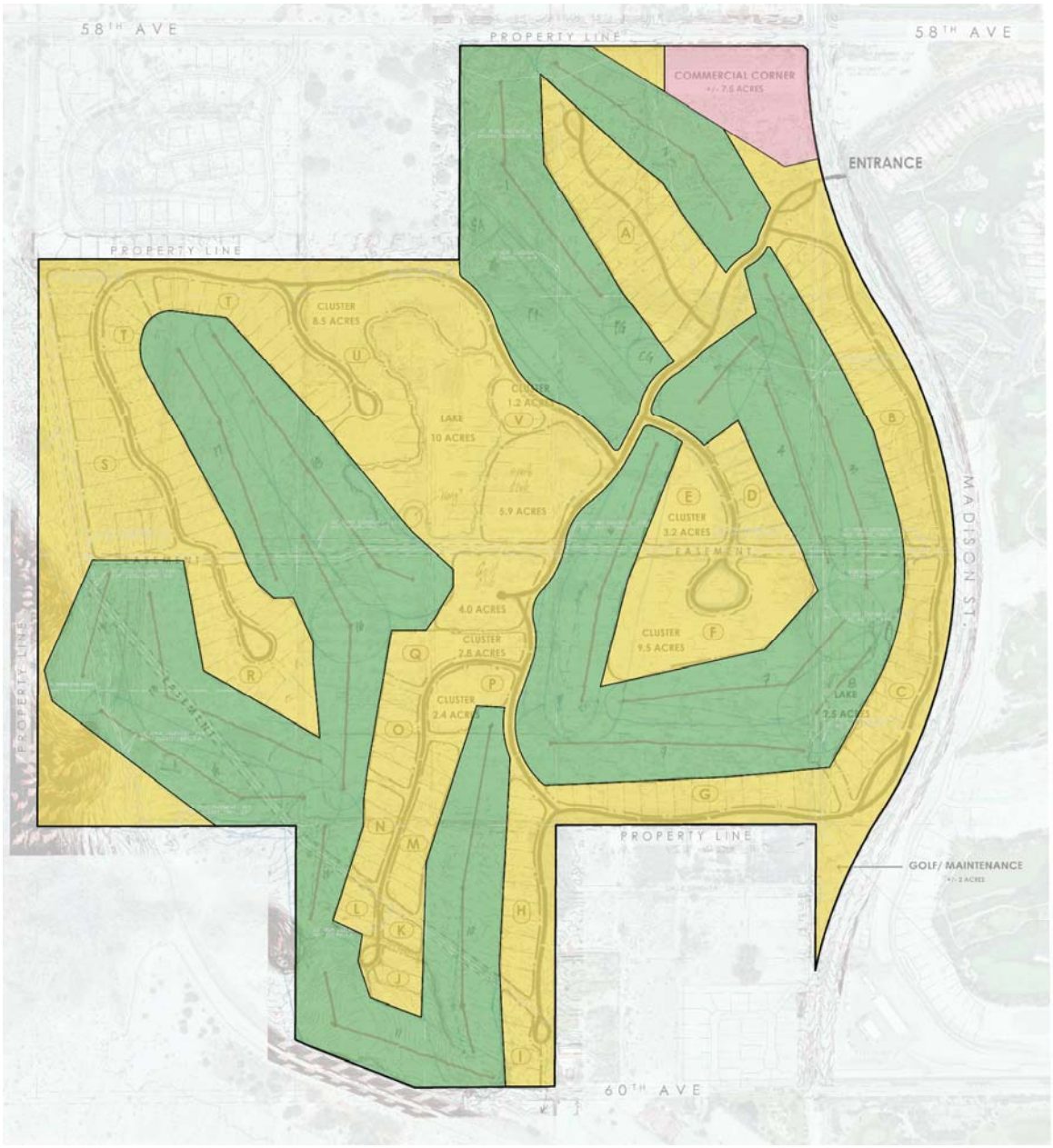
John Kain, AICP
Principal

Marlie Whiteman

Marlie Whiteman, P.E.
Senior Associate

Attachments

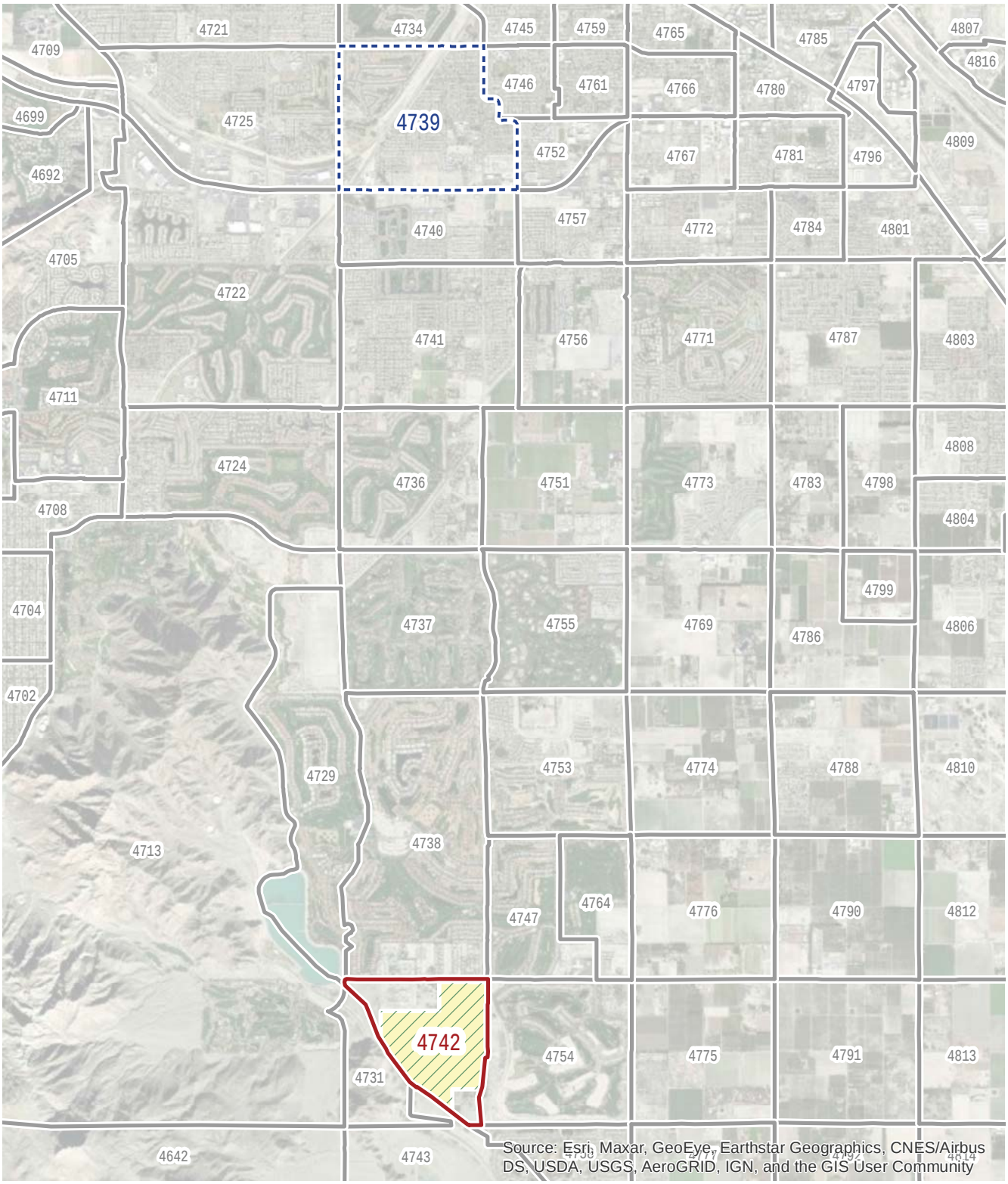
EXHIBIT 1: PRELIMINARY SITE PLAN



Residential Land Area :	± 193.7 Acres
Commercial Land Area :	± 7.7 Acres
Golf Course Area :	± 183.0 Acres
Total Project Area :	± 384.4 Acres

N

EXHIBIT 12: PROJECT AREA RIVTAM TRAFFIC ANALYSIS ZONES



LEGEND

EXAMPLE OF RIVTAM LOW VMT TAZ

RIVTAM TAZ ENCOMPASSING CORAL MOUNTAIN PROJECT

SEPARATE TAZ ADDED FOR PROJECT REPRESENTATION IN RIVTAM

N

12615 - 01 - TAZ.mxd

15455 - 01 - study area.dwg

Water Supply Assessment

for the Proposed

Coral Mountain Project

Prepared for:

Coachella Valley Water District
P.O. Box 1058
Coachella, CA 92236

Prepared by:

MSA Consulting Inc.
34200 Bob Hope Dr
Rancho Mirage, CA 92270

August 2023

Approved by
Coachella Valley Water District
Board of Directors
On September 12, 2023

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1 Summary and Requirements

The environmental review of the Coral Mountain Project (Project) is being prepared in compliance with the California Environmental Quality Act (CEQA) process. The City is the Lead Agency for the planning and environmental review of the proposed Project. The City has identified the Coachella Valley Water District (CVWD) as the Public Water System (PWS) that will supply water for the proposed Project and has requested that CVWD assist in preparing a Water Supply Assessment (WSA) as part of the environmental review for the Project.

The Project is in the City of La Quinta, Riverside County. The property is generally vacant and undeveloped with CVWD irrigation mains, numerous dirt roads and hiking trails. Various desert vegetation is found throughout the site. The site is bounded to the east by Madison Street, to the north by 58th Avenue, existing levees and the Coral Mountain to the west and southwest, and 60th Avenue to the south.

The Project proposes to develop approximately 387 acres of vacant land to include three planning areas: Planning Area III (PA-III) Residential, Planning Area V (PA-V) Neighborhood Commercial, and Planning Area VI (PA-VI) Golf/Open Space. PA-III consists of approximately 191.8 acres of land and will allow the construction of up to 750 single family attached and detached dwellings and affiliated amenities. In addition to residential acreage, PA III also includes a 5.9-acre sports club, a 4-acre golf club, a 3-acre active amenity park to include both passive and active recreation activities, two restaurants located inside the sports club and golf club, a 12-acre lake and 2 acres of golf maintenance area.

PA-V consists of 7.7 acres of land that will include 60,000 square feet of publicly accessible neighborhood commercial building space. PA-VI consists of approximately 184.9 acres of land to be developed into a championship length 18-hole golf course and ancillary facilities such as a golf academy, practice range, chipping, putting facilities, and irrigation lakes.

This WSA determined that the total projected water demand for the Project is 1,217.01 AFY, or 3.14 acre-feet per acre. This WSA demonstrates that sufficient water supplies exist, or will exist based on current water planning assumptions, to meet the projected demands of the Project, in addition to current and future projected water demands within CVWD's service area in normal, single-dry, and multiple-dry years over a 20-year projection. This WSA will be reviewed every five years, or in the event that the water planning assumptions have changed, until the Project begins construction to ensure it remains accurate and no significant changes to either the Project or available water supply has occurred. Consistent with the provisions of SB 610, neither this WSA nor its approval shall be construed to create a right or entitlement to water service or any specific level of water service, and shall not impose, expand, or limit any duty concerning the obligation of CVWD to provide certain service to its existing customers or to any future potential customers.

This WSA does not constitute an agreement to provide water service to the Project, and does not entitle the Project, Project Applicant, or any other person or entity to any right, priority or

allocation in any supply, capacity, or facility. To receive water service, the Project will be subject to an agreement with CVWD, together with any and all applicable fees, charges, plans and specifications, conditions, and any and all other applicable CVWD requirements in place and as amended from time to time. Nor does anything in this WSA prevent or otherwise interfere with CVWD's discretionary authority to declare a water shortage emergency in accordance with the Water Code.

1.1 Regulatory Requirements

This WSA provides an assessment of the availability of sufficient water supplies during normal, single-dry, and multiple-dry years over a 20-year projection to meet the projected demands of the Project, in addition to existing and planned future water demands of CVWD, as required by Senate Bill (SB) 610 and SB 1262. This WSA also includes identification of existing water supply entitlements, water rights, water service contracts, or agreements relevant to the identified water supply for the Project and quantities of water received in prior years pursuant to those entitlements, rights, contracts, and agreements.

This WSA has been prepared in compliance with the requirements under SB 610 and SB 1262 by MSA Consulting in consultation with CVWD and the City. This WSA does not relieve the Project from complying with all applicable state, county, city, and local ordinances or regulations, including the CVWD Landscape Ordinance and indoor water use performance standards provided in the California Water Code (CWC).

This WSA will be reviewed every five years, or in the event that the water planning assumptions have changed, until the Project begins construction on all planning areas, to ensure it remains accurate and no significant changes to either the Project or available water supply has occurred. The Project applicant shall notify CVWD when construction of all planning areas begins.

1.1.1 Senate Bill 610

On January 1, 2002, Senate Bill 610 (SB 610) was enacted and codified in CWC Section 10910 et seq., requiring the preparation of a Water Supply Assessment (WSA) for certain new development projects. As stated in SB 610, the purpose of a WSA is to determine whether the PWS's "total projected water supplies available during normal, single-dry, and multiple-dry water years during a 20-year projection will meet the projected water demand associated with the proposed project, in addition to the PWS's existing and planned future uses, including agricultural and manufacturing uses."

CWC Section 10912 defines a "project" as any of the following:

- A proposed residential development of more than 500 dwelling units;
- A proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space;
- A proposed commercial office building employing more than 1,000 persons or having more than 250,000 square feet of floor space;

- A proposed hotel or motel, or both, having more than 500 rooms;
- A proposed industrial, manufacturing, or processing plant, or industrial park, planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 square feet of floor space;
- A mixed-use project that includes one or more of the projects specified in this subdivision; or
- A project that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500-dwelling unit project (about 250 acre-feet per year).

The intent of SB 610 is to improve the link between information on water supply availability and certain land-use decisions made by cities and counties.

1.1.2 Senate Bill 1262

On January 1, 2017, Senate Bill 1262 (SB 1262) was enacted and amended CWC Section 10910, requiring that information regarding the Sustainable Groundwater Management Act (SGMA) be included in a WSA if the water supply for a proposed project includes groundwater from a basin that is not adjudicated and was designated medium- or high-priority by the California Department of Water Resources (DWR).

1.2 Water Management Planning Documents

CVWD has prepared long-term planning documents to project future was use and manage the water supplies within its service area. These planning documents can be used for compliance with SB 610 and SB 1262 and are discussed in further detail in the following sections.

1.2.1 Urban Water Management Planning Act

The Urban Water Management Planning Act (UWMPA) was established by Assembly Bill 797 (AB 797) on September 21, 1983, and passage of this law recognized that water is a limited resource, and that efficient water use and conservation would be actively pursued throughout the State. The UWMPA requires that municipal water suppliers providing either directly or indirectly to more than 3,000 customers or supplying more the 3,000 acre-feet per year (AFY), prepare and adopt an Urban Water Management Plan (UWMP) every five years which defines their current and future water use, source of supply, source reliability, and existing conservation measures.

1.2.1.1 Coachella Valley Water District Urban Water Management Plan

CVWD prepared and adopted its 2005, 2010, and 2015 UWMPs to document CVWD's projected water demands and plans for delivering water supplies to its water service area during normal, single-dry, and multiple-dry years over a 20-year projection.

The six urban water suppliers in the Coachella Valley (CVWD, Coachella Water Authority, Desert Water Agency (DWA), Indio Water Authority (IWA), Mission Springs Water District (MSWD), and Myoma Dunes Mutual Water Company) collaboratively prepared the 2020 Coachella Valley Regional UWMP, including regional and individual agency content and other necessary elements

as set forth in DWR's 2020 UWMP Guidebook. The 2020 Coachella Valley Regional UWMP was submitted to DWR on July 1, 2021. DWR accepted CVWD's portion of the Regional UWMP on May 17, 2022.

