

John Street and Abbott Street Mixed Use Development Project

Initial Study – Mitigated Negative Declaration

prepared by

City of Salinas
Community Development Department
65 W. Alisal Street, 2nd Floor
Salinas, California 93901
Contact: Robert Latino, Associate Planner

prepared with the assistance of

Rincon Consultants, Inc.
2511 Garden Road, Suite C-250
Monterey, CA 93940

February 2023

RINCON CONSULTANTS, INC.
Environmental Scientists | Planners | Engineers
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Table of Contents

Initial Study ..... **Error! Bookmark not defined.**
1. Project Title 2
2. Lead Agency Name and Address 2
3. Contact Person and Phone Number 2
4. Introduction 2
5. Project Location 3
6. General Plan Designation 6
7. Zoning 6
8. Setting and Surrounding Land Uses 6
9. Description of Project 9
10. Other Public Agencies Whose Approval is Required 3
11. Have California Native American Tribes Traditionally and Culturally Affiliated with the Project Area Requested Consultation Pursuant to Public Resources Code Section 21080.3.1? 3

Tables

Table 1 Full Buildout Summary 9

Table 2 Phase 1 Project Summary 1

Figures

Figure 1 Regional Location 3

Figure 2 Project Location 4

Figure 3 Surrounding Land Uses 7

Appendices

Initial Study

1. Project Title

John Street & Abbott Street Mixed Use Development Project

2. Lead Agency Name and Address

Community Development Department
City of Salinas
65 West Alisal Street, 2nd Floor
Salinas, California 93901

3. Contact Person and Phone Number

Robert Latino, Associate Planner
831-758-7206

4. Introduction

The John Street and Abbott Street Mixed Use Development Project would involve a multi-phase, mixed-use planned unit development (PUD) within 9 future parcels within a 22.74-acre site located on the southeast corner of John and Abbott Streets in Salinas, California. In the short term, Phase 1 of the PUD would include a new extended stay hotel with 111 guest rooms in four stories, with outdoor patios and an interior pool. In the long term, buildout of the PUD would include seven phases; these phases include: 242 residential dwelling units within mixed use buildings and multifamily dwellings, retail, office, a remodel of the existing Butler building, new parking, pedestrian plazas and walking paths, new streets and internal drive accesses, widening of a portion of Abbott Street, and a new signalized intersection at Abbott Street and Maple Street. At its completion, the project would provide a variety of multi-family housing options, supporting uses, and be a pedestrian-friendly community with multiple exterior plazas and walkable paths between buildings. Low impact development (LID) would be incorporated into the project, and landscaping would include a mix of native and native-style plants and trees, watered with drip irrigation.

CEQA Methodology

This Initial Study-Mitigated Negative Declaration (IS-MND) evaluates the first phase of the PUD, the hotel, at a site-specific "project level," consistent with CEQA Guidelines Section 15161 and 15378(a). Project-level analysis examines all phases of a proposed project, including planning, construction, and operation, and a site-specific level. This IS-MND evaluates the remaining six phases of the PUD on a "program level," consistent with CEQA Guidelines Section 15168. Program-level analysis examines the phases on a more general level, and further environmental review would be conducted as determined appropriate pursuant to CEQA. CEQA Guidelines Sections 15161 and 15168 pertain to EIRs; this IS-MND will be applying these guidelines in concept. The legally required contents of a project-level IS-MND are the same as those of a program-level IS-MND, and both

approaches have the purpose of informing public agency decisionmakers and the public generally of the potential environmental impacts of a project or program, and to identify ways that these impacts will be mitigated.

This IS-MND will take a hybrid approach and analyze Phase 1 of the PUD on a project level and the remaining buildout of the PUD on a program level, as specific details regarding Phases 2 through 7 are not yet known. This approach will allow decisionmakers and the public to consider the potential environmental effects and mitigation measures associated with Phase 1 in detail and will provide the City greater flexibility to address potential environmental effects and mitigation measures for the remaining phases on a comprehensive basis. To facilitate this hybrid analysis, Phase 1 of the PUD will be referred to as "project" or "proposed project," and the remaining phases will be referred to as "full buildout" of the PUD. Both elements will be referred to as the PUD. This IS-MND will provide the basis for any future project-level CEQA analyses.

5. Project Location

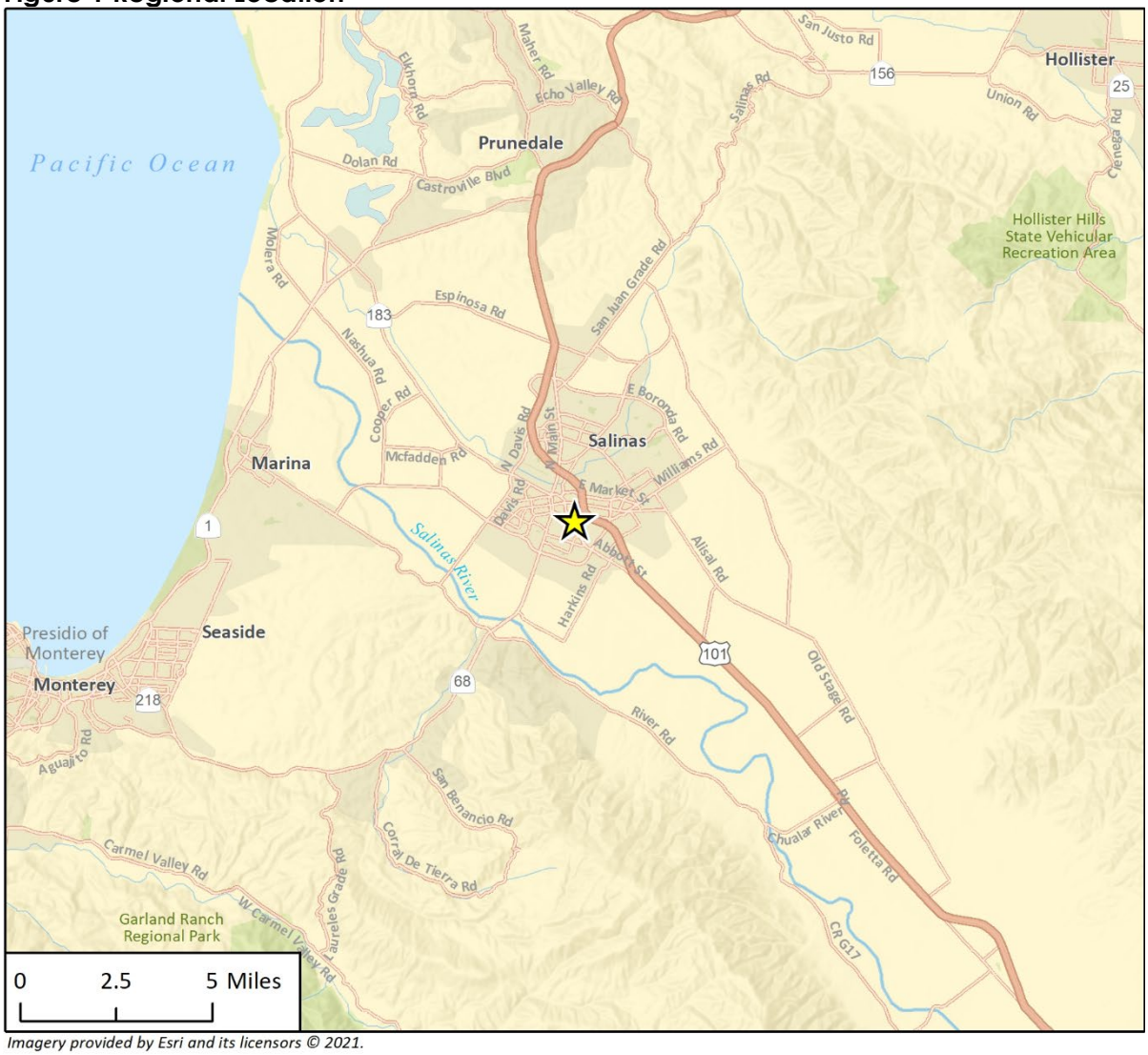
The proposed PUD is located on the southeast corner of the John Street and Abbott Street intersection in the City of Salinas, Monterey County, California. The approximately 22.74-acre site consists of 13 existing parcels and a portion of parcel #002-481-022-000, which have the following Assessor's Parcel Numbers (APN):