1.2.2 Sustainable Groundwater Management Act

In September 2014, Governor Brown signed three bills into law: Assembly Bill 1739, Senate Bill 1319, and Senate Bill 1168, which became collectively known as the Sustainable Groundwater Management Act (SGMA), creating a framework for sustainable, local groundwater management for the first time in California history. DWR evaluated and prioritized the 515 groundwater basins identified in Bulletin 118, and 94 of these groundwater basins were designated as high- or medium-priority basins, as of December 2019, requiring them to be sustainably managed within 20 years. SGMA required local authorities to form local Groundwater Sustainability Agencies (GSAs) by June 30, 2017 to evaluate conditions in their local groundwater basins and adopt locally-based Groundwater Sustainability Plans (GSPs), or Alternatives to a GSP (Alternative Plans), tailored to their regional economic and environmental needs.

As defined by DWR, the subbasins of the Coachella Valley Groundwater Basin are the Indio, Mission Creek, San Gorgonio Pass, and Desert Hot Springs Subbasins. CVWD's service area overlies the Indio, Mission Creek, and Desert Hot Springs Subbasins. The Indio and Mission Creek Subbasins have been designated medium-priority by DWR and are subject to the requirements of SGMA. The Desert Hot Springs Subbasin has been designated very low-priority by DWR and is not subject to the requirements of SGMA. The Project is located within the Indio Subbasin, which has been designated as a medium priority groundwater basin by DWR under SGMA.

1.2.2.1 Alternative Plan for the Indio Subbasin

Twenty years before the adoption of SGMA, CVWD began the development of the initial water management plan for the Coachella Valley in 1994 after recognizing the need to sustainably manage the Coachella Valley Groundwater Basin. The original planning document is the 2002 Coachella Valley Water Management Plan (CVWMP). The 2002 CVWMP was updated in 2010 and adopted in 2012.

CVWD, DWA, CWA, and IWA, are the Indio Subbasin GSAs designated by DWR for their respective service areas. On December 29, 2016, CVWD, DWA, CWA, and IWA collaboratively submitted the 2010 CVWMP Update as an Alternative Plan for the Indio Subbasin, with an associated Bridge Document and supporting documents, to DWR for review and evaluation. On July 17, 2019, DWR determined that the Alternative Plan for the Indio Subbasin satisfies the objectives of SGMA and notified the Indio Subbasin GSAs that the Alternative Plan was approved, and that they would be required to submit an assessment and update of the Alternative Plan pursuant to the SGMA by January 1, 2022, and every five years thereafter. The 2022 Alternative Plan Update for the Indio Subbasin was submitted to DWR on December 29, 2021.

On February 1, 2018, DWR notified all GSAs who submitted Alternative Plans that they would be required to submit annual reports pursuant to SGMA by April 1, 2018, and every year thereafter.

CVWD, DWA, CWA, and IWA have collaboratively prepared and submitted the Indio Subbasin Annual Reports for Water Years 2016-2017 through 2021-2022.

1.2.2.2 Alternative Plan for the Mission Creek Subbasin

In 2004, CVWD, DWA, and MSWD reached an agreement and created the Mission Creek Subbasin Management Committee (Management Committee). The Management Committee jointly prepared the 2013 Mission Creek-Garnet Hill Subbasin Water Management Plan (2013 MC-GH WMP).

On December 29, 2016, CVWD, DWA, and MSWD collaboratively submitted the 2013 MC-GH WMP as an Alternative Plan for the Mission Creek Subbasin, with an associated Bridge Document and supporting documents, to DWR for review and evaluation. On July 17, 2019, DWR determined that the Alternative Plan for the Mission Creek Subbasin satisfies the objectives of SGMA and notified the Management Committee that the Alternative Plan was approved, and that they would be required to submit an assessment and update of the Alternative Plan pursuant to SGMA by January 1, 2022, and every five years thereafter. The 2022 Alternative Plan Update for the Mission Creek Subbasin was submitted to DWR on December 30, 2021.

On February 1, 2018, DWR notified all GSAs who submitted Alternative Plans that they would be required to submit annual reports pursuant to SGMA by April 1, 2018, and every year thereafter. CVWD, DWA, and MSWD have collaboratively prepared and submitted the Mission Creek Subbasin Annual Reports for Water Years 2016-2017 through 2021-2022.

1.2.3 Groundwater Replenishment

State Water Code (SWC) 31630-31639 provides CVWD with the authority to levy and collect water replenishment assessments to implement groundwater replenishment programs (GRPs) within its jurisdictional boundary. Groundwater replenishment is necessary to mitigate overdraft of the groundwater basin and associated undesirable results. The jurisdictional areas that benefit from the GRPs, and where CVWD levies replenishment assessments on groundwater production, are termed Areas of Benefit (AOBs). There are three AOBs within CVWD's boundary: the Mission Creek Subbasin AOB, the West Whitewater River Subbasin AOB, and the East Whitewater River Subbasin AOB. The GRP for the West Whitewater River Subbasin AOB was formed in 1976, the GRP for the Mission Creek Subbasin AOB was formed in 2003, and the GRP for the East Whitewater River Subbasin AOB was formed in 2004. The Project is located within the East Whitewater River Subbasin AOB.

1.2.3.1 Annual Engineer's Reports

CVWD is required to prepare and present to its Board of Directors annually an Engineer's Report on Water Supply and Replenishment Assessment reporting on the conditions of the groundwater supplies and recommend Replenishment Assessment Charges (RACs) to be levied upon groundwater production greater than 25 AFY within each AOB in accordance with SWC 31630-31639. The Engineer's Report must include the following information: a summary of the conditions of groundwater supplies; the need for replenishment; a description of the

replenishment programs, including the source and amount of replenishment waters, the costs associated with the GRP, the areas directly and indirectly benefited by the GRP, and the amount of groundwater produced in each area during the prior year; and a recommendation for the RAC to be levied on each AOB. The 2023-2024 Engineer's Report on Water Supply and Replenishment Assessment was prepared and presented to CVWD's Board of Directors on April 25, 2023.

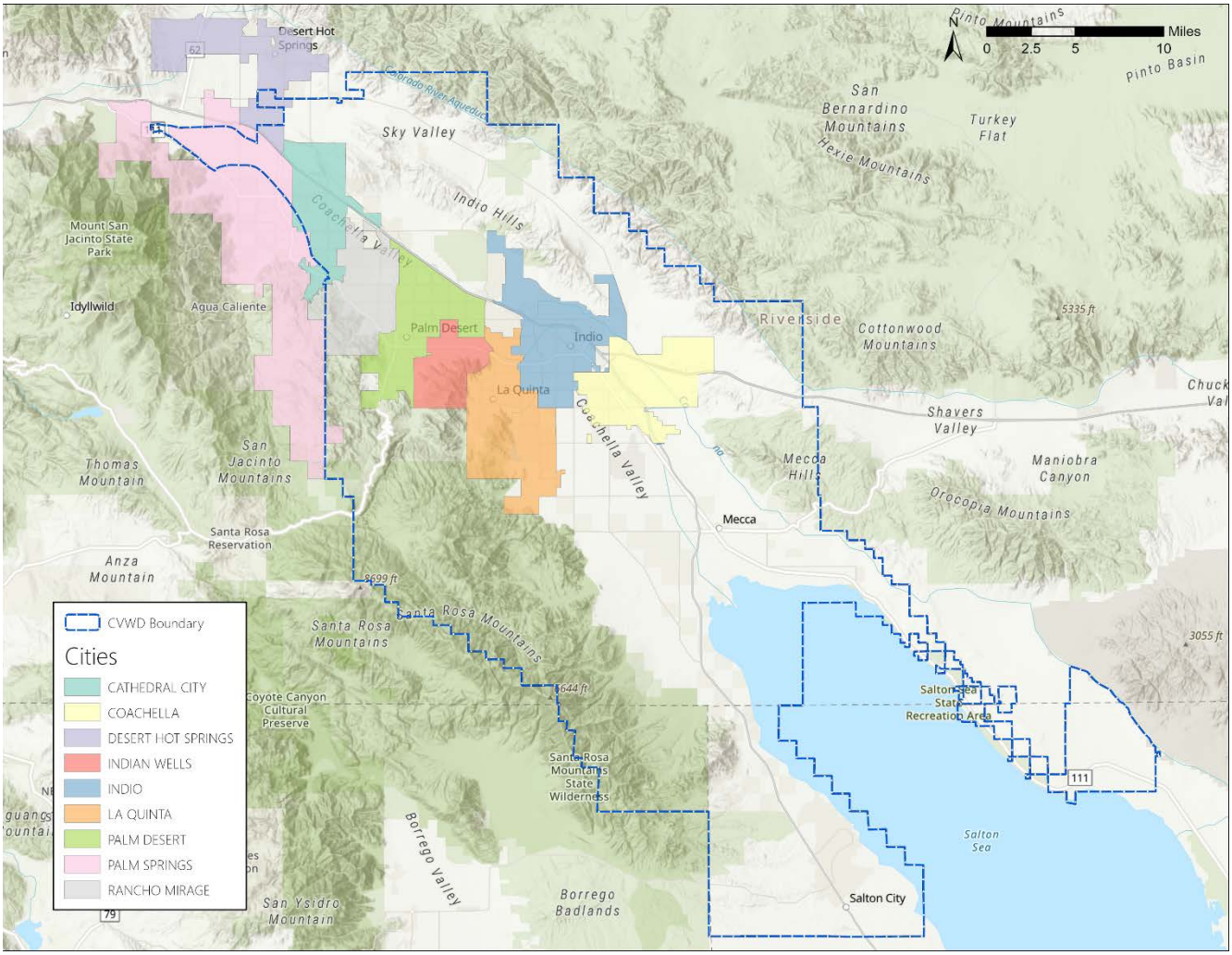
2 Public Water System

The City is the Lead Agency for the planning and environmental review of the proposed Coral Mountain Project (Project). The City has identified the Coachella Valley Water District (CVWD) as the Public Water System (PWS) that will supply water for the proposed Project, and has requested that CVWD assist in preparing a Water Supply Assessment (WSA) as part of the environmental review for the Project.

2.1 Coachella Valley Water District

CVWD was established in 1918 under the County Water District Act provisions of the California Water Code. CVWD provides water related services for domestic water, wastewater collection and treatment, recycled water, agricultural irrigation water, drainage management, imported water supply, groundwater replenishment, stormwater management, flood control, and water conservation. CVWD's boundary encompasses approximately 640,000 acres as shown in **Figure 2-1**, mostly within Riverside County, but also extending into northern Imperial and San Diego Counties.

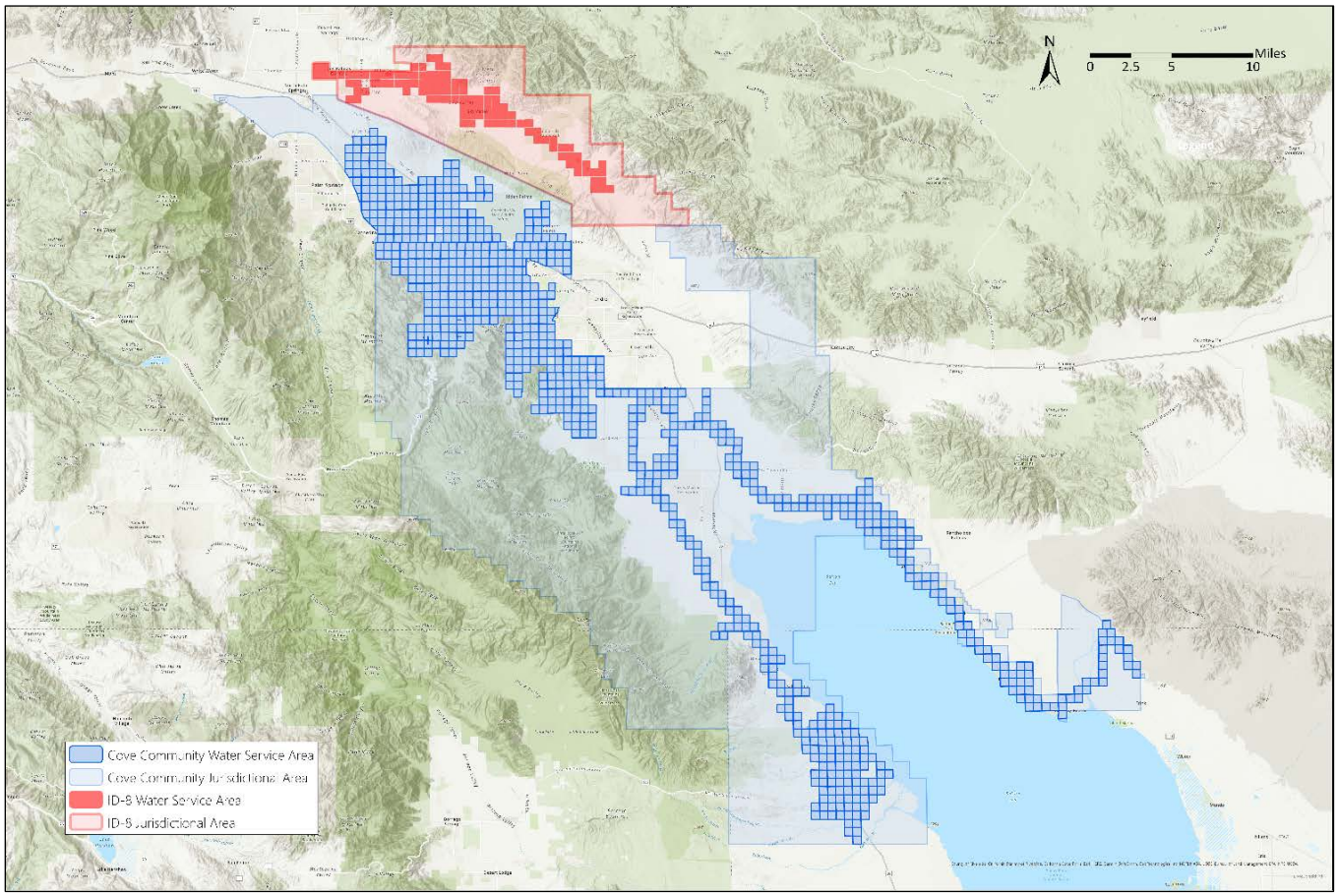
Figure 2-1: Coachella Valley Water District Boundary and Cities



2.1.2 Coachella Valley Water District – Potable Water Distribution Systems

CVWD has two domestic water service areas that serve potable water to its local communities: the Cove Communities system and Improvement District No. 8 (ID-8) as shown in **Figure 2-2**. CVWD previously had three water systems, but ID-11 was consolidated into the Cove Communities system in March 2021. CVWD had approximately 113,481 domestic water connections and served approximately 91,230acre-feet (AF) of water in 2022. CVWD serves all of the Cities of Rancho Mirage, Thousand Palms, Palm Desert, Indian Wells, and La Quinta, and a portion of Indio, Coachella, and Cathedral City. Other areas served with domestic water by CVWD include a portion of lands near Desert Hot Springs and the Indio Hills. CVWD also serves other unincorporated communities including Thermal, Mecca, Oasis, Desert Shores, Salton Sea Beach, Salton City, North Shore, Bombay Beach, Hot Mineral Springs, and other portions of unincorporated Riverside and Imperial Counties. The Project is located within CVWD's Cove Communities domestic water distribution system.

Figure 2-2: Coachella Valley Water District Domestic Water Service Areas



The 2020 Regional UMWP projected that population in CVWD's urban water service area would increase as shown in **Table 2-1**.

Table 2-1: Current and Projected Population for CVWD's Service Area

Population Served	2020	2025	2030	2035	2040	2045
	268,952	292,077	315,202	338,274	360,813	383,300

Source: 2020 Coachella Valley Regional Urban Water Management Plan

2.2 Coachella Valley Hydrology

The bulk of natural groundwater replenishment comes from runoff from the adjacent mountains. Climate in the Coachella Valley is characterized by low humidity, high summer temperatures, and mild dry winters. Average annual precipitation varies from 3 to 6 inches of rain on the Coachella Valley floor to more than 30 inches in the surrounding mountains. Most of the precipitation occurs between December and February, except for summer thundershowers. Prevailing winds in the area are usually gentle, but occasionally increase to velocities as high as 30 miles per hour or more. Mid-summer temperatures commonly exceed 100 degrees Fahrenheit (°F), frequently

reach 110 °F, and periodically reach or exceed 120 °F, and the average winter temperature is approximately 60 °F as shown in **Table 2-2** and **Table 2-3**.