- 002-481-022-000
- 002-481-025-000
- 002-481-026-000
- 002-481-027-000
- 002-481-028-000
- 002-481-029-000
- 002-481-030-000
- 002-481-031-000
- 002-481-032-000
- 002-481-033-000
- 002-481-034-000
- 002-481-035-000
- 002-371-039-000
- 002-371-044-000

The PUD site is bound by John Street and California State Route 68 (SR 68) to the north, the Union Pacific Railroad tracks to the east, Spicer Street to the south, and Abbott Street to the west. Access to the PUD site is provided via John, Abbott, and Spicer Streets. Regional access to the PUD site is provided via SR 68 and the John Street exit from U.S. Route 101 (US 101).

Figure 1 shows the location of the site in the region, and Figure 2 shows the PUD site in its neighborhood context.

Figure 1 Regional Location



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Project Location

N

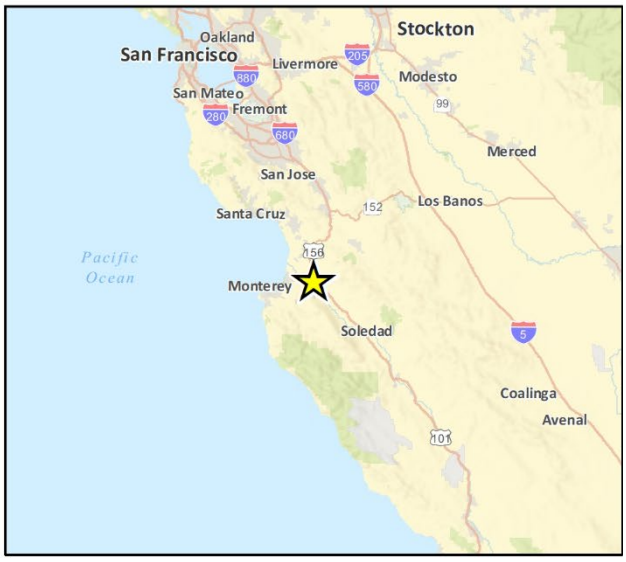


Figure 2 Project Location



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6. General Plan Designation

The site is designated as Office on 13 of the 14 existing parcels, which the General Plan defines as businesses and offices where residential development of comparable impact may be considered. One parcel is designated General Industrial, which the General Plan defines as “automobile dealerships and repair shops, building material sales, light manufacturing, distribution, warehousing, and wholesaling” where residential development (single room occupancies and seasonal transitional housing) may be allowed. Additionally, the site is within the Abbott Street Focused Growth Overlay District (FG-4) which the City’s General Plan describes as existing urbanized areas where additional growth and/or redevelopment and revitalization would be appropriate and provide benefits to the community; by selectively increasing density in a manner compatible with the surrounding neighborhoods, the pressure to develop agricultural lands is also reduced (City of Salinas The City is currently undertaking its General Plan Update and is evaluating increasing density and intensity of uses in the Focus Growth Overlay Districts, which includes the project site. The density and intensity allowed at the project site may increase through the future General Plan Update.

7. Zoning

The site is currently zoned Commercial Office – Abbott Street Focused Growth Overlay (CO – FG-4) on 13 of the 14 existing parcels. Per Salinas Municipal Code (SMC) Section 37-30.190(k)(2), Commercial Office provides areas for primarily for offices, personal services, financial services, mixed use residential, and for residential uses. Per Salinas Municipal Code (SMC) Section 37-40.200, the purpose of the Abbott Street Focused Growth Overlay is to focus growth at high potential, under-utilized sites ("focused growth overlay areas") within Salinas by providing standards that will enhance the city and its neighborhoods and create incentives for mixed use neighborhoods that are active, pedestrian-friendly, safe, and welcoming. One parcel is zoned Industrial – General (IG), which SMC Section 37-30.300(e)(3) defines as areas that provide for the full range of manufacturing, industrial processing, general service, and distribution uses deemed suitable for locations in the city; and protects Salinas’ general industrial areas from competition for space from unrelated commercial uses that could more appropriately be located elsewhere in the City.

A portion of the site is within the Airport Overlay District (AR), which serves the Salinas Municipal Airport. SMC Section 37-40.410 states that the purpose of this district is to fulfill the city's obligations, in accordance with requirements of state law (Government Code Section 65302.3), to implement the airport land use compatibility policies adopted by the Monterey County Airport Land Use Commission; regulate land use development within the vicinity of Salinas municipal airport to protect it from potential encroachment by land uses which are incompatible with airport activities and which may impair the future development and use of the airport; and minimize the public's exposure to excessive noise and safety hazards that would result from incompatible land use development within areas around airport..