Table 2-2: Monthly Average Climate Data for Palm Springs

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Max (°F)[1]	71	73	80	86	94	104	108	107	102	90	78	69	89
Min (°F)[1]	47	49	54	59	65	73	80	79	74	64	53	46	62
Rain (in)[1]	0.95	0.92	0.36	0.10	0.02	0.00	0.25	0.14	0.20	0.20	0.26	0.70	3.80
ETo (in)[2]	2.5	3.4	5.6	7.1	8.3	8.7	8.1	7.5	6.2	4.7	2.9	2.2	67.2

Source: 2020 Coachella Valley Regional Urban Water Management Plan

[1] National Weather Service Forecast, Station Palm Springs Airport, 1998-2020

[2] CIMIS Station 208 – La Quinta II, 2007-2020

Table 2-3: Monthly Average Climate Data for Thermal

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Max (°F) [1]	71	74	81	87	95	103	107	106	101	91	79	69	89
Min (°F) [1]	39	43	49	55	63	69	76	75	68	57	45	38	56
Rain (in)[1]	0.64	0.61	0.34	0.08	0.01	0.01	0.13	0.12	0.32	0.19	0.17	0.34	2.96
ETo (in) [2]	2.7	3.9	6.4	8.0	9.3	9.3	9.6	9.1	7.1	5.3	3.2	2.4	70.2

Source: 2020 Coachella Valley Regional Urban Water Management Plan

[1] National Weather Service Forecast, Station Desert Resorts Regional Airport, 1990-2020

[2] CIMIS Station 218 – Thermal South, 2010-2020

3 Public Water System – Existing Supply and Demand

Currently, all of Coachella Valley Water District's (CVWD's) urban potable water uses are supplied using groundwater. In addition to groundwater, CVWD has imported water supplies from the State Water Project (SWP) and the Colorado River, and recycled water from water reclamation plants. These imported and recycled water supplies are used to meet CVWD's non-potable water demands and to replenish the groundwater basin.

3.1 Groundwater

Groundwater is the principal source of potable supply in the Coachella Valley and CVWD obtains groundwater from both the Indio and Mission Creek Subbasins of the Coachella Valley Groundwater Basin. CVWD has the legal authority to manage the groundwater basin within its boundaries under the County Water District Law (California Water Code section 30000, et seq.) and as a Groundwater Sustainability Agency (GSA) under the Sustainable Groundwater Management Act (SGMA).

Groundwater, to be supplied to the Project, is also used by other domestic water suppliers and private pumpers for crop irrigation, fish farms, duck clubs, golf course irrigation, greenhouses, and industrial uses in the Coachella Valley.

3.1.1 Coachella Valley Groundwater Basin

The Coachella Valley Groundwater Basin is bounded on the north and east by the San Bernardino and Little San Bernardino Mountains, on the south and west by the Santa Rosa and San Jacinto Mountains, and on the south by the Salton Sea. At the west end of the San Gorgonio Pass, between Beaumont and Banning, the basin boundary is defined by a surface drainage divide separating the Coachella Valley Groundwater Basin from the Beaumont Groundwater Basin of the Upper Santa Ana Drainage Area.

The southern boundary is formed primarily by the watershed of the Mecca Hills and by the northwest shoreline of the Salton Sea running between the Santa Rosa Mountains and Mortmar. Between the Salton Sea and Travertine Rock, at the base of the Santa Rosa Mountains, the southern boundary crosses the Riverside County Line into Imperial and San Diego Counties.

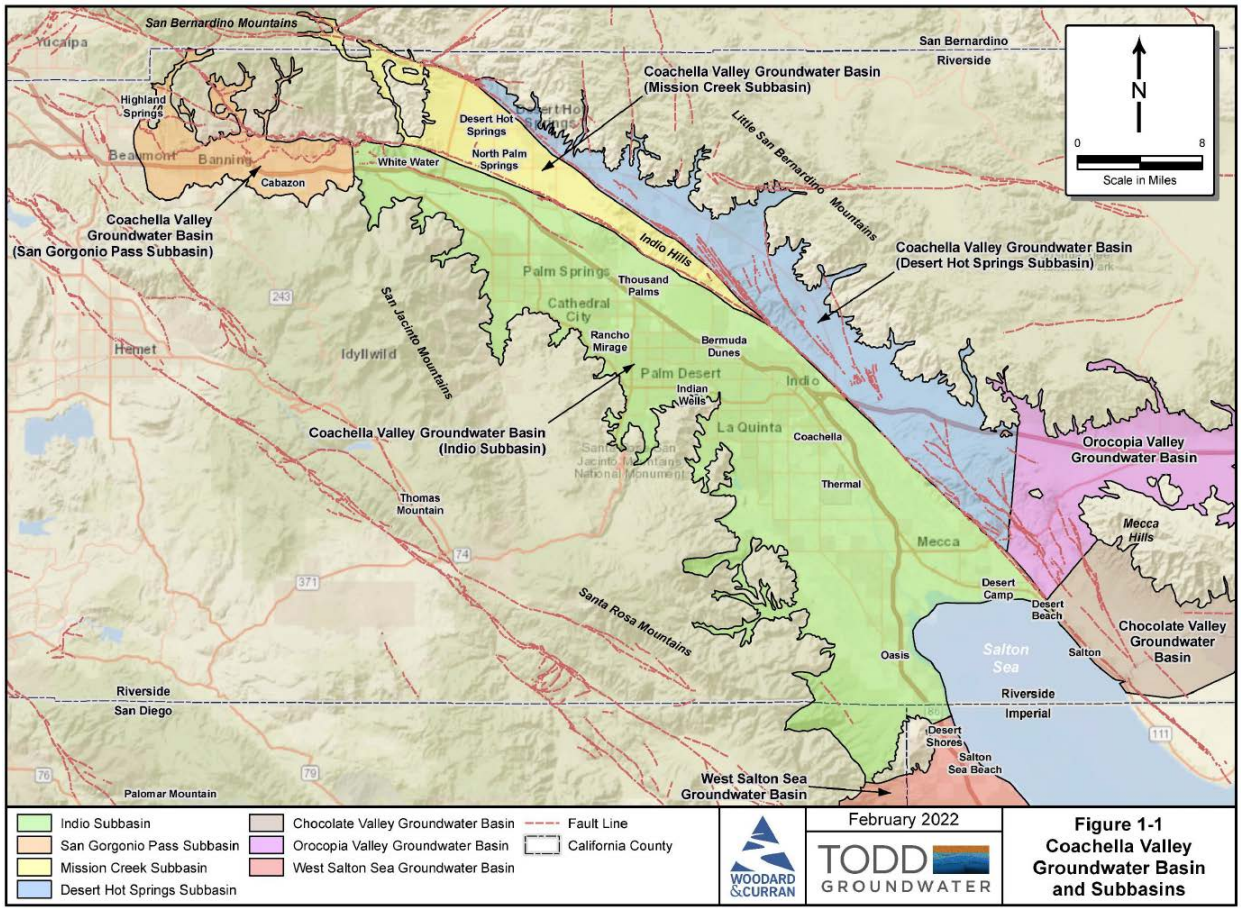
Although there is interflow of groundwater throughout the Coachella Valley Groundwater Basin, fault barriers, constrictions in the basin profile, and areas of low permeability limit and control movement of groundwater. Based on these factors, the Coachella Valley Groundwater Basin has been divided into subbasins and subareas as described by DWR in 1964 and 2003, and by the United States Geological Survey (USGS) in 1974.

3.1.1.1 Coachella Valley Groundwater Basin – Subbasins

As shown on **Figure 3-1,** the subbasins of the Coachella Valley Groundwater Basin are the Indio, Mission Creek, San Gorgonio Pass, and Desert Hot Springs Subbasins. The subbasins are defined without regard to water quantity or quality. They delineate areas underlain by formations which readily yield stored groundwater through water wells and offer natural reservoirs for the regulation of water supplies.

The boundaries between subbasins within the Coachella Valley Groundwater Basin are generally defined by faults that impede the lateral movement of groundwater. Minor subareas have also been delineated based on one or more of the following geologic or hydrologic characteristics: types of water-bearing formations, water quality, areas of confined groundwater, forebay areas, groundwater divides, and surface drainage divides.

Figure 3-1: Coachella Valley Groundwater Basin and Subbasins



Source: Indio Subbasin Annual Report for Water Year 2020-2021

The following is a list of the subbasins in the Coachella Valley Groundwater Basin as designated by DWR in Bulletin 118:

- Indio Subbasin (Subbasin 7-21.01)
- Mission Creek Subbasin (Subbasin 7-21.02)
- San Gorgonio Pass Subbasin (Subbasin 7-21.03)
- Desert Hot Springs Subbasin (Subbasin 7-21.04)

DWR designated the Indio, Mission Creek, and San Gorgonio Pass Subbasins as medium-priority, and the Desert Hot Springs Subbasin as very low priority. None of the subbasins are adjudicated or in a state of overdraft.

In 1964, DWR estimated that the subbasins in the Coachella Valley Groundwater Basin contained approximately 39,200,000 acre-feet (AF) of water in the first 1,000 feet below the groundwater surface. The capacities of the subbasins are shown in **Table 3-1**.

Table 3-1: Groundwater Storage in the Coachella Valley Groundwater Basin

Subbasin/Subarea	Storage (AF) [1]
Indio Subbasin	
Palm Springs Subarea	4,600,000
Thousand Palms Subarea	1,800,000
Oasis Subarea	3,000,000
Garnet Hill Subarea	1,000,000
Thermal Subarea	19,400,000
Indio Subbasin Subtotal	**29,800,000**
Mission Creek Subbasin	2,600,000
San Gorgonio Subbasin	2,700,000
Desert Hot Springs Subbasin	4,100,000
Total	**39,200,000**

Source: DWR Bulletin 108 (1964)

[1] First 1,000 feet below ground surface. (DWR, 1964)

3.1.2 Groundwater Demand

Groundwater is the principal source of potable supply in the Coachella Valley and CVWD extracts groundwater from both the Indio and Mission Creek Subbasins of the Coachella Valley Groundwater Basin, which is continually replenished by CVWD. CVWD's groundwater demands in the Coachella Valley Groundwater Basin for 2018 through 2022 are shown in **Table 3-2**.

Table 3-2: CVWD Groundwater Demand in the Coachella Valley Groundwater Basin

Groundwater Production (AF)	2018	2019	2020	2021	2022
Indio Subbasin	96,176	93,130	96,661	98,484	97,106
Mission Creek Subbasin	2,786	2,642	3,182	3,062	2,960
Total	**98,962**	**95,772**	**99,843**	**101,546**	**100,066**

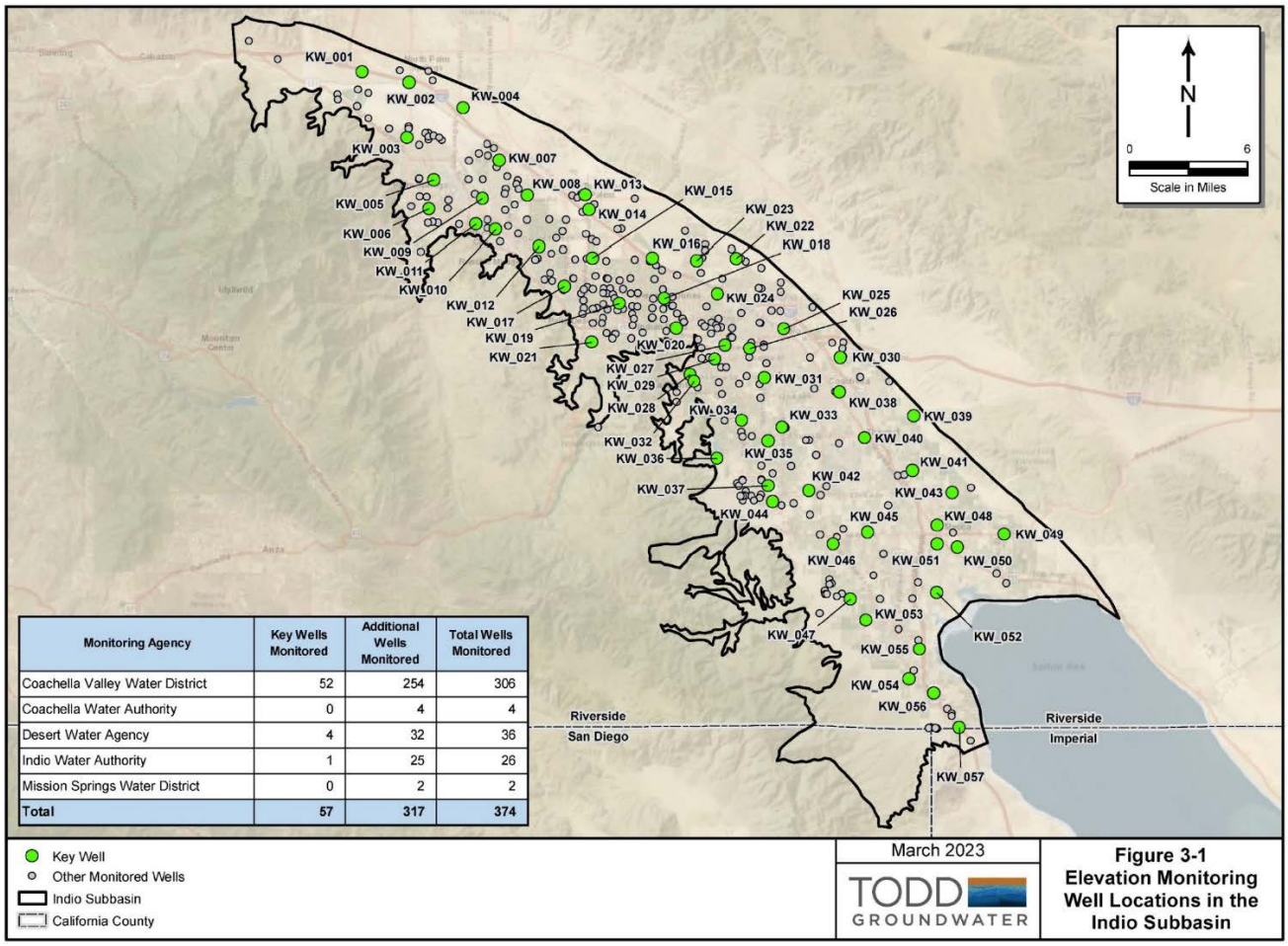
3.1.3 Groundwater Sustainability

Long-term sustainability is typically assessed based on changes in groundwater storage over a historical period on the order of ten to twenty years that includes wet and dry periods.

3.1.3.1 Indio Subbasin

The 2022 Indio Subbasin Alternative Plan Update identified 57 Key Wells across the subbasin to represent local groundwater levels, shown in **Figure 3-2**. The plan set metrics to demonstrate sustainability, including a Minimum Threshold (MT) at each Key Well. MTs are numeric values used to define undesirable results under SGMA. In WY 2021-2022, water levels in all 57 Key Wells remained above their respective MTs. This confirms that the significant undesirable results of chronic lowering of groundwater levels, depletion of groundwater storage, and potential subsidence are not occurring in the Indio Subbasin.

Figure 3-2: Water Level Monitoring Wells in the Indio Subbasin



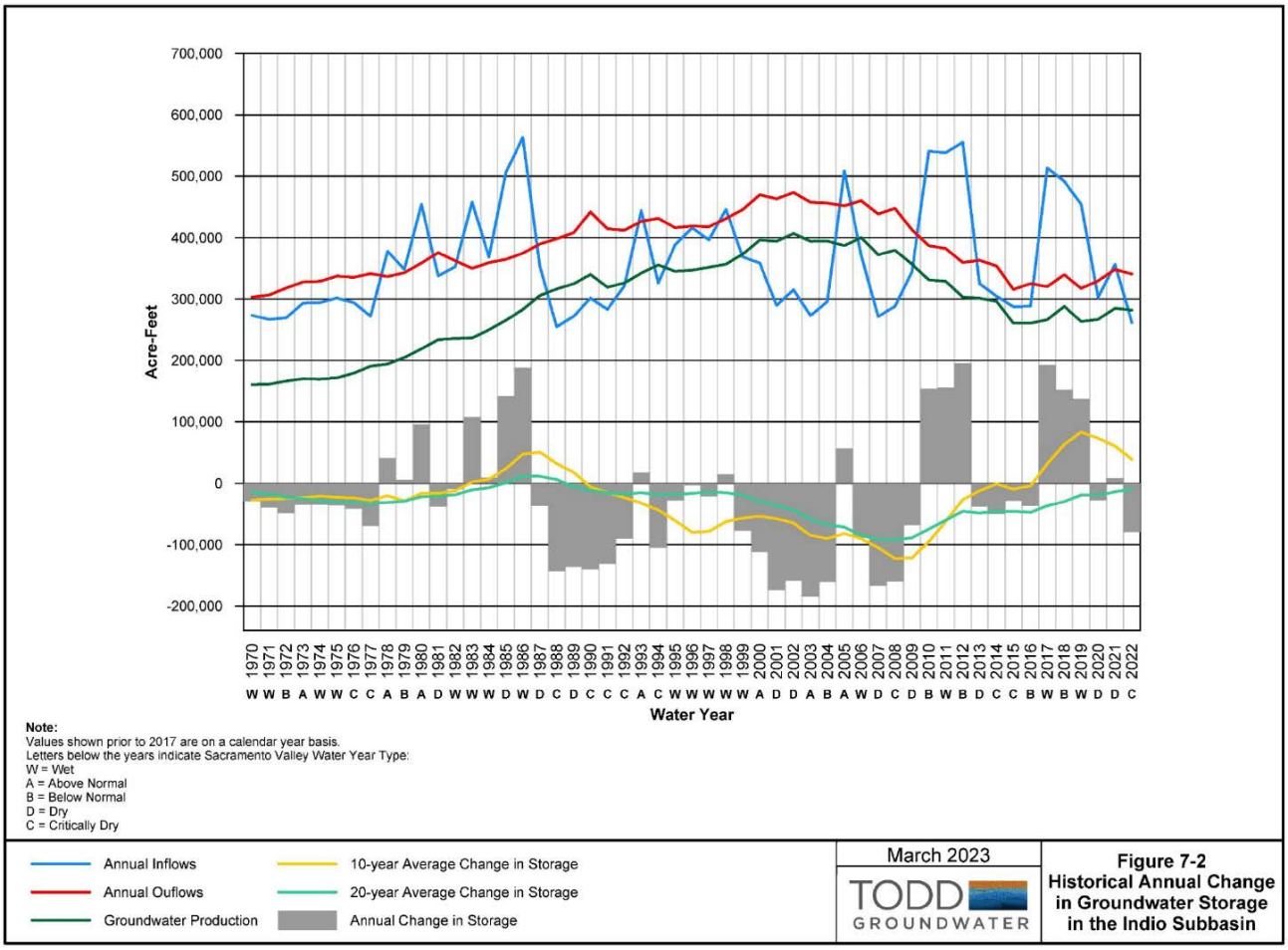
Monitoring Agency	Key Wells Monitored	Additional Wells Monitored	Total Wells Monitored
Coachella Valley Water District	52	254	306
Coachella Water Authority	0	4	4
Desert Water Agency	4	32	36
Indio Water Authority	1	25	26
Mission Springs Water District	0	2	2
Total	**57**	**317**	**374**

Source: 2022 Alternative Plan Update for the Indio Subbasin

Figure 3-3 shows the historical annual change in groundwater storage from 1970 through Water Year (WY) 2020-2021 in the Indio Subbasin. The figure also shows annual inflows, outflows, groundwater production, and 10-year and 20-year running-average change in groundwater storage. During periods of high artificial recharge, the change in storage tends to be positive. In dry years or periods of high groundwater pumping, the change in storage can be negative.

As shown in **Figure 3-3**, annual inflows to the Indio Subbasin are highly variable with years of high inflows corresponding to wet years when SWP delivery volumes were greater. Higher inflows in the mid-1980s occurred when the Metropolitan Water District of Southern California (MWD) commenced large-scale advanced water deliveries to the Indio Subbasin. After an extended period of decline, both the 10-year and 20-year running-average change in storage have shown positive trends since 2009, and the 10-year running-average has been positive since 2017.

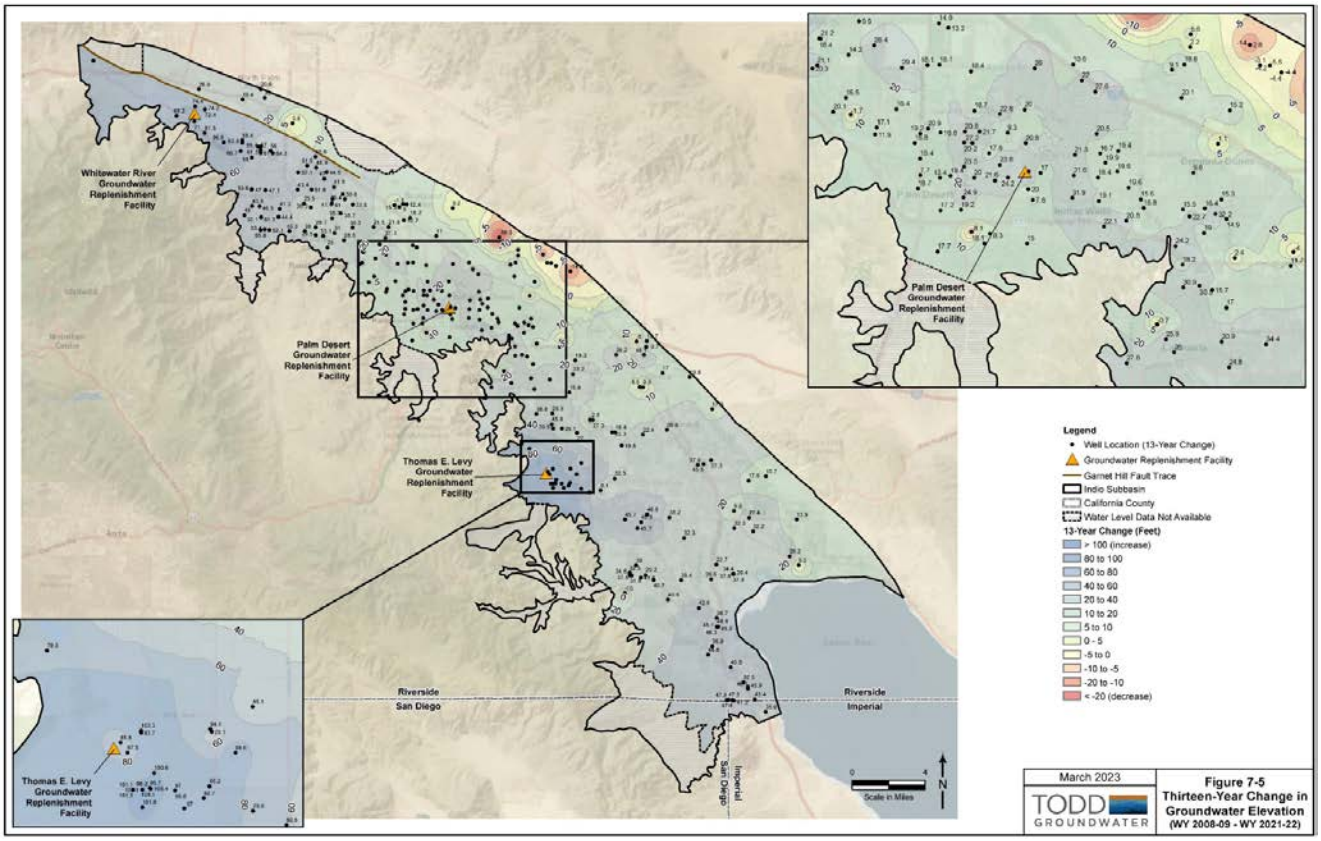
Figure 3-3: Historical Annual Change in Groundwater Storage in the Indio Subbasin



Source: Indio Subbasin Annual Report for Water Year 2021-2022

As shown in **Figure 3-4**, groundwater levels have increased significantly in the Indio Subbasin from WY 2008-2009 to WY 2021-2022. The Indio Subbasin Annual Report uses 2009 water levels as a metric of sustainability because historical low groundwater levels occurred in the years around 2009 throughout most of the Indio Subbasin. The Indio Subbasin shows a long-term positive trend in sustainability resulting from implementation of the Indio Subbasin Alternative Plan.

Figure 3-4: Change in Groundwater Elevation from Water Year 2008-2009 through Water Year 2021-2022 in the Indio Subbasin

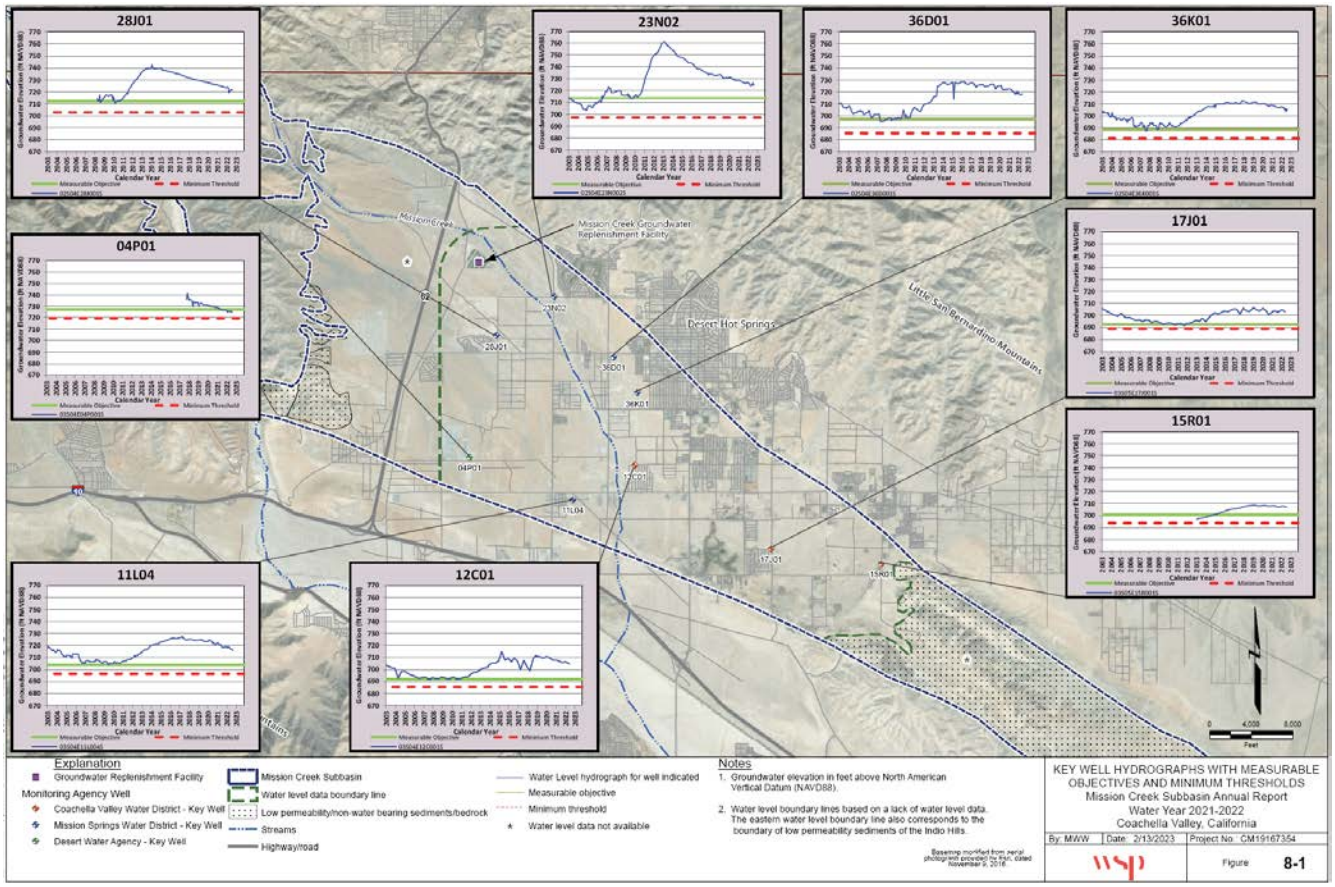


Source: Indio Subbasin Annual Report for Water Year 2021-2022

3.1.3.2 Mission Creek Subbasin

The 2022 Mission Creek Subbasin Alternative Plan Update identified nine Key Wells across the subbasin to represent local groundwater levels, as shown in **Figure 3-5**. The plan set MTs at each Key Well to demonstrate sustainability. In WY 2021-2022, water levels in all nine Key Wells remained above their respective MTs, as shown in the hydrographs in **Figure 3-5**. This confirms that the significant undesirable results of chronic lowering of groundwater levels, depletion of groundwater storage, and potential subsidence are not occurring in the Mission Creek Subbasin.

Figure 3-5: Water Level Monitoring Wells in the Mission Creek Subbasin

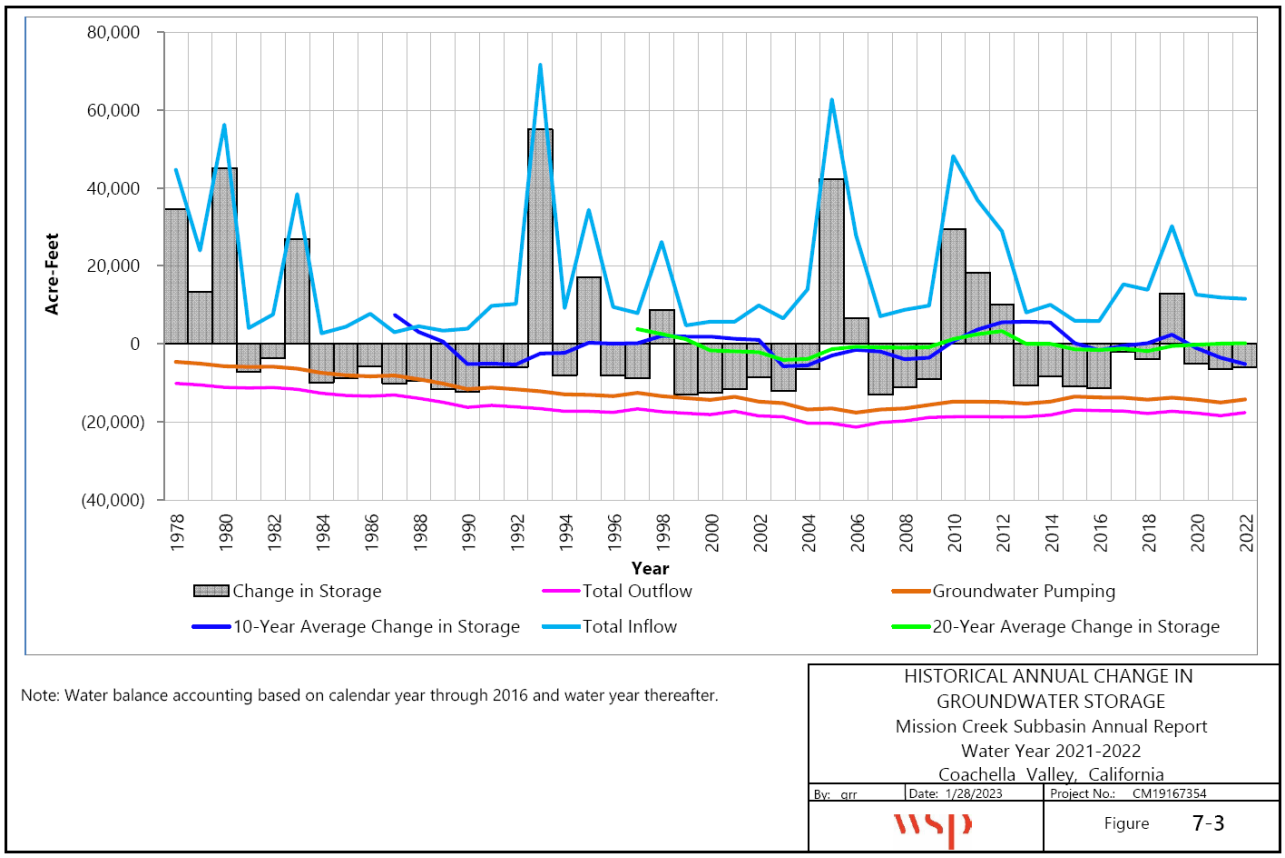


Source: 2022 Alternative Plan Update for the Mission Creek Subbasin

Figure 3-6 shows the historical annual change in groundwater storage from 1978 through WY 2021-2022 in the Mission Creek Subbasin. The figure also shows annual inflows, outflows, groundwater production, and 10-year and 20-year running-average change in groundwater storage. During periods of high artificial recharge, the change in storage tends to be positive. In dry years or periods of high groundwater pumping, the change in storage can be negative.