8. Setting and Surrounding Land Uses

The PUD site is developed and currently occupied with commercial and light industrial uses, including a produce wholesaler, packing supply store, DMV testing site, parking lots, and vehicle storage. Historically, the site was used for agricultural processing and cooling. As shown in Figure 3,

land uses surrounding the site include commercial industrial uses to the north and to the east, general industrial uses to the south, and mixed use and residential uses to the west.

Lincoln Elementary School is located approximately 975 feet or 0.18 mile southwest and US 101 is located approximately 1,240 feet or 0.23 mile east of the PUD site.

Figure 3 Surrounding Land Uses



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9. Description of Project

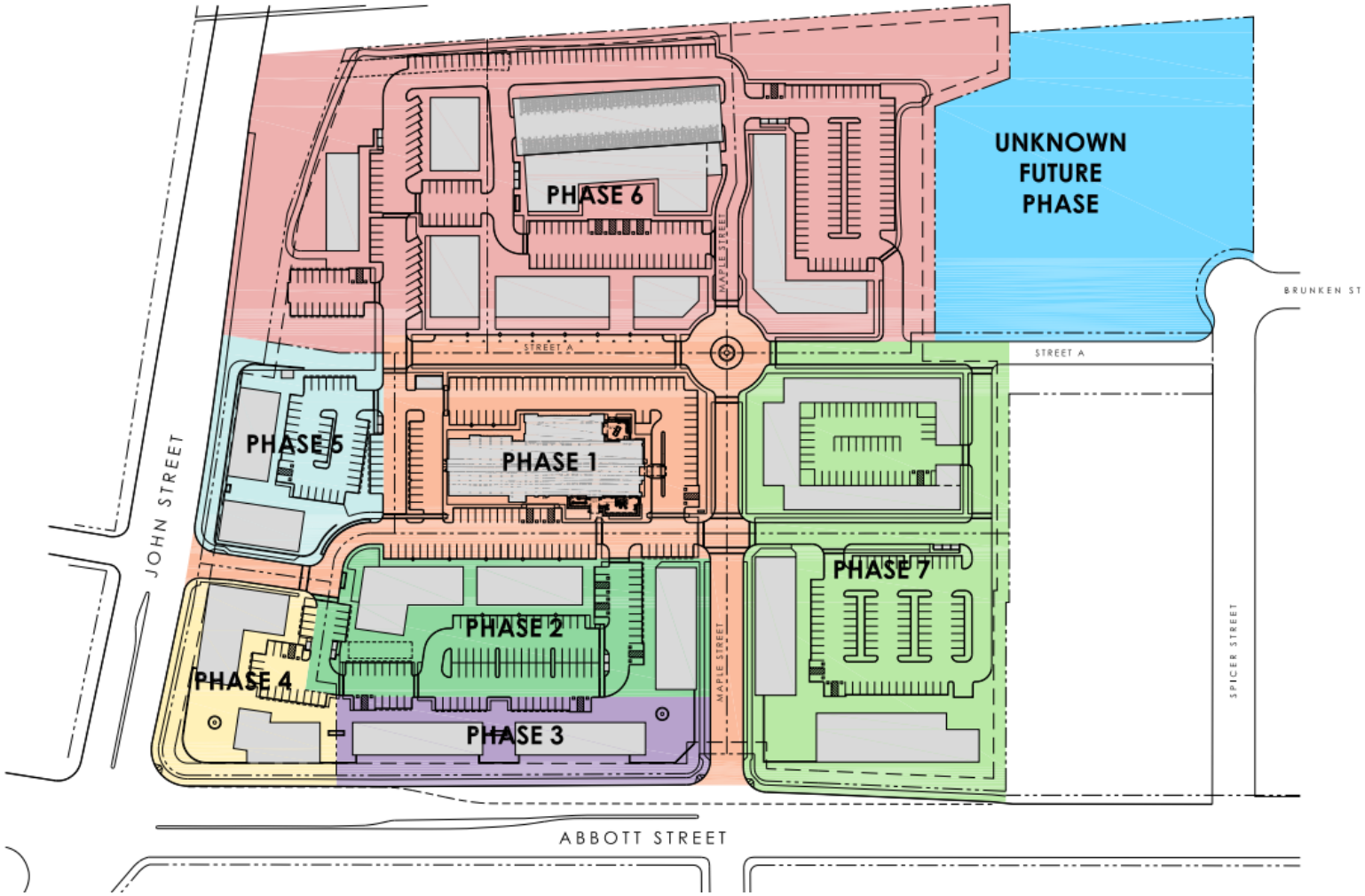
The proposed PUD consists of seven phases and would include approximately 242 dwelling units, 149,300 square feet of retail and office use in either freestanding or mixed use buildings. In addition, the PUD would be subject to the Tentative Map process to reconfigure 14 existing parcels into 9 parcels. The PUD would involve cutting approximately 10,300 cubic yards (CY) of earth and filling with 18,500 CY, for a net fill of 8,200 CY. Table 1 summarizes the construction and buildout associated with each phase, and Figure 4 shows the preliminary phasing plan. Density does not include what may be allowed under density bonus law.

Table 1 Full Buildout Summary

Phase	Estimated Construction Duration	Buildings	*Residential Units*	*Square Feet*			
				Residential	*Retail*	*Office*	*Total Square Feet*
1	20 months	1A	111*	-	-	-	70,000
2	18 – 20 months	1F, 1J, 1H	28	28,800	21,400	-	50,200
3	14 – 16 months	1G, 1I	-	-	12,800	12,800	25,600
4	10 – 12 months	1D, 1E	-	-	14,000	-	14,000
5	10 – 12 months	1B, 1C	-	29,400	16,200	-	45,600
6	18 – 20 months	3A – 3F, 4	134	109,600	23,800	-	152,600**
7	20 – 24 months	2A,-2C	80	83,000	19,700	18,100	120,800
Total	110 – 124 months 9 – 10 years		111* / 242	232,800	107,900	30,900	**478,800**

*Phase 1 Hotel includes 70,000 square feet for 111 guest rooms.
**Phase 6 includes 19,200 square feet of parking lifts.
Source: Appendix A

Figure 4: Preliminary Phasing Plan



Source: Arris Studio Architects

Phase 1

The first phase of the PUD (the "proposed project") includes the development of a four-story (56 feet, 8 inches), approximately 70,000-square foot hotel with 111 guest rooms, including 20 double queen studio rooms, 84 king studio rooms, and seven king one-bedroom rooms and various amenities including an indoor pool, pool lounge and BBQ patio, fitness room, outdoor lounge, and breakfast bar. Construction of the hotel, which is estimated to take 20 months, is anticipated to begin August 1, 2023 and conclude April 1, 2025. Table 2 summarizes Phase 1 key project features.