As shown in **Figure 3-6**, after a period of decline, starting in 2004 both the 10-year and 20-year running-average change in groundwater storage have shown positive trends. Annual inflows to the Mission Creek Subbasin are highly variable with years of high inflows corresponding to years when SWP delivery volumes were greater. The 20-year running-average change in storage shows that the Mission Creek Subbasin has been in balance since 2012.

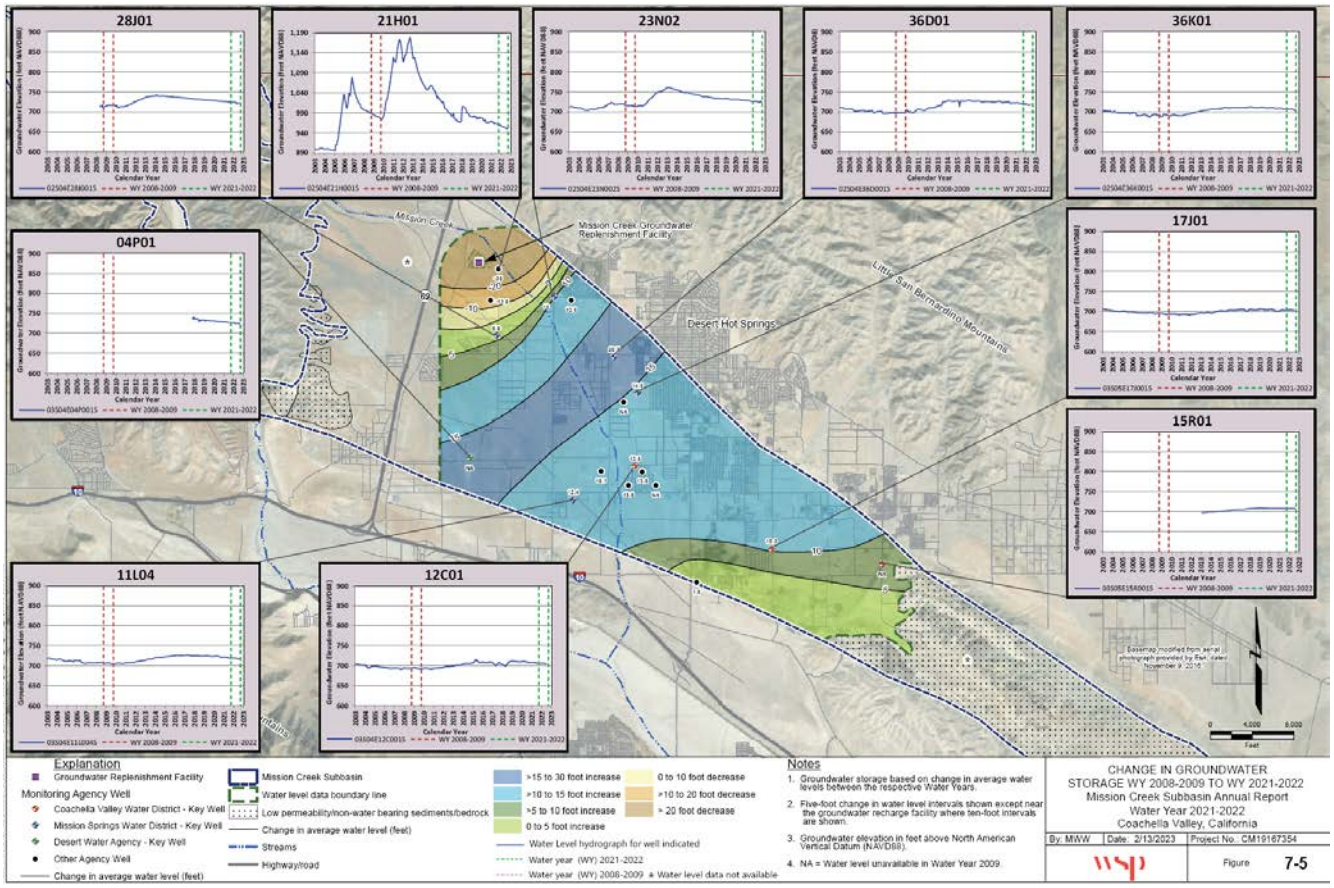
Figure 3-6: Historical Annual Change in Groundwater Storage in the Mission Creek Subbasin



Source: Mission Creek Subbasin Annual Report for Water Year 2021-2022

Groundwater levels have increased significantly in the Mission Creek Subbasin over the past 10 years from WY 2008-2009 to WY 2021-2022 as shown in **Figure 3-7**. The Mission Creek Subbasin Annual Report uses 2009 water levels as a metric of sustainability because historical low groundwater levels occurred in the years around 2009 throughout most of the Mission Creek Subbasin. The Mission Creek Subbasin shows a long-term positive trend in sustainability resulting from implementation of the Mission Creek Subbasin Alternative Plan.

Figure 3-7: Change in Groundwater Elevation from Water Year 2008-2009 through Water Year 2021-2022 in the Mission Creek Subbasin



Source: Mission Creek Subbasin Annual Report for Water Year 2021-2022

3.2 Imported Water

CVWD has two sources of imported water available: Colorado River water delivered via the Coachella Canal and SWP water exchanged for Colorado River water delivered through the Colorado River Aqueduct. These imported water sources are used to recharge the groundwater basin and as an alternative source to meet non-potable demands from irrigation of agriculture, golf, and urban uses that would have otherwise been met by pumping groundwater. In the future, if urban demand significantly increases relative to non-potable uses, Colorado River water may be treated and delivered directly to customers through CVWD's potable water distribution system.

3.2.1 Colorado River Water

Colorado River water has been a significant water supply source for the Indio Subbasin since the Coachella Canal was completed in 1949. CVWD is the only agency in the Indio Subbasin that receives Colorado River water allocations. The Colorado River is managed and operated in accordance with the Law of the River, a collection of interstate compacts, federal and state legislation, various agreements and contracts, an international treaty, a U.S. Supreme Court

decree, and federal administrative actions that govern the rights to use Colorado River water within the seven Colorado River Basin states. The 1922 Colorado River Compact apportioned the waters of the Colorado River Basin between the Upper Colorado River Basin (i.e., Colorado, Wyoming, Utah, and New Mexico) and the Lower Basin (i.e., Nevada, Arizona, and California). The 1922 Colorado River Compact allocates 15 million AFY of Colorado River water as follows: 7.5 million AFY to the Upper Basin and 7.5 million AFY to the Lower Basin, plus up to 1 million AFY of surplus supplies. The Lower Basin's water was further apportioned among the three Lower Basin states by the 1928 Boulder Canyon Project Act and the 1931 Boulder Canyon Project Agreement, typically called the 1931 Seven Party Agreement, which allocates California's apportionment of Colorado River water among Palo Verde Irrigation District, Imperial Irrigation District (IID), CVWD, Metropolitan Water District of Southern California (MWD), City of Los Angeles, City of San Diego, and County of San Diego. The 1964 U.S. Supreme Court decree in Arizona v. California established Arizona's basic annual apportionment at 2.8 million AFY, California's at 4.4 million AFY, and Nevada's at 0.3 million AFY. Mexico is entitled to 1.5 million AFY of the Colorado River under the 1944 United States-Mexico Treaty for Utilization of Waters of the Colorado and Tijuana Rivers and of the Rio Grande. However, this treaty did not specify a required quality for water entering Mexico. In 1973, the United States and Mexico signed Minute No. 242 of the International Boundary and Water Commission requiring certain water quality standards for water entering Mexico. California's Colorado River supply is protected by the 1968 Colorado River Basin Project Act, which provides that in years of insufficient supply on the main stem of the Colorado River, supplies to the Central Arizona Project shall be reduced to zero before California will be reduced below 4.4 million AF in any year. This assures full supplies to the Coachella Valley, except in periods of extreme drought.

The Coachella Canal is a branch of the All-American Canal that brings Colorado River water into the Imperial and Coachella Valleys. Under the 1931 Seven Party Agreement, CVWD receives 330,000 AFY of Priority 3A Colorado River water diverted from the All-American Canal at the Imperial Dam. The Coachella Canal originates at Drop 1 on the All-American Canal and extends approximately 123 miles, terminating in CVWD's Lake Cahuilla. The service area for Colorado River water delivery under CVWD's contract with the U.S. Bureau of Reclamation (USBR) is defined as Improvement District No. 1 (ID-1), which encompasses 136,400 acres covering most of the East Valley and a portion of the West Valley north of Interstate 10. Under the 1931 Seven Party Agreement, CVWD has water rights to Colorado River water as part of the first 3.85 million AFY allocated to California. CVWD is in the third priority position along with IID.

In 2003, CVWD, IID, and MWD successfully negotiated the 2003 Quantification Settlement Agreement (2003 QSA), which quantifies Colorado River allocations through 2077 and supports the transfer of water between agencies. Under the 2003 QSA, CVWD has a base entitlement of 330,000 AFY. CVWD negotiated water transfer agreements with MWD and IID that increased CVWD supplies by an additional 123,000 AFY. CVWD's net QSA supply will increase to 424,000 AFY by 2026 and remain at that level until 2047, decreasing to 421,000 AFY until 2077, when the agreement terminates. As of 2021, CVWD's available Colorado River water diversions at Imperial Dam under the QSA were 399,000 AFY. This includes the base entitlement of 330,000 AFY, the MWD/IID Transfer of 20,000 AFY, IID/CVWD First Transfer of 50,000 AFY, and IID/CVWD Second

Transfer of 28,000 AFY. CVWD's QSA diversions also deducts the -26,000 AFY transferred to San Diego County Water Authority (SDCWA) as part of the Coachella Canal Lining Project and the -3,000 AFY transfer to Indian Present Perfected Rights. Additionally, under the 2003 QSA, MWD transferred 35,000 AFY of its State Water Project (SWP) Table A Amount to CVWD. This SWP water is exchanged for Colorado River water and can be delivered at Imperial Dam for delivery via the Coachella Canal to the eastern portion of the Indio Subbasin or at Lake Havasu for delivery via the Colorado River Aqueduct to the western portion of the Indio Subbasin at the Whitewater River Groundwater Replenishment Facility (WWR-GRF). The 2019 Second Amendment guaranteed delivery of 35,000 AFY from 2019 to 2026, for a total of 280,000 AFY of water to the WWR-GRF during that timeframe. MWD can deliver the water through CVWD's Whitewater Service Connections (for recharge at WWR-GRF) or via the Advance Delivery account.

The MWD/IID Transfer originated in a 1989 agreement with MWD to receive 20,000 AF of its Colorado River supply. The 2019 Amended and Restated Agreement for Exchange and Advance Delivery of Water defined the exchange and delivery terms between MWD, CVWD, and DWA. The 2019 Second Amendment to Delivery and Exchange Agreement reduced CVWD's annual delivery of the MWD/IID Transfer to 15,000 AFY, for a total of 105,000 AF, if taken at the Whitewater Service Connections (for recharge at WWR-GRF) between 2020 and 2026. For those seven years, MWD keeps the remaining 5,000 AFY, after which CVWD's allocation increases back up to 20,000 AFY. CVWD's total allocations under the QSA, including MWD's transfer of 35,000 AFY and the MWD/IID Transfer, will increase from 424,000 AFY in 2020 to 459,000 AFY by 2026 and remain at that level for the remainder of the 75-year term of the QSA. **Table 3-3** lists total Colorado River entitlements under existing agreements.

Table 3-3: CVWD Colorado River Entitlements (AFY)

Diversion	2020	2025	2030	2035	2040	2045
Base Entitlement	330,000	330,000	330,000	330,000	330,000	330,000
1988 MWD/IID Approval Agreement	20,000	20,000	20,000	20,000	20,000	20,000
IID/CVWD First Transfer	50,000	50,000	50,000	50,000	50,000	50,000
IID/CVWD Second Transfer[1]	23,000	48,000	53,000	53,000	53,000	53,000
Coachella Canal Lining	-26,000	-26,000	-26,000	-26,000	-26,000	-26,000
Indian Present Perfected Rights Transfer	-3,000	-3,000	-3,000	-3,000	-3,000	-3,000
QSA Diversions	**394,000**	**419,000**	**424,000**	**424,000**	**424,000**	**424,000**
MWD SWP Transfer[2]	35,000	35,000	35,000	35,000	35,000	35,000
Total Diversions	**429,000**	**454,000**	**459,000**	**459,000**	**459,000**	**459,000**
Assumed Conveyance Losses (5%)	-21,200	-22,700	-22,950	-22,950	-22,950	-22,950
MWD/IID Approval Agreement Transfer[3]	-5,000	-5,000	0	0	0	0
Total Available Deliveries	**402,800**	**426,300**	**436,050**	**436,050**	**436,050**	**436,050**

Source: 2022 Alternative Plan Update for the Indio Subbasin

[1] The Second IID/CVWD Transfer began in 2018 with 13,000 AF of water. This amount increases annually by 5,000 AFY for a total of 53,000 AFY in 2026.

[2] The 35,000 AFY MWD/CVWD SWP Transfer may be delivered at either Imperial Dam or Whitewater River and is not subject to SWP or Colorado River reliability.

[3] Accounts for -5,000 AFY reduction in MWD/IID Approval Agreement deliveries from 2020-2026 per the 2019 Amendments with MWD.

The Colorado River deliveries to CVWD at the Imperial Dam/Coachella Canal from 2018 through 2022 are shown in **Table 3-4.**

Table 3-4: Colorado River Deliveries to CVWD at the Imperial Dam/Coachella Canal

Diversions (AF)	2018	2019	2020[1]	2021[1]	2022[1]
Imperial Dam/Coachella Canal	338,035	343,971	350,618	351,904	330,387

Source: U.S. Bureau of Reclamation, Lower Colorado Region, Colorado River Accounting and Water Use Reports for Arizona, California, and Nevada.

[1] The 15,000 AFY of 1988 MWD/IID Approval Agreement water was delivered at WWR-GRF from 2020 to 2022.

CVWD's recharge volumes of Colorado River water from 2018 through 2022 are shown in **Table 3-5**.

Table 3-5: Groundwater Recharge of Colorado River Water Deliveries to CVWD at the Imperial Dam/Coachella Canal

Groundwater Recharge (AF)	2018	2019	2020	2021	2022
Thomas E. Levy GRF	33,348	36,143	37,536	37,971	27,993
Palm Desert GRF	0	7,757	9,700	10,633	10,949
Total	**33,348**	**43,900**	**47,236**	**48,604**	**38,942**

Source: 2023-2024 CVWD Annual Engineer's Reports on Water Supply and Replenishment Assessment

3.2.2 State Water Project

The SWP is managed by DWR and includes 705 miles of aqueduct and conveyance facilities extending from Lake Oroville in Northern California to Lake Perris in Southern California. The SWP has contracts to deliver 4.172 million AFY to the State Water Contractors. The State Water Contractors consist of 29 public entities with long-term contracts with DWR for all, or a portion of, their water supply needs. In 1962 and 1963, DWA and CVWD, respectively, entered contracts with the State of California for a total of 61,200 AFY of SWP water. SWP water has been an important component of the region's water supply mix since CVWD and DWA began receiving and recharging SWP exchange water at the WWR-GRF. Starting in 1973, CVWD and DWA began exchanging their SWP water with MWD for Colorado River water delivered via MWD's Colorado River Aqueduct. Because CVWD and DWA do not have a physical connection to SWP conveyance facilities, MWD takes delivery of CVWD's and DWA's SWP water, and in exchange, delivers an equal amount of Colorado River water to the Whitewater Service Connections (for recharge at WWR-GRF and Mission Creek Groundwater Replenishment Facility). The exchange agreement was most recently re-established in the 2019 Amended and Restated Agreement for Exchange and Advance Delivery of Water.