Table 2 Phase 1 Project Summary

Floor	Double Queen Studio	King Studio	King One-Bedroom	Total	Area (sf)
First/Ground	5	9	1	15	19,850
Second	5	25	2	32	16,420
Third	5	25	2	32	16,420
Fourth	5	25	2	32	16,420
Total	**20**	**84**	**7**	**111**	**69,110**

Notes: sf = square feet

Source: Appendix A

Future Buildout: Phases 2 – 7

While there are no specific site plans for future phases, the project includes a PUD with future buildout of the site. For the purposes of this analysis, the full buildout would include: mixed use buildings (multi-story buildings with ground floor retail spaces and upper floor residential spaces) retail buildings (single-story), retail and office buildings (multi-story buildings), and multifamily buildings (multi-story buildings). Phases 2 through 7 would take approximately ten years to complete. Under the current zoning, the PUD would only allow a net density of 10 dwelling units per net acre, or approximately 197 dwelling units. However, the General Plan Update (GPU), which is already underway may ultimately increase allowed density. Therefore, this environmental analysis is being conducted assuming additional density should it be permitted by underlying zoning in the future.

Proposed Architectural Design

The architectural design of the proposed development of the PUD would be subject to the Mixed Use Design Standards as found in Salinas Municipal Code (SMC) Section 37-30.280; these design standards are intended to assist the designer in understanding the City's requirements for high quality development (residential, mixed use, and nonresidential) in the mixed use districts. These standards complement the development regulations contained in this division by providing good examples of potential design solutions and by providing design interpretations of the various regulations. These standards ensure the highest level of design quality while at the same time providing the flexibility necessary to encourage creativity on the part of project designers. These

standards are also intended to ensure that buildings and dwellings are visually compatible with one another and adjacent neighborhoods and create mixed use areas, which are attractive, compact, pedestrian and transit-oriented, active, and safe.

Services and Utilities

Police and Fire Services

The site is served by the City of Salinas Police Department and City of Salinas Fire Department.

Wastewater

Wastewater treatment service for the project would be provided by Monterey One Water (M1W), formerly the Monterey Regional Water Pollution Control Agency. Wastewater would be conveyed to the M1W Regional Treatment Plant located in Marina, approximately five miles northwest of the City.

After development of the proposed hotel, future phases of project development would include upsizing an existing 8-inch sanitary sewer main to ensure adequate wastewater capacity for project buildout. The sanitary sewer main would be upsized to a 12-inch main line beneath the paved Abbott Street right-of-way between a manhole at the John Street intersection and either a manhole approximately 100 feet south of the Maple Street intersection or a manhole at the Spicer Street intersection. The upsized sanitary sewer main would be approximately 875 feet in length between the John Street and Abbott Street intersection and Maple Street, or 1,375 feet between the John Street and Abbott Street intersection and Spicer Street. The timing and length of sanitary sewer main upsizing depends upon the size and timing of Phases 2 through 7. The applicant with provide sewer analysis for each phase of proposed development. The City will review each phase as applications are received to identify when upsizing is required.

Water

Water supply for the project would be provided by California Water Service and would consist of local groundwater.

Storm Drainage

The site is not currently connected to the City's stormwater drainage system. Development of the site would be required to comply with all applicable City and State regulations for stormwater control.

Gas/Electricity

Pacific Gas and Electric (PG&E) and Central Coast Community Energy would provide gas and electric services to the PUD.

Circulation and Parking

Vehicle access would be provided by two new private streets, Maple Street and Street A. Maple Street would be perpendicular to Abbott Street and would connect to Street A and several internal private driveways and parking lots. Street A would be perpendicular to Spicer Street and intersect with Maple Street in a future roundabout. The hotel would be accessed via Maple Street and a future private drive that would encircle the building. The hotel requires at least 146 parking spaces,

which would be provided along the private drive on all sides of the hotel. The full PUD buildout would require the provision of off-street parking requirements subject to the Salinas Municipal Code, which would be dispersed throughout the site and accessible via Maple Street, Street A, and several internal driveways.

Required Approvals

Buildout of the PUD would require approval of a Conceptual Master Site Plan for a Mixed Use Development project, a Conditional Use Permit for Phase 1, a Tentative Map, and subsequent approvals for future Phases consistent with the Mixed Use Development use.

Other Approvals

As part of this application, the City and the Applicant may enter into a Development Agreement.

10. Other Public Agencies Whose Approval is Required

The project includes adjusting the boundaries of several individual parcels, which requires approval by the Salinas City Council. No other public agencies would be required to approve the project, though approvals may be required for future applications on the site, including from the following agencies:

- Central Coast Regional Water Quality Control Board (RWQCB)
- Monterey Bay Air Resources District (MBARD)
- California Department of Transportation (Caltrans)

11. Have California Native American Tribes Traditionally and Culturally Affiliated with the Project Area Requested Consultation Pursuant to Public Resources Code Section 21080.3.1?

On November 3, 2021, the City of Salinas mailed local tribes an Assembly Bill (AB) 52 notification letter via certified mail. Under AB 52, Native American tribes have 30 days to respond and request further project information and request formal consultation.

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Environmental Factors Potentially Affected

This project would potentially affect the environmental factors checked below, involving at least one impact that is "Potentially Significant" or "Less than Significant with Mitigation Incorporated" as indicated by the checklist on the following pages.

☐	Aesthetics	☐	Agriculture and Forestry Resources	■	Air Quality
■	Biological Resources	■	Cultural Resources	☐	Energy
■	Geology/Soils	☐	Greenhouse Gas Emissions	■	Hazards & Hazardous Materials
☐	Hydrology/Water Quality	☐	Land Use/Planning	☐	Mineral Resources
☐	Noise	☐	Population/Housing	☐	Public Services
☐	Recreation	■	Transportation	■	Tribal Cultural Resources
☐	Utilities/Service Systems	☐	Wildfire	■	Mandatory Findings of Significance

Determination

Based on this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

■ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions to the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a "potentially significant impact" or "less than significant with mitigation incorporated" impact on the environment, but at least one effect (1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and (2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potential significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature	Date
Printed Name	Title

Environmental Checklist

1 Aesthetics

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Except as provided in Public Resources Code Section 21099, would the project:				
a. Have a substantial adverse effect on a scenic vista?	☐	☐	☐	■
b. Substantially damage scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	■	☐
c. In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from a publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	■	☐
d. Create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area?	☐	☐	■	☐

As addressed in CEQA analysis, aesthetics refers to visual environmental concerns as perceived from publicly accessible spaces, such as roadways, parks, and designated open spaces. Aesthetics or visual resources analysis is a process to assess the visible change and anticipated viewer response to that change. The Federal Highway Administration (FHWA), Bureau of Land Management (BLM), and U.S. Forest Service (USFS) have developed methodologies for conducting visual analysis that are used across the industry (FHWA 2015; BLM 1984; USFS 1996). These methods have been synthesized and used for this analysis.

While the conclusions of these assessments may seem entirely subjective, value is measured based on generally accepted measures of quality, viewer sensitivity, and viewer response, supported by consistent levels of agreement in research on visual quality evaluation (BLM 1984; FHWA 2015). Modifications in a landscape that repeat basic elements found in that landscape are said to be in harmony with their surroundings; changes that do not harmonize often look out of place and can be found to form an unpleasant contrast when their effects are not evaluated adequately.

Visual quality is a term that indicates the uniqueness or desirability of a visual resource, within a frame of reference that accounts for the uniqueness and "apparent concern for appearance" by concerned viewers (e.g., residents, visitors, jurisdictions) (USFS 1996). A well-established approach to visual analysis is used to evaluate visual quality, using the concepts of vividness, intactness, and unity (FHWA 2015).

- Vividness describes the memorability of landscape components as they combine in striking patterns.
- Intactness refers to the visual integrity of the natural and human-built.
- Unity indicates the visual coherence and compositional harmony of the landscape as a whole.

Figure 1 and Figure 2 below show existing views of the project site. The visual quality of the project site is low due to the condition of the site, which includes one-story, rectangular industrial and warehouse buildings with dilapidated rooflines, foundations of former buildings, and expansive surface parking lots and paved areas in between. The areas to the north and south of the project site have a similar visual quality as they also contain older, one-story industrial uses; the area to the east of the project site has a moderate visual quality with more modern, one-story commercial/industrial buildings; and the area to the east of the project site has a moderate visual quality with older, one-story residential and commercial uses ranging from one to two stories in height.

Figure 4 Project Site Photos



Northeastern portion of site facing east towards Building 3



Eastern portion of site facing west towards Building 2



Northwestern portion of site facing south towards Building 1



Northern portion of site facing west towards existing storage tank

Figure 5 Project Site Photos cont.



Northern portion of site facing west towards Abbott Street



Northern portion of site facing southeast towards Building 2



Southern portion of site facing south towards Spicer Street



Eastern portion of site facing west towards Abbott Street

a. Would the project have a substantial adverse effect on a scenic vista?

Scenic vistas are places from which expansive views of a highly valued landscape can be observed by the public. They can be enjoyed from elevated places in the landscape or from roadways or other public places where the views stretch far into the distance. Scenic vistas may be informally recognized, or officially designated by a public agency.

The Salinas General Plan notes that public views are available from US 101, and that these views are often the first impression of Salinas for visitors. The General Plan notes that view corridors of the community from US 101 include "agricultural views in the northern portion of the planning area, views of the [Northridge and Westridge shopping centers and the Auto Center], long vistas into Carr Lake [to the east of the highway], and potential office and commercial development in the central portion of the city" (Salinas 2002b).

The nearest public views identified in the General Plan to the project site are the Upper Carr Lake Views, located approximately 1.3 miles northeast across the US 101, which are not visible from the project site due to distance and existing development that block potential views. In addition, the proposed four-story (56 feet, 8 inches) hotel and development envisioned under the remaining project phases would be consistent with development standards and of similar height and massing of surrounding development, including the four-story Hampton Inn and Suites Salinas hotel, located approximately 720 feet east of the project site. For these reasons, the proposed hotel and future development under the remaining project phases would not impact surrounding public views and, therefore, would have no impact on scenic vistas.

NO IMPACT

b. Would the project substantially damage scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

There are no roadways in the City of Salinas that are officially designated for the state scenic highway system. No other road segments in the City are listed as eligible for designation (Caltrans 2021). The site does not contain trees or rock outcroppings. In addition, the project site does not qualify as a historical resource and that no historic resources are within or directly adjacent to the project area (Appendix A). Off-site improvements associated with the project would not occur within a state scenic highway or the viewshed of a state scenic highway. The site is not visible from a state scenic highway, and the project would not substantially damage scenic resources. Impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

c. Would the project substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from a publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

The project site is in an urbanized area surrounded by SR 68, the Union Pacific Railroad tracks, commercial industrial uses, general industrial uses, and mixed-use and residential uses. As discussed under criterion (a), Phase 1 of the project would include the construction of a four-story (56 feet, 8 inches) hotel with ground-level parking and landscaping on an approximate 22.74-acre project site, which currently consists of commercial and light industrial uses, including a produce wholesaler, packing supply store, DMV driving school, parking lots, and vehicle storage. The project site is

designated as CO – FG-4 in the City Zoning Code. Phase 1 of the project would increase the massing and intensity of development on the project site and introduce a building with a different architectural style. As such, Phase 1 of the project would represent a substantial change in the visual character of the project site.

Although the proposed hotel would increase the massing and height of development compared to the existing buildings on site, Phase 1 of the project would comply with the purpose of the CO – FG-4 zoning district in the City's Zoning Code, which promotes areas primarily for offices, personal services, financial services, mixed-use residential, and residential uses (SMC Section 37-30.190[k][2]) and promotes growth at high potential, under-utilized sites ("focused growth overlay areas") within the city by providing standards that will enhance the city and its neighborhoods and create incentives for mixed-use neighborhoods that are active, pedestrian-friendly, safe, and welcoming (SMC Section 37-40.200). The proposed hotel would be similar in height and massing as the surrounding development, including the four-story Hampton Inn and Suites Salinas hotel, located approximately 720 feet east of the project site. In addition, the project would introduce a building of higher visual quality than the existing commercial and light industrial buildings on site with a contemporary design and several landscaping elements surrounding the hotel. The additional landscaping would reduce the visual impact of the project and soften the appearance of the new building. Furthermore, the proposed hotel would adhere to the established design guidelines in the SMC (Sections 37-30.210 and 37-40.230) intended to ensure buildings and dwellings are visually compatible with one another and with adjacent neighborhoods.