Each SWP contract contains a "Table A" exhibit that defines the maximum annual amount of water each contractor can receive excluding certain interruptible deliveries. DWR uses Table A amounts to allocate available SWP supplies and some SWP project costs among the contractors. Each year, DWR determines the amount of water available for delivery to SWP contractors based on hydrology, reservoir storage, the requirements of water rights licenses and permits, water quality, and environmental requirements for protected species in the Sacramento-San Joaquin

River Delta (Delta). The available supply is then allocated according to each SWP contractor's Table A amount.

CVWD's and DWA's collective increments of Table A water are listed in Table **3-6**. Original Table A SWP water allocations for CVWD and DWA were 23,100 AFY and 38,100 AFY, respectively, for a combined amount of 61,200 AFY. CVWD and DWA obtained a combined 100,000 AFY transfer from MWD under the 2003 Exchange Agreement. In 2004, CVWD purchased an additional 9,900 AFY of SWP Table A water from the Tulare Lake Basin Water Storage District (Tulare Lake Basin) in Kings County. In 2007, CVWD and DWA made a second purchase of Table A SWP water from Tulare Lake Basin totaling 7,000 AFY. In 2007, CVWD and DWA also completed the transfer of 16,000 AFY of Table A Amounts from the Berrenda Mesa Water District in Kern County. These latter two transfers became effective in January 2010. With these additional transfers, the total SWP Table A Amount for CVWD and DWA is 194,100 AFY. **Table 3-7** shows the percent allocation of SWP Table A allocations from 2018 through 2022. **Table 3-8** shows the recharge of SWP Exchange Water from 2018 through 2022.

Table 3-6: State Water Project Table A Allocations

	Original SWP Table A (AFY)	Tulare Lake Basin 2004 Transfer (AFY)	Metropolitan Water District 2003 Transfer (AFY)	Tulare Lake Basin 2007 Transfer (AFY)	Berrenda Mesa 2007 Transfer (AFY)	Total (AFY)
CVWD	23,100	9,900	88,100	5,250	12,000	138,350
DWA	38,100	0	11,900	1,750	4,000	55,750
Total	**61,200**	**9,900**	**100,000**	**7,000**	**16,000**	**194,100**

Source: 2020 Coachella Valley Regional Urban Water Management Plan

Table 3-7: State Water Project Table A Percent Allocations

	2018	2019	2020	2021	2022
Table A Allocation	35%	75%	20%	5%	5%

Source: CA Department of Water Resources Historical Table A Allocations for Years 1996-2023

Table 3-8: CVWD and DWA Groundwater Recharge

Groundwater Recharge (AF)	2018	2019	2020	2021	2022
Whitewater River GRF	129,725	235,600	126,487[1]	15,006[1]	15,011[1]
Mission Creek GRF	2,027	3,688	1,768	0	0
Total	**131,752**	**239,288**	**128,255**	**15,006**	**15,011**

Source: CVWD 2023-2024 Annual Engineer's Reports on Water Supply and Replenishment Assessment

[1] Between 2020 and 2022, the 15,000 AFY of 1988 MWD/IID Approval Agreement water was delivered at Whitewater River GRF.

3.2.3 Other SWP Water

There are other types of SWP water that can be purchased, such as individual water purchase opportunities and transfers/exchanges. These may be conveyed to CVWD and DWA as available, but no commitments exist.

In 2008, CVWD and DWA entered into separate agreements with DWR for the purchase and conveyance of supplemental SWP water under the Yuba River Accord Dry Year Water Purchase Program (Yuba Accord). This program provides dry year supplies through a water purchase agreement between DWR and Yuba County Water Agency, which settled long-standing operational and environmental issues over instream flow requirements for the lower Yuba River. The amount of water available for purchase varies annually and is allocated among participating SWP contractors based on their Table A amounts. CVWD and DWA may purchase up to 1.72 percent and 0.69 percent, respectively, of available Yuba Accord water, in years it is made available. Yuba Accord deliveries have varied from zero in multiple years to a total of 2,664 AFY to CVWD and DWA in 2013.

Article 21 water (described in Article 21 of the SWP water contracts), "Interruptible Water," is water that State Water Contractors may receive on a short-term basis in addition to their Table A water if they request it in years when it is available. Article 21 water is used by many contractors to help meet demands in low allocation years. Article 21 water is not available every year, amounts vary when it is available, and is proportionately allocated among participating Contractors. The availability and delivery of Article 21 water cannot interfere with normal SWP operations and cannot be carried over for delivery in a subsequent year.

3.3 Surface Water

CVWD does not currently use or intend to use any local surface water as part of its urban potable water supply. Local runoff is captured and used for groundwater recharge.

3.3.1 River/Stream Diversion

Surface water supplies come from several local rivers and streams including the Whitewater River, Snow Creek, Falls Creek, and Chino Creek, as well as a number of smaller creeks and washes. Because surface water supplies are affected by variations in annual precipitation, the annual supply is highly variable. The 50-year hydrologic period from 1970 to 2019 had an annual average watershed runoff of 52,506 AFY, with approximately 43,300 AFY in natural infiltration. Runoff during the 25-year period from 1995 to 2019 was below average, with 39,196 AFY in watershed runoff and 29,200 AFY in natural infiltration. CVWD does not currently use or intend to use any local surface water as part of its urban potable water supply. Local runoff is captured and used for groundwater recharge.

3.3.2 Stormwater Capture

The Coachella Valley drainage area is approximately 65 percent mountainous and 35 percent typical desert valley with alluvial fan topography buffering the valley floor from the steep mountain slopes. The mean annual precipitation ranges from 30 inches or more in the San Bernardino Mountains to less than 3 inches at the Salton Sea. Three types of storms produce precipitation in the drainage area: general winter storms, general thunderstorms, and local thunderstorms. Longer duration, lower intensity rainfall events tend to have higher recharge

rates, but runoff from flash flooding can result from all three types of storms. Otherwise, there is little to no flow in most of the streams in the drainage area.

Significant amounts of local runoff are currently captured at the Whitewater River GRF and in the debris basins and unlined channels of the western Coachella Valley. Additional stormwater will be captured when the Thousand Palms Flood Control Project is completed and when flood control is constructed in the Oasis area. However, limited data exists to estimate the amount of additional stormwater that could be captured by new facilities in the Coachella Valley. Nonetheless, large-scale stormwater capture is not expected to yield sufficient water to be worth the investment as a single purpose project. Small-scale stormwater retention systems located in areas of suitable geology to allow percolation could capture small intensity storms as well as street runoff. The potential yield of these system are not known at this time, but stormwater capture should be considered in conjunction with projects that construct stormwater and flood control facilities.

3.4 Wastewater and Recycled Water

Wastewater that has been highly treated and disinfected can be reused for landscape irrigation and other purposes. Recycled wastewater has historically been used for irrigation of golf courses and municipal landscaping in the Coachella Valley since as early as the 1960s. As growth occurs in the eastern Coachella Valley, the supply of recycled water is expected to increase, creating an additional opportunity to maximize local water supply.

CVWD operates five water reclamation plants (WRPs), two of them (WRP-7 and WRP-10) generate recycled water for irrigation of golf courses and large landscaped areas. WRP-4 became operational in 1986 and serves the communities from La Quinta to Mecca. WRP-4 effluent is not currently recycled; however, it will be in the future when the demand for recycled water is developed, and tertiary treatment is constructed. The other two WRPs serve communities near the Salton Sea. A sixth WRP (WRP-9) was decommissioned in July 2015. The wastewater treated by CVWD from 2018 through 2022 is shown in **Table 3-9**. **Table 3-10** shows the recycled water produced by CVWD from 2018 through 2022. CVWD will continue to expand its recycled water program by connecting additional recycled water customers to meet the non-potable water demands in the western and eastern portions of the Coachella Valley.

Table 3-9: Wastewater Treated by CVWD

Wastewater (AF)	2018	2019	2020	2021	2022
WRP-1	19	16	18	24	22
WRP-2	12	16	13	15	16
WRP-4	5,900	6,065	6,353	6,452	6,440
WRP-7	3,275	3,246	3,236	3,287	3,375
WRP-10	10,124	9,663	9,238	8,980	9,235
Total	**19,330**	**19,006**	**18,858**	**18,758**	**19,088**

Table 3-10: Recycled Water Produced by CVWD

Recycled Water (AF)	2018	2019	2020	2021	2022
WRP-7	2,246	1,657	1,936	2,136	2,170
WRP-10	7,857	7,100	7,521	7,285	7,371
Total	**10,103**	**8,757**	**9,457**	**9,421**	**9,541**

3.5 Conservation

Water conservation, and the reduced groundwater production associated with water conservation, benefits the groundwater basin and is an important element of the Alternative Plans and the 2020 Regional UWMP.

CVWD has utilized several programs to ensure water conservation within its service area. CVWD has implemented allocation-based conservation water pricing (i.e., tiered rates) to prevent water waste or unreasonable use of water. In addition, CVWD's indoor rebate programs are designed to assist homeowners and commercial customers reduce water usage by upgrading toilets, replacing inefficient devices, and installing new technology to improve efficiency. CVWD also has outdoor rebate programs that are designed to assist homeowners, homeowners associations, and commercial customers reduce outdoor water usage by converting turf to desert landscaping, installing smart irrigation controllers, and improving the efficiency of irrigation systems. CVWD offers seminars, workshops, and classes to help educate the public regarding the need for water conservation and the conservation programs that are available.

3.6 Landscape Ordinance

CVWD Landscape Ordinance 1302.5 requires a series of reduction methods, including requirements that new developments install weather-based irrigation controllers that automatically adjust watering. Additional requirements include setbacks of spray emitters from impervious surfaces, as well as use of porous rock and gravel buffers between grass and curbs to eliminate run-off onto streets. With the exception of turf, all landscaping including groundcover and shrubbery must be irrigated with a drip system. Also, the maximum water allowance for landscaped areas through the CVWD service area has been reduced. This reduction goal requires that developers maximize the use of native and other drought-tolerant landscape materials and minimize use of more water-intensive landscape features, including turf and fountains.

3.7 Water Shortage Contingency Planning

Based on the experiences from the 2013-2015 drought, CVWD's domestic Water Shortage Contingency Plan provides the shortage levels summarized in **Table 3-11**. The trigger levels used to determine the water shortage level depend on the local water situation or applicable State mandates. CVWD has a diverse mix of water supplies and benefits from a large groundwater basin providing storage. CVWD's groundwater replenishment program replenishes the basin to

increase groundwater storage during wet years and that supply is available for use during dry years.

Table 3-11: Urban Water Shortage Contingency Plan Shortage Levels

Shortage Level	Shortage Range	Water Supply Condition
1	Up to 10%	Normal water supplies
2	Up to 20%	Slightly limited water supplies
3	Up to 30%	Moderately limited water supplies
4	Up to 40%	Limited water supplies
5	Up to 50%	Significantly limited water supplies
6	Up to 60%	Severe shortage or catastrophic incident

Source: 2020 CVWD Water Shortage Contingency Plan

4 Public Water System – Projected Supply and Demand

Coachella Valley Water District (CVWD) projects that a majority of its urban potable water uses will continue to be supplied from local groundwater. In addition to groundwater, CVWD has secured imported water supplies from the State Water Project (SWP) and the Colorado River, and recycled water from water reclamation plants. These imported and recycled water supplies are used to meet CVWD's non-potable water demands and to replenish the groundwater basin.

4.1 Projected Urban Demand and Supply

The following tables from the 2020 Regional Urban Water Management Plan (Regional UWMP) provide the CVWD's projected water supplies and demands. Potable water demand projections for the CVWD service area are summarized in **Table 4-1**.

Table 4-1: CVWD Projected Urban Retail Potable Demands

	Projected Water Use				
Use Type	**2025**	**2030**	**2035**	**2040**	**2045**
Single Family	60,142	63,824	67,331	69,816	71,695
Multi-Family	6,873	7,245	7,742	8,267	9,045
CII	7,060	7,244	7,438	7,709	7,985
Landscape	34,193	36,205	38,226	39,865	41,516
Other	1,457	1,563	1,670	1,755	1,840
Losses	13,736	14,501	15,222	15,670	16,085
Total	**123,461**	**130,582**	**137,629**	**143,081**	**148,166**

Source: 2020 Coachella Valley Regional Urban Water Management Plan

A summary of existing and planned urban water supply volumes by source are presented in **Table 4-2**. It should be noted that the supplies and demands presented in the tables below include recycled water delivered to CVWD's non-potable customers based on the DWR standardized tables and 2020 UWMP Guidebook. DWR requires the supply reliability table to include both potable and recycled water, however, CVWD's recycled water is not a potable water supply and is not delivered to CVWD's potable water customers. Instead, recycled water is used to offset the

groundwater pumping of private well owners (mainly for golf course and landscape irrigation) to eliminate overdraft.

These projections were based on 2010 U.S. Census Data, DWR's Population Tool, the Southern California Association of Governments' (SCAG) 2020 Connect SoCal Regional Transportation Plan, and seasonal occupancy data from the Greater Palm Springs Convention and Visitors Bureau.

Table 4-2: CVWD Projected Urban Water Supplies

Water Supply	Projected Water Supply (AFY)				
	2025	2030	2035	2040	2045
Groundwater	123,461	130,582	137,629	143,081	148,166
Recycled Water	13,600	14,400	15,100	15,900	16,800
Total	**137,061**	**144,982**	**152,729**	**158,981**	**164,966**

Source: 2020 Coachella Valley Regional Urban Water Management Plan

4.2 Normal, Single-Dry, Multiple-Dry Year Comparison

The following tables from the 2020 Regional UWMP provide CVWD's projected water supplies and demands in a normal year, single-dry year, and multiple-dry years.

During normal years, CVWD will be able to meet current and future urban water demand needs projected in the 2020 Regional UWMP through groundwater pumping and recycled water as shown in **Table 4-3**.

Table 4-3: Normal Year Supply and Demand Comparison

	2025	2030	2035	2040	2045
Supply Totals (AFY)	**137,061**	**144,982**	**152,729**	**158,981**	**164,966**
Groundwater	123,461	130,582	137,629	143,081	148,166
Recycled Water	13,600	14,400	15,100	15,900	16,800
Demand Totals (AFY)	**137,061**	**144,982**	**152,729**	**158,981**	**164,966**
Potable Water Demand	123,461	130,582	137,629	143,081	148,166
Recycled Water Demand	13,600	14,400	15,100	15,900	16,800
Difference	**0**	**0**	**0**	**0**	**0**

Source: 2020 Regional Urban Water Management Plan

Note: CVWD and the other Regional UWMP agencies collaborate on groundwater management plans for long-term sustainability. During a normal year, single-dry year, or five-dry year period, the agencies could produce additional groundwater if demands exceeded the estimates shown here.

During single-dry years, CVWD will be able to meet current and future urban water demand needs through groundwater pumping and recycled water as shown in **Table 4-**4. Water supplies during the single-dry year are 100 percent reliable. CVWD's groundwater replenishment program replenishes the basin to increase groundwater storage during wet years and that supply is available for use during dry years. Thus, the supply and demand comparison for the single-dry year is the same as the normal year.

Table 4-4: Single-Dry Year Supply and Demand Comparison

	2025	2030	2035	2040	2045
Supply Totals (AFY)	**137,061**	**144,982**	**152,729**	**158,981**	**164,966**
Groundwater	123,461	130,582	137,629	143,081	148,166
Recycled Water	13,600	14,400	15,100	15,900	16,800
Demand Totals (AFY)	**137,061**	**144,982**	**152,729**	**158,981**	**164,966**
Potable Water Demand	123,461	130,582	137,629	143,081	148,166
Recycled Water Demand	13,600	14,400	15,100	15,900	16,800
Difference	**0**	**0**	**0**	**0**	**0**

Source: 2020 Regional Urban Water Management Plan

Note: CVWD and the other Regional UWMP agencies collaborate on groundwater management plans for long-term sustainability. During a normal year, single-dry year, or five-dry year period, the agencies could produce additional groundwater if demands exceeded the estimates shown here.

During multiple-dry years, CVWD will be able to meet current and future urban water demand needs through groundwater pumping and recycled water as shown in **Table 4-5**. Similar to the single-dry year, the multiple-dry year water supply reliability is 100 percent. Thus, the supply and demand comparison for the multiple-dry years is the same as the normal year. CVWD and the other Regional UWMP agencies collaborate on groundwater management plans for long-term sustainability. During a normal year, single-dry year, or five-dry year period, the agencies could produce additional groundwater if demands exceeded the estimates shown here.