As with Phase 1, development under the remaining project phases would comply with the purpose of the City's CO – FG-4 zoning district and would be similar in height and massing as the surrounding development. Development under the remaining project phases would include multi-story mixed use buildings, single-story retail buildings, multi-story retail and office buildings, and multi-story multi-family buildings with a "modern Latin" design aesthetic. These buildings would include a variety of materials and textures, such as stucco, wood accents, corrugated or standing seam metal, and board-formed concrete which would be of higher visual quality than the existing commercial and light industrial buildings on site. Upsizing of the sanitary sewer main would occur within an existing paved roadway, which would return to existing visual conditions after construction. Based on the discussion above, the proposed hotel and future development under the remaining project phases would not conflict with applicable zoning and other regulations governing scenic quality nor significantly degrade the existing visual character or quality of the site and its surroundings. Therefore, impacts related to visual character and quality would be less than significant.

LESS THAN SIGNIFICANT IMPACT

d. Would the project create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area?

Stationary sources of light currently present on the project site include exterior parking lot and building security lighting; moving sources of light include the headlights of vehicles driving on roadways near the project site. Streetlights and other security lighting also serve as sources of light in the evening hours.

Glare is defined as focused, intense light emanating directly from a source or indirectly when light reflects from a surface. Daytime glare is caused in large part by sunlight shining on highly reflective surfaces at or above eye level. Reflective surfaces are associated with buildings that have expanses of polished or glass surfaces, light-colored pavement, and the windshields of parked cars.

The project area is largely developed and includes commercial industrial uses to the north and to the east, general industrial uses to the south, and mixed use and residential uses to the west. Light from exterior and interior night lighting on buildings and in parking lots, along with headlights of cars traveling on city streets and in parking lots, is relatively high. Existing sources of glare include parked cars and from east/west facing windows that reflect the sun as it transitions. In areas where mature street trees exist, glare from parked cars is reduced somewhat.

The project site is currently illuminated with parking lot and security lighting. The lighting conditions on this portion of the project site is commensurate with the rest of the site and surrounding areas. The glare conditions are consistent with an urban area where cars park in street lots and the sun shines on windshields or traversed by motorists in the evening where headlights create potential, temporary glare impacts.

The proposed project would include the development of a four-story (56 feet, 8 inches) hotel and various mixed use, retail, retail and office, and multi-family buildings which would introduce new sources of light at the project site. The proposed hotel would incorporate exterior lighting in the form of pedestrian walkway and parking lot lighting, as well as building-mounted lighting on the rear side of the hotel. Additionally, interior lighting would be visible through the windows of the proposed hotel and future development. These light sources would not have a significant impact on the night sky, as they would only incrementally add to the existing background light levels already present from the surrounding street lighting and urban development. Because of the existing, relatively high ambient lighting levels near the project site, the hotel and future development would not substantially alter this condition. Upsizing of the sewer line would not require additional sources of light.

Project compliance with SMC Section 37-50.480 would require building and parking lot lighting be designed to generate the lowest possible amount of light while still providing for safety and security. Specifically, SMC Section 37-50.480 requires the following:

- Outdoor lighting shall employ cutoff optics that allows no light emitted above a horizontal plane running through the bottom of the fixture.
- Parking lots shall be illuminated to no more than an average maintained two and four-tenths footcandle at ground level with uniform lighting levels.
- All building-mounted and freestanding parking lot lights (including the fixture, base, and pole) shall not exceed a maximum of 25 feet in height in all districts.
- Lighting adjacent to other property or public rights-of-way shall be shielded to reduce light trespass.
- No portion of the lamp (including the lens and reflectors) shall extend below the bottom edge of the lighting fixture nor be visible from an adjacent property or public right-of-way.
- A point to point lighting plan showing horizontal illuminance in footcandles and demonstrating compliance with this section shall be submitted for review and approval prior to issuance of a building permit.

New sources of glare would include windows and glass components associated with the proposed hotel and future development. The frontage of the hotel would be painted a light gray color that could also generate glare if positioned so that the sun shines on it for extended periods. SMC Section 37-30.280 details design standards to reduce glare on residential, mixed-use, and non-residential development. Relative to glare, this includes the following:

- Restrictions on roof materials, including prohibiting highly reflective surfaces that create glare
- Use of intermittent awnings and canopies to shield windows from direct sun that would create glare
- Prohibiting windows that have reflective glass
- Use of exterior color palettes that are compatible with adjacent structures and that are not highly reflective (e.g., bright white)

Building windows would also be required to comply with Title 24 Energy Standards by providing ultraviolet protection with polarization to reduce light and glare onto adjacent uses.

Conformance to the City's outdoor lighting standards, design guidelines and ordinances, and Title 24 would keep the proposed hotel and future development under the remaining project phases from creating a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area. Impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

2 Agriculture and Forestry Resources

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	■
b. Conflict with existing zoning for agricultural use or a Williamson Act contract?	☐	☐	☐	■
c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)); timberland (as defined by Public Resources Code Section 4526); or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?	☐	☐	☐	■
d. Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	■
e. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	■

a. Would the project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

b. Would the project conflict with existing zoning for agricultural use or a Williamson Act contract?

e. Would the project involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?

The PUD site is within a fully developed urban area in the City of Salinas. According to the California Department of Conservation (DOC) Farmland Mapping and Monitoring program, there is no existing

Important Farmland on or adjacent to the site. The site, as well as all surrounding properties, are designated as "Urban and Built-Up Land" (DOC 2018). In addition, the site and off-site improvement areas (sanitary sewer main upsizing)are not designated for agriculture, used for agricultural production, or under a Williamson Act contract (County of Monterey 2010). Dense urban development is present between the site and the nearest agricultural operations, which occur approximately 4,700 feet north. As a result, development of the mixed-use project would not convert farmland, conflict with agricultural zoning, or have the potential to result in the loss or conversion of farmland into non-agricultural use. There would be no impact.

NO IMPACT

c. *Would the project conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)); timberland (as defined by Public Resources Code Section 4526); or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))*

d. *Would the project result in the loss of forest land or conversion of forest land to non-forest use?*

e. *Would the project involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?*

The PUD site is within a developed and urbanized area and there is no forest land on or adjacent to the site. The site and neighboring properties are not designated or zoned for forest preservation or timber harvesting. Therefore, the project would not conflict with zoning or cause rezoning of forest land or result in conversion of forest land. There would be no impact.

NO IMPACT

3 Air Quality

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	■	☐
b. Result in a 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?	☐	☐	■	☐
c. Expose sensitive receptors to substantial pollutant concentrations?	☐	■	☐	☐
d. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	■	☐

Overview of Air Pollution

The federal and State Clean Air Acts (CAA) mandate the control and reduction of certain air pollutants. Under these laws, the U.S. Environmental Protection Agency (USEPA) and the California Air Resources Board (CARB) have established the National Ambient Air Quality Standards (NAAQS) and the California Ambient Air Quality Standards (CAAQS) for "criteria pollutants" and other pollutants. Some pollutants are emitted directly from a source (e.g., vehicle tailpipe, an exhaust stack of a factory, etc.) into the atmosphere, including carbon monoxide (CO), volatile organic compounds (VOC)/reactive organic gases (ROG),[1] nitrogen oxides (NO_X), particulate matter with diameters of ten microns or less (PM_{10}) and 2.5 microns or less ($PM_{2.5}$), sulfur dioxide, and lead. Other pollutants are created indirectly through chemical reactions in the atmosphere, such as ozone, which is created by atmospheric chemical and photochemical reactions primarily between VOC and NO_X. Secondary pollutants include oxidants, ozone, and sulfate and nitrate particulates (smog).

Air Quality Standards and Attainment

The project site is in the North Central Coast Air Basin (NCCAB), which is under the jurisdiction of the Monterey Bay Air Resource District (MBARD). As the local air quality management agency, MBARD is required to monitor air pollutant levels to ensure that the NAAQS and CAAQS are met and, if they are not met, to develop strategies to meet the standards. Depending on whether the standards are

[1] CARB defines VOC and ROG similarly as, "any compound of carbon excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate," with the exception that VOC are compounds that participate in atmospheric photochemical reactions. For the purposes of this analysis, ROG and VOC are considered comparable in terms of mass emissions, and the term VOC is used in this IS-MND.

met or exceeded, the NCCAB is classified as being in "attainment" or "nonattainment." In areas designated as non-attainment for one or more air pollutants, a cumulative air quality impact exists for those air pollutants, and the human health impacts associated with these criteria pollutants are already occurring in that area as part of the environmental baseline condition. Under state law, air districts are required to prepare a plan for air quality improvement for pollutants for which the district is in non-compliance. The NCCAB is designated a nonattainment area for the ozone and PM_{10} CAAQS. (CARB 2021).

Air Quality Management

Because the NCCAB currently exceeds the state ozone and PM_{10} standards, MBARD is required to implement strategies to reduce pollutant levels to achieve attainment of the CAAQS. In March 2017, MBARD adopted its most recent Air Quality Management Plan (AQMP) to demonstrate a pathway for the region to make progress toward meeting the ozone CAAQS. Given that NO_x emissions are a precursor to ozone formation, the AQMP includes measures to reduce NO_x emissions that focus on on-road and off-road vehicles (MBARD 2017).

Air Pollutant Emission Thresholds

The analysis of the project's air quality impacts follows the guidance and methodologies recommended in the MBARD's CEQA Air Quality Guidelines (2008) as well as Appendix G of the State CEQA Guidelines.

Table 1 presents MBARD's project-level significance thresholds for construction and operational criteria air pollutant and precursor emissions. These represent levels at which a project's individual emissions of criteria air pollutants or precursors would result in a cumulatively considerable contribution to the NCCAB's existing air quality conditions. For the purpose of this analysis, the project would result in a significant impact if construction or operational emissions from development facilitated by the project would exceed the thresholds shown in Table 1.

The CO thresholds provided by MBARD, as presented in Table 1, are designed to screen out from further analysis projects that would have a less than significant impact from CO emissions. Projects that exceed these thresholds may but would not necessarily result in a CO hotspot and would require additional analysis.

Table 2 Air Quality Thresholds of Significance

Pollutant	Source	Threshold of Significance
Construction Impacts		
PM_{10}	Direct	82 lbs/day[1]
Operational Impacts		
VOC	Direct and Indirect	137 lbs/day
NO_X	Direct and Indirect	137 lbs/day
PM_{10}	On-site	82 lbs/day[2]
CO	N/A	LOS at intersection/road segment degrades from D or better to E or F or V/C ratio at intersection/road segment at LOS E or F increases by 0.05 or more or delay at intersection at LOS E or F increases by 10 seconds or more or reserve capacity at unsignalized intersection at LOS E or F decreases by 50 or more
	Direct	550 lbs/day[3]
SO_X, as SO_2	Direct	150 lbs/day

lbs/day = pounds per day; PM_{10} = particulate matter with a diameter of 10 microns or less; VOC = volatile organic compounds (also referred to as ROG, or reactive organic gases); NO_X = oxides of nitrogen; CO = carbon monoxide; SO_X = oxides of sulfur; SO_2 = sulfur dioxide

[1] This threshold only applies if construction is located nearby or upwind of sensitive receptors. In addition, a significant air quality impact related to PM_{10} emissions may occur if a project uses equipment that is not "typical construction equipment" as specified in Section 5.3 of the MBARD CEQA Guidelines.

[2] The District's operational PM_{10} threshold of significance applies only to on-site emissions, such as project-related exceedances along on-site unpaved roads. These impacts are generally less than significant. For large development projects, almost all travel is on paved roads, and entrained road dust from vehicular travel can exceed the significance threshold.

[3] Modeling should be undertaken to determine if the project would cause or substantially contribute (550 lbs/day) to exceedance of CO ambient air quality standards. If not, the project would not have a significant impact.

Source: MBARD 2008

Methodology

Air pollutant emissions generated by project construction and operation were estimated using the California Emissions Estimator Model (CalEEMod), version 2020.4.0. CalEEMod uses project-specific information, including the project's land uses, square footages for different uses (e.g., mid-rise apartments and a parking lot), and location, to model a project's construction and operational emissions. The analysis reflects the construction and operation of the project as described under Section 2, *Project Description*.