Table 4-5: Multiple-Dry Years Supply and Demand Comparison

		2025	2030	2035	2040	2045
First Year	**Supply Totals (AFY)**	**137,061**	**144,982**	**152,729**	**158,981**	**164,966**
	Groundwater	123,461	130,582	137,629	143,081	148,166
	Recycled Water	13,600	14,400	15,100	15,900	16,800
	Demand Totals (AFY)	**137,061**	**144,982**	**152,729**	**158,981**	**164,966**
	Potable Water Demand	123,461	130,582	137,629	143,081	148,166
	Recycled Water Demand	13,600	14,400	15,100	15,900	16,800
	Difference	**0**	**0**	**0**	**0**	**0**
Second Year	**Supply Totals (AFY)**	**137,061**	**144,982**	**152,729**	**158,981**	**164,966**
	Groundwater	123,461	130,582	137,629	143,081	148,166
	Recycled Water	13,600	14,400	15,100	15,900	16,800
	Demand Totals (AFY)	**137,061**	**144,982**	**152,729**	**158,981**	**164,966**
	Potable Water Demand	123,461	130,582	137,629	143,081	148,166
	Recycled Water Demand	13,600	14,400	15,100	15,900	16,800
	Difference	**0**	**0**	**0**	**0**	**0**
Third Year	**Supply Totals (AFY)**	**137,061**	**144,982**	**152,729**	**158,981**	**164,966**
	Groundwater	123,461	130,582	137,629	143,081	148,166
	Recycled Water	13,600	14,400	15,100	15,900	16,800
	Demand Totals (AFY)	**137,061**	**144,982**	**152,729**	**158,981**	**164,966**
	Potable Water Demand	123,461	130,582	137,629	143,081	148,166
	Recycled Water Demand	13,600	14,400	15,100	15,900	16,800
	Difference	**0**	**0**	**0**	**0**	**0**
Fourth Year	**Supply Totals (AFY)**	**137,061**	**144,982**	**152,729**	**158,981**	**164,966**
	Groundwater	123,461	130,582	137,629	143,081	148,166
	Recycled Water	13,600	14,400	15,100	15,900	16,800
	Demand Totals (AFY)	**137,061**	**144,982**	**152,729**	**158,981**	**164,966**
	Potable Water Demand	123,461	130,582	137,629	143,081	148,166
	Recycled Water Demand	13,600	14,400	15,100	15,900	16,800
	Difference	**0**	**0**	**0**	**0**	**0**
Fifth Year	**Supply Totals (AFY)**	**137,061**	**144,982**	**152,729**	**158,981**	**164,966**
	Groundwater	123,461	130,582	137,629	143,081	148,166
	Recycled Water	13,600	14,400	15,100	15,900	16,800
	Demand Totals (AFY)	**137,061**	**144,982**	**152,729**	**158,981**	**164,966**
	Potable Water Demand	123,461	130,582	137,629	143,081	148,166
	Recycled Water Demand	13,600	14,400	15,100	15,900	16,800
	Difference	**0**	**0**	**0**	**0**	**0**

Source: 2020 Regional Urban Water Management Plan

Note: CVWD and the other Regional UWMP agencies collaborate on groundwater management plans for long-term sustainability. During a normal year, single-dry year, or five-dry year period, the agencies could produce additional groundwater if demands exceeded the estimates shown here.

CVWD's total current urban water demand was 109,607 acre-feet (AF) for 2022, including 100,066 AF of groundwater and 9,541 AF of recycled water.

5 Project Description

The Coral Mountain Project (Project) is situated in the easterly portion of the Coachella Valley within the corporate limits of the City of La Quinta, Riverside County as shown in **Figure 5-1: Project Regional Location Map**. The Project is surrounded on the north and west by developed residential land within the City of La Quinta's jurisdiction. Vacant land, including Coral Mountain, lies east of the Project, and scattered residential and vacant land lies south of the Project. The Project and the surrounding properties all are situated within the jurisdictional boundaries of the City of La Quinta. The Project is bounded by Madison Street on the west, Avenue 58 on the north, and Avenue 60 to the south as shown in **Figure 5-2: Project Vicinity Map**.

The Project is located in the City of La Quinta, Riverside County. The Project proposes to develop approximately 387 acres of vacant land to include three planning areas: Planning Area III (PA-III) Residential, Planning Area V (PA-V) Neighborhood Commercial, and Planning Area VI (PA-VI) Golf/Open Space. PA-III consists of 191.8 acres of land and will allow the construction of up to 750 single family attached and detached dwellings and affiliated amenities. In addition to residential acreage, PA III also includes a 5.9-acre sports club, a 4-acre golf club, a 3-acre active amenity park, two restaurants located inside the sports club and golf club, a 12-acre lake and approximately 2 acres of golf maintenance area.

PA-V consists of 7.7 acres of land that will include 60,000 square feet of publicly accessible neighborhood commercial building space. PA-VI consists of approximately 184.9 acres of land and will be developed into a championship length 18-hole golf course and ancillary facilities such as a golf academy, practice range, chipping, putting facilities, and irrigation lakes as shown in **Figure 5-3: Project Site Plan** and **Table 5-1: Project Land Use Summary**.

Figure 5-1: Project Regional Location Map

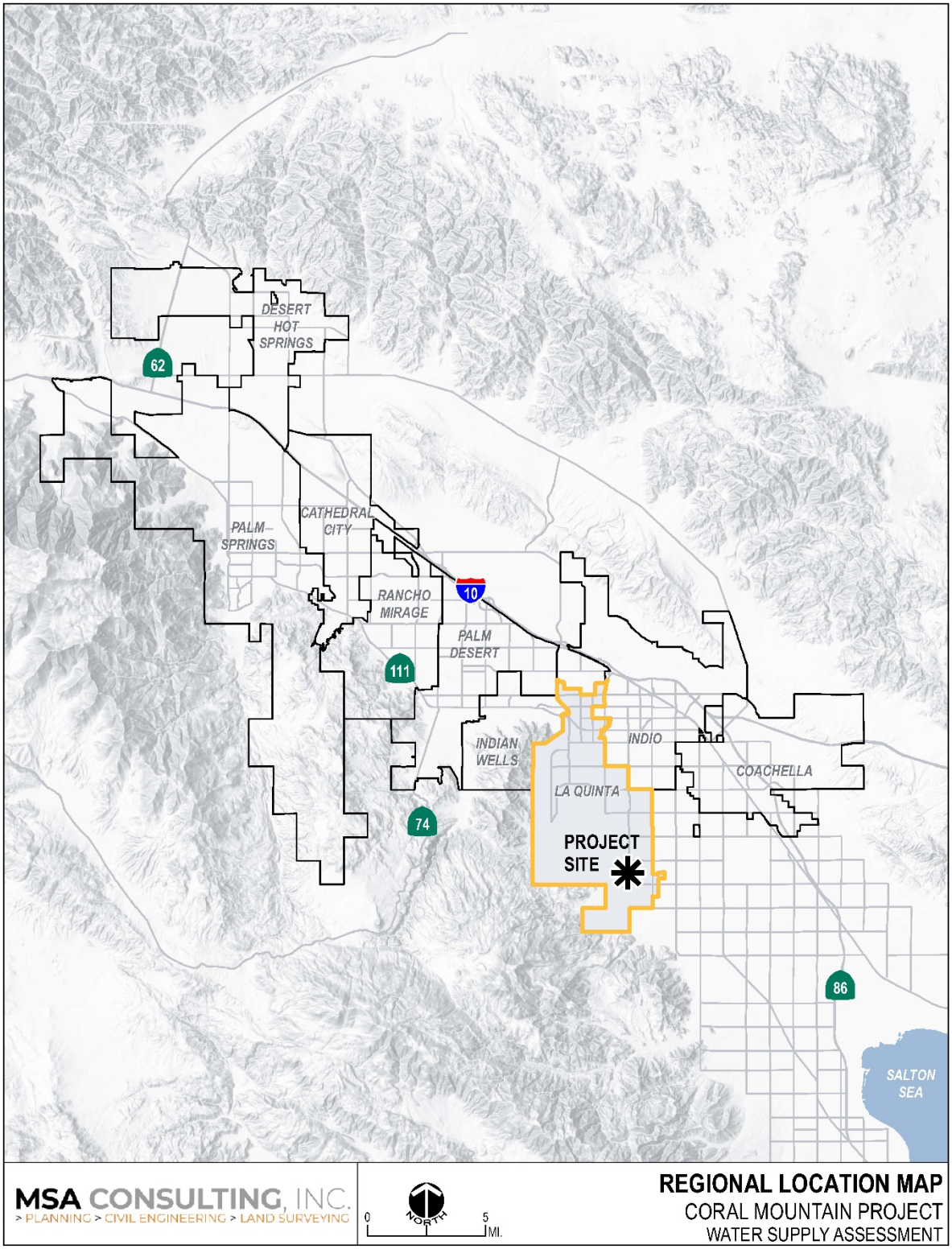


Figure 5-2: Project Vicinity Map

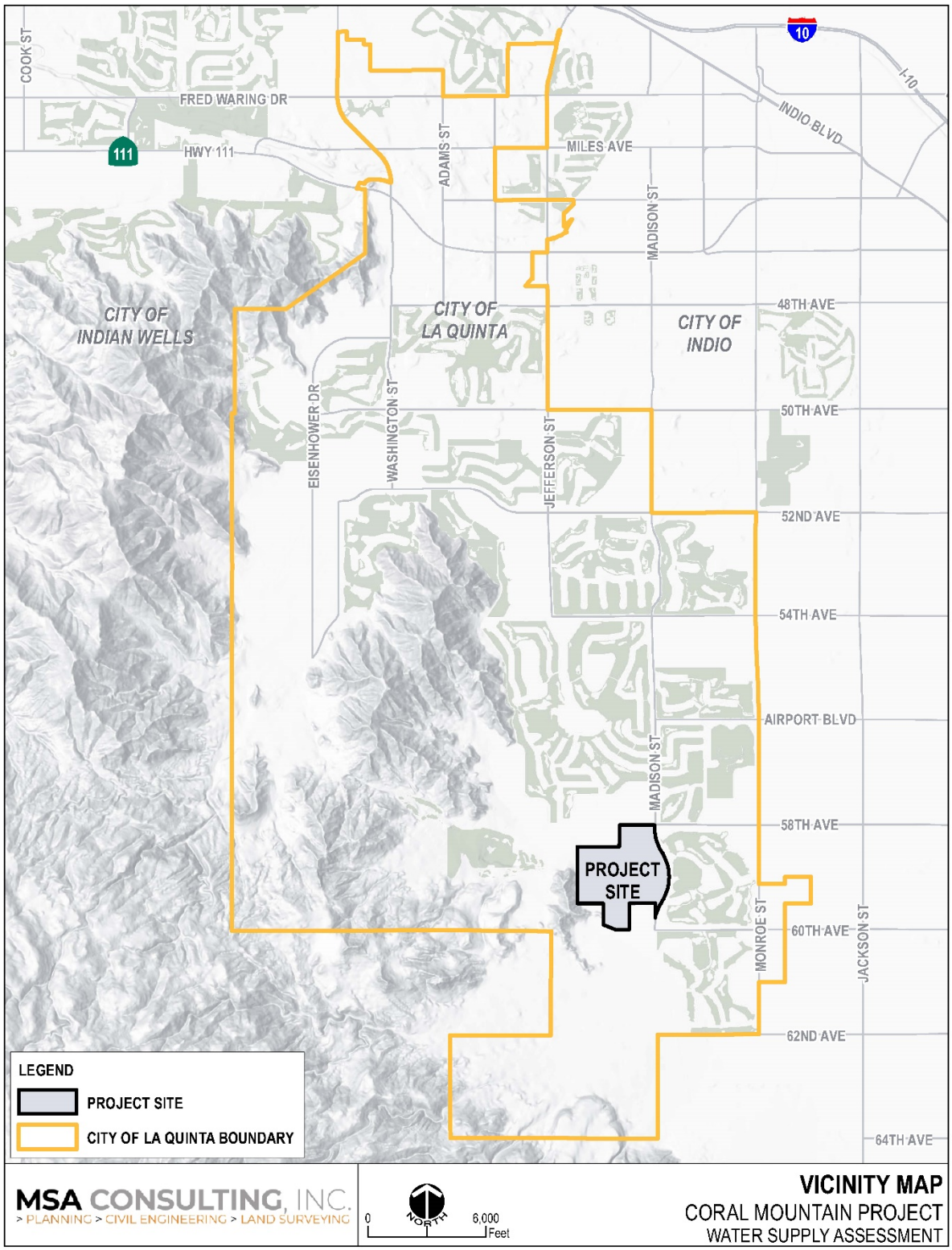


Figure 5-3: Project Site Plan

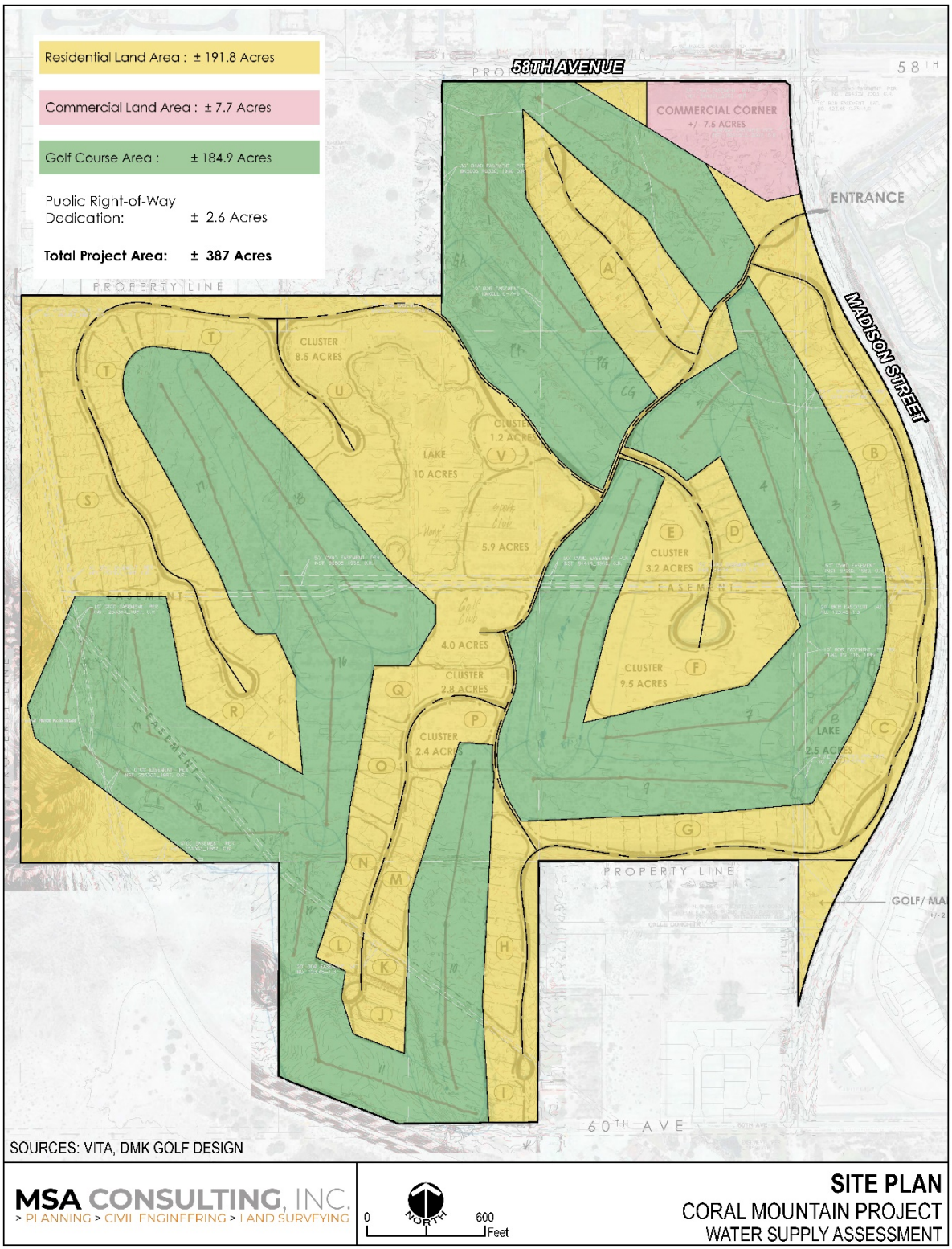


Table 5-1: Project Land Use Summary

Planning Area	Specific Plan/Land Use Designation	Land Area (Acres)	Target Density (EDUs/Acre)	Estimated Dwelling Units (EDUs)	Non-Residential Building Area (ft^2)
PA-III	Single Family Residential	164.9	4.4	730	0
	Sports Club	5.9	1.7	10	24,500
	Golf Club	4.0	2.5	10	8,600
	Active Amenity Park	3.0	0.0	0	0
	Golf Maintenance	2.0	0.0	0	10,000
	Restaurants*	0.0*	0.0	0	3,000
	Recreational Lake	12.0	0.0	0	0
PA-V	Neighborhood Commercial	7.7	0.0	0	60,000
PA-VI	Golf Course	181.9	0.0	0	0
	Golf Course Lake	3.0	0.0	0	0
N/A	Public Right of Way	2.6	0.0	0	0
Total		**387**		**750**	**106,100**

*Restaurant acreage is 0.0 due to proposed restaurants being included within either the sports club or golf club.

6 Project Water Demands

The Coral Mountain Project (Project) proposes to develop 387 acres of land and convert it into 164.9 acres of single-family residential land use, 5.9 acres for a sports club, 4 acres for a golf club, 3 acres for an active amenity park, 12-acre lake, 2 acres for golf maintenance, and two restaurants located inside the sports club and golf club, and convert 181.9 acres into a golf course area and 7.7 acres into a neighborhood commercial land area.

6.1 Projected Indoor Residential Water Demand

The projected indoor residential unit usage for this Water Supply Assessment/Water Supply Verification (WSA/WSV) is based on indoor water use performance standards as provided in the California Water Code (CWC) for residential water demand Water Code Section 10910 approved November 10, 2009, codified in CWC section 10608.20 (b)(2)(A). The projected indoor residential water demand for the Project totals 108.12 acre-feet per year (AFY) as shown in **Table 6-1**. SB 606 and AB 1668 established guidelines for efficient water use and a framework for the implementation and oversight of the new standards. Based on results of the Indoor Residential Water Use Study, DWR and the State Water Resources Control Board jointly recommended that the indoor residential standard remain at 55 gallons per capita per day (gpcd) through 2024 and decline to 47 gpcd in 2025 and to 42 gpcd in 2030.

Table 6-1: Projected Indoor Residential Water Demand

Planning Area	Land Area (Acres)	Estimated Dwelling Units (EDUs)	Estimated Occupants per Home [1]	Gallons per Day (gpd) per Occupant [2]	gpd/EDU	Water Demand (gpd)	Water Demand (AFY)
Single Family	164.9	730	2.34	55	128.7	93,951	105.24
Sports Club	5.9	10	2.34	55	128.7	1,287	1.44
Golf Club	4	10	2.34	55	128.7	1,287	1.44
Total	**174.8**	**750**				**96,525**	**108.12**

[1] CA Department of Finance Table 2: E-5 City/County Population and Housing Estimates, 2023 for the City of La Quinta

[2] CA Indoor Water Use Performance Standard

6.2 Projected Indoor Commercial and Industrial Water Demand

The projected indoor commercial and industrial unit usage for this WSA are based on the American Water Works Association Research Foundations (AWWARF's) Commercial and Industrial End Uses of Water. The projected indoor commercial and industrial water demand for the Project totals 15.81 AFY as shown in **Table 6-2** below.

Table 6-2: Projected Indoor Commercial and Industrial Water Demand

Planning Area	Indoor Area (ft^2)	Number of Rooms	Maximum Interior Floor Space per Unit	Water Demand Factor [1]	Water Demand (gpd)	Water Demand (AFY)
Sports Club	24,500			45	3,020.55	3.38
Golf Club	8,600			45	1,060.27	1.19
Restaurants	3,000			331	2,720.55	3.05
Golf Maintenance	10,000			45	1,232.88	1.38
Neighborhood Commercial	60,000			37	6,082.19	6.81
Total	**106,100**				**14,116.44**	**15.81**

[1] AWWARF Commercial and Industrial End Uses of Water, 2000.

6.3 Projected Outdoor Irrigation Water Demand

The projected outdoor irrigation water usage is based on the Maximum Applied Water Allowance (MAWA) equation from Appendix D of Coachella Valley Water District's (CVWD's) Landscape Ordinance No. 1302.5, which meets the water conservation goals of the California Department of Water Resources (DWR) Model Efficient Landscape Ordinance (MWELO). The projected outdoor irrigation water demand for the Project is 339.89 AFY as shown in **Table 6-3** below.

Table 6-3: Projected Outdoor Irrigation Water Demand

Planning Area	Landscaped Area (ft^2)	ETo (in/yr) [1]	ETAF [2]	Conversion Factor (gal/ft^2) [3]	Water Demand (gpd)	Water Demand (AFY)
Single Family	5,387,283.00	64.22	0.45	0.62	264,454.79	296.23
Sports Club	205,603.20	64.22	0.45	0.62	10,092.80	11.31
Golf Club	156,816.00	64.22	0.45	0.62	7,697.90	8.62
Active Amenity Park	104,544.00	64.22	0.45	0.62	5,131.93	5.75
Golf Maintenance	52,272.00	64.22	0.45	0.62	2,565.97	2.87
Neighborhood Commercial	201,247.20	64.22	0.45	0.62	9,878.97	11.07
Public Right of Way	73,616.40	64.22	0.45	0.62	3,613.73	4.05
Total	**6,181,381.80**				**303,436.07**	**339.89**

[1] Reference Evapotranspiration (ETo) for ETo Zone 3 from CVWD Landscape Ordinance 1302.5, Appendix C

[2] Evapotranspiration Adjustment Factor (ETAF) from CVWD Landscape Ordinance 1302.5, Appendix D

[3] Conversion Factor from CVWD Landscape Ordinance 1302.5, Appendix D

6.4 Projected Outdoor Water Features Demand

The projected outdoor irrigation water usage for the golf course and recreational lake is based on the Maximum Applied Water Allowance (MAWA) equation from Appendix D of Coachella Valley Water District's (CVWD's) Landscape Ordinance No. 1302.5. The projected outdoor water features demand for the Project is 753.19 AFY, as shown in **Table 6-4** below.

Table 6-4: Projected Outdoor Recreational Water Demand

Planning Area	Water Feature Area (ft^2)	ETo (in/yr) [1]	ETAF [2]	Conversion Factor (gal/ft^2) [3]	Water Demand (gpd)	Water Demand (AFY)
Golf Course - Irrigated Turf	3,571,920.00	64.22	1.0	0.62	389,646.56	436.46
Golf Course - Other Areas	4,351,644.00	64.22	0.45	0.62	213,616.60	239.28
Golf Course Lake	130,680.00	64.22	0.45	0.62	6,414.91	7.19
Recreational Lake	522,720.00	64.22	1.1	0.62	62,723.59	70.26
Total					**672,401.67**	**753.19**

[1] Reference Evapotranspiration (ETo) for ETo Zone 3 from CVWD Landscape Ordinance 1302.5, Appendix C

[2] Evapotranspiration Adjustment Factor (ETAF) from CVWD Landscape Ordinance 1302.5, Appendix D of 1.0 for special areas, 1.1 for a stationary body of water, and 1.2 for a moving body of water

[3] Conversion Factor from CVWD Landscape Ordinance 1302.5, Appendix D

6.5 Projected Total Water Demand

The total projected water demand for the Project is 1,217.01 AFY, or 3.14 acre-feet per acre, as shown in **Table 6-5** below.

Table 6-5: Projected Total Water Demand

Planning Area	Land Area (Acres)	Indoor Residential Demand (AFY)	Indoor Commercial and Industrial Demand (AFY)	Outdoor Irrigation Demand (AFY)	Outdoor Recreational Demand (AFY)	Total Water Demand (AFY)
Single Family	164.90	105.24	0.00	296.23	0.00	401.47
Sports Club	5.90	1.44	3.38	11.31	0.00	16.13
Golf Club	4.00	1.44	1.19	8.62	0.00	11.25
Restaurants	0.00	0.00	3.05	0.00	0.00	3.05
Golf Maintenance	2.00	0.00	1.38	2.87	0.00	4.26
Neighborhood Commercial	7.70	0.00	6.81	11.07	0.00	17.88
Golf Course - Irrigated Turf	82.00	0.00	0.00	0.00	436.46	436.46
Golf Course - Other Areas	99.90	0.00	0.00	0.00	239.28	239.28
Recreational Lake	12.00	0.00	0.00	0.00	70.26	70.26
Public Right of Way	2.60	0.00	0.00	4.05	0.00	4.05
Golf Course Lake	3.00	0.00	0.00	0.00	7.19	7.19
Active Amenity Park	3.00	0.00	0.00	5.75	0.00	5.75
Total	**387.00**	**108.12**	**15.81**	**339.89**	**753.19**	**1,217.01**

*Restaurant acreage is 0.0 due to proposed restaurants being located within either the sports club or golf club.

6.6 Projected Water Sources

Project domestic water supplies and associated landscape irrigation supplies will be provided from groundwater from the Indio Subbasin in the Coachella Valley Groundwater Basin via Coachella Valley Water District's (CVWD's) potable water distribution system. This source will serve all indoor and private landscape uses. Canal water and/or well water will serve the golf course and the community common area and streetscape landscape if available.

Table 6-6: Projected Water Sources

Planning Area	Land Area (Acres)	Indoor Residential Demand	Indoor Commercial and Industrial Demand	Outdoor Irrigation Demand	Outdoor Recreational Water Demand
Single Family Residential	164.90	CVWD Domestic Water System		CVWD Domestic Water System	
Sports Club	5.90		CVWD Domestic Water System	Canal Water and/or Well Water	
Golf Club	4.00				
Golf Maintenance	2.00				
Neighborhood Commercial	7.70				
Restaurants	0.00				
Active Amenity Park	3.00			Canal Water and/or Well Water	
Public Right of Way	2.60				
Golf Course	181.90				Canal Water and/or Well Water
Golf Course Lake	3.00				
Recreational Lake	12.00				

6.7 Conservation Measures

The landscape guidelines for the Coral Mountain Project emphasize non-invasive drought tolerant plant materials that are climate-appropriate, water efficient, and sustainable. The plant palette throughout the Specific Pan area shall utilize low maintenance and low water. The landscaping and irrigation plans and system shall comply with all CVWD and County ordinances relating to water efficiency and the Project shall use automated irrigation systems with irrigation timers, and two drip or bubbler heads per tree to provide efficient deep-root irrigation.

6.7.1 Desert Landscaping & Drought Tolerant Plants

The need for progressive water conservation and control of landscape maintenance costs has prompted the greater use of native and non-native drought-tolerant planting materials within the Project. The Coachella Valley and CVWD have been a leader in the promotion of these desert landscape materials and design themes, most notably in CVWD Landscape Ordinance 1302.4. As a result, thoughtful and conservative management and use of water resources have guided development of this Project landscape plan.

6.7.2 Project Specific Water Conservation Measures

A broad range of design components and mitigation measures will be implemented to address the Project's potential impacts on water resources.

Project developers will be required to implement the following measures in order to assure the most efficient use of water resources and to meet and maintain the 2010 CVWMP Update goals throughout the life of the Project:

- To the greatest extent practicable, native plant materials and other drought-tolerant plants shall be used in all non-turf areas of Project landscaping. Large expanses of lawn and other water-intensive landscaped areas shall be kept to the minimum necessary and consistent with the functional and aesthetic needs of the Project, while providing soil stability to resist erosion.
- The installation and maintenance of efficient on-site irrigation systems will minimize runoff and evaporation and maximize effective watering of plant roots. Drip irrigation and moisture detectors will be used to the greatest extent practicable to increase irrigation efficiency.
- The use of low-flush toilets and water-conserving showerheads and faucets shall be required in conformance with Section 17921.3 of the Health and Safety Code, Title 20, California Code of Regulations Section 1601(b), and applicable sections of Title 24 of the State Code.

6.7.3 Golf Course Irrigation System Conservation

The irrigation system has been planned to meet the standards of a modern golf course irrigation system and enable precise water management through multiple measures as listed:

- The irrigation system will feature individual irrigation head control, allowing precise control over each sprinkler.
- A central control computer system will be implemented to manage all sprinkler heads and valves efficiently.
- An onsite weather station will be integrated into the system, enabling the irrigation program to provide the exact amount of water needed based on real-time weather conditions.
- During challenging water restriction episodes, the system will have the capability to exclusively water greens and trees if required.
- Modern control monitoring through internet-based software will be incorporated into the pumping facilities for efficient monitoring and control.
- The design of the irrigation system will adhere to the stringent criteria identified by CVWD.

7 Availability of Sufficient Supplies

7.1 Water Supply Assessment

Based on the analysis in this Water Supply Assessment (WSA), the projected total water demand for the Coral Mountain Project (Project) will be 1,217.01 acre-feet per year (AFY), or 3.14 acre-feet per acre. CVWD's long-term water management planning ensures that adequate water supplies are available to meet existing and future water needs within its service area. CVWD's current urban water demand was 100,066 acre-feet (AF) for 2022, and the projected urban water demand by 2045 is 148,166 AFY. This Project's water demand of 1,217.01 AFY accounts for approximately 2.5 percent of the total planned increase in demand of 48,100 AFY by 2045.

This WSA provides an assessment of the availability of sufficient water supplies during normal, single-dry, and multiple-dry years over a 20-year projection to meet the projected demands of the Project, in addition to existing and planned future water demands of CVWD, as required by Senate Bill (SB) 610 and SB 1262. This WSA also includes identification of existing water supply entitlements, water rights, water service contracts, and agreements relevant to the identified water supply for the Project and quantities of water received in prior years pursuant to those entitlements, rights, contracts, and agreements.

This WSA has been prepared in compliance with the requirements of SB 610 and SB 1262 by MSA Consulting in consultation with CVWD and the City. This WSA does not relieve the Project from complying with all applicable state, county, city, and local ordinances or regulations including the CVWD Landscape Ordinance, and indoor water use performance standards provided in the California Water Code now or in the future.

Consistent with the provisions of SB 610, neither this WSA nor its approval shall be construed to create a right or entitlement to water service or any specific level of water service, and shall not impose, expand, or limit any duty concerning the obligation of CVWD to provide certain service to its existing customers or to any future potential customers.

This WSA does not constitute an agreement to provide water service to the Project, and does not entitle the Project, Project applicant, or any other person or entity to any right, priority, or allocation in any supply, capacity, or facility. To receive water service, the Project will be subject to an agreement with CVWD, together with any and all applicable fees, charges, plans and specifications, conditions, and any and all other applicable CVWD requirements in place and as amended from time to time. Nor does anything in this WSA prevent or otherwise interfere with CVWD's discretionary authority to declare a water shortage emergency in accordance with the Water Code.

This WSA will be reviewed every five years, or in the event that the water planning assumptions have changed, until the Project begins construction on all planning areas to ensure it remains accurate and no significant changes to either the Project or available water supply has occurred. The Project applicant shall notify CVWD when construction begins on all planning areas.

7.2 Requirement for Written Verification of Water Supply Availability

Government Code §66473.7 requires that a Written Verification of Water Supply (WV) be prepared in connection with the approval of a development agreement or tentative map that includes a subdivision. A subdivision is defined as a proposed residential development of more than 500 units, except that for a water agency with fewer than 5,000 service connections, a subdivision includes a residential development project that would account for an increase of 10 percent or more in the number of the agency's existing service connections.

This WSA is not a WV. If the City determines that the Project or any planning area meets the definition of a subdivision and therefore requires preparation of a WV, the City must request a WV prepared by CVWD in compliance with the requirements of SB 221. This WSA may be used to support the WV. Depending on circumstances including but not limited to new water efficiency regulations or changes in water supply availability, CVWD may recommend preparation of an updated supply and demand assessment to support the WV.

8 References

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