Construction emissions modeled include emissions generated by construction equipment used on-site and emissions generated by vehicle trips associated with construction, such as worker and vendor trips. CalEEMod estimates construction emissions by multiplying the time equipment is in operation by emission factors. The construction of the proposed project was analyzed based on the construction schedule provided by the applicant, which is included in the *Project Description*. In addition, the project is analyzed using the CalEEMod default construction equipment list for a project of this type and size. Construction would be over seven phases, with each phase lasting between 10 and 24 months. Total project construction would occur over 9 to 10 years. It is assumed that 8,200 cubic yards of fill would be required. Fill was allocated based on the parcel size for each phase. It is assumed that all construction equipment used would be diesel-powered, and that the project would comply with all applicable regulatory standards. In particular, the project would comply with MBARD Rules 426 for architectural coatings (50 grams per liter for flat or non-flat coatings; and 100 grams per liter for traffic marking coatings).

Operational emissions modeled include mobile source emissions (i.e., vehicle emissions), energy emissions, and area source emissions. Mobile source emissions are generated by vehicle trips to and from the project site. The default trip generation rates were used, which are based on the Institute of Transportation Engineers (ITE) 10th edition trip generation rates. Emissions attributed to energy use include natural gas consumption by appliances as well as for space and water heating. Default area source emissions are generated by landscape maintenance equipment, consumer products and architectural coatings based on land use type. In addition, default rates for water consumption and solid waste generation were used.

A CO hotspot is a localized CO concentration that is above a CO ambient air quality standard. The entire Basin conforms to state and federal CO standards, and most air quality monitoring stations no longer report CO levels. One station within the NCCAB reports CO emissions data and only reports maximum 1-hour and average daily concentrations of CO. For 2020 the Salinas-High School monitoring station in Monterey County reported maximum 1-hour and average daily concentrations of 1.6 ppm and 1.074 ppm, respectively (CARB, n.d.).[2] These are well below the respective 1-hour and 8-hour standards of 20 ppm and 9 ppm. Given the ambient concentrations, which includes mobile as well as stationary sources, a project in NCCAB would need to emit concentrations twelve times the hourly maximum ambient emissions for all sources near the Salinas-High School station before project emissions would exceed the 1-hour standard. Additionally, the project would need to emit eight times the daily average for ambient concentrations near the monitoring station within eight hours to exceed the 8-hour standards. Typical development projects would not emit the levels of CO necessary to result in a localized hot spot. Therefore, CO hotspots are not discussed further in this document.

a. Would the project conflict with or obstruct implementation of the applicable air quality plan?

A project could be inconsistent with the AQMP if it would generate population, housing, or employment growth exceeding forecasts used in the development of the AQMP. MBARD uses growth forecasts provided by the Association of Monterey Bay Area Governments (AMBAG) to project population-related emissions, which are used in developing the AQMP for the NCCAB. AMBAG is the regional planning agency for Monterey, San Benito, and Santa Cruz counties, and addresses regional issues relating to transportation, economy, community development, and the environment. The AQMP utilizes the 2014 Regional Growth Forecasts adopted by the AMBAG Board in June 2014 as the basis for emissions forecasting and the land use and transportation control portions of the AQMP (MBARD 2017).[3]

The AQMP population forecast for Monterey County is a population of 479,487 persons in 2030, an increase of 64,430 persons from a population of 415,057 persons in 2010. The project would involve the development of up to 242 dwelling units. The project is anticipated to provide housing units for 932 new residents in the city (refer to Section 14, *Population and Housing*, for details on this calculation). This increase of 932 residents would be within the AQMP's projected 2030 population increase of 64,430 persons for Monterey County. Additionally, as described under checklist question (b) below, the project would not exceed MBARD's construction or operational ozone precursor thresholds. Therefore, both the proposed hotel under Phase 1 of the project and future development under the remaining project phases would be within the population forecasts used in

[2] Data for 2020 was used as the data for 2021 has not been fully verified for all sites.

[3] On June 13, 2018, AMBAG's Board of Directors adopted the 2018 Regional Growth Forecast. However, the most recent AQMP was adopted prior to this date and relies on the demographic and growth forecasts of the 2014 Regional Growth Forecast; therefore, the 2014 forecasts are utilized in the analysis of the project's consistency with the AQMP.

the AQMP. Additionally, as discussed below under Threshold (b), operational VOC or NO_X emissions would be less than 137 pounds per day. For these reasons, the project would not generate air pollutant emissions that would impede or conflict with the AQMP's goal of achieving attainment of the State ozone standards. As a result, the project would not conflict with the implementation of the AQMP. Therefore, this impact would be less than significant.

LESS THAN SIGNIFICANT IMPACT

b. Would the project result in a 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 NCCAB is designated nonattainment for the ozone and PM_{10} CAAQS. The following subsections discuss emissions associated with construction and operation of the proposed project.

Construction Emissions

Project construction would generate temporary air pollutant emissions associated with fugitive dust (PM_{10} and $PM_{2.5}$). In addition, exhaust emissions from heavy construction equipment and construction vehicles along with VOC emissions that would be released during the drying phase of architectural coating. Table 2 summarizes the estimated maximum daily emissions of pollutants during each phase of project construction. As shown therein, construction-related emissions would be well below MBARD thresholds. Therefore, construction of both the proposed hotel under Phase 1 of the project and future development under the remaining project phases would not result in a 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. Impacts would be less than significant.

Table 3 Estimated Unmitigated Maximum Daily Construction Emissions (lbs/day)

Construction Phase	Maximum Daily Emissions (lbs/day)					
	VOC	NO_x	CO	SO_2	PM_{10}	$PM_{2.5}$
Phase 1	22	26	29	<1	8	4
Phase 2	18	24	30	<1	8	4
Phase 3	15	22	29	<1	8	4
Phase 4	14	12	15	<1	6	3
Phase 5	28	17	23	<1	8	4
Phase 6	55	24	32	<1	8	4
Phase 7	41	17	32	<1	7	4
Maximum Daily Emissions	**41**	**26**	**32**	**<1**	**8**	**4**
MBARD Thresholds	N/A	N/A	NA	N/A	82[1]	NA
Threshold Exceeded?	N/A	N/A	NA	N/A	No	N/A

lbs/day = pounds per day; PM_{10} = particulate matter with a diameter of 10 microns or less; VOC = volatile organic compounds (also referred to as ROG, or reactive organic gases); NO_X = oxides of nitrogen; CO = carbon monoxide; SO_X = oxides of sulfur; SO_2 = sulfur dioxide

Notes: All numbers have been rounded to the nearest tenth. Emissions presented are the highest of the winter and summer modeled emissions. Emission data is pulled from "unmitigated" results. See Appendix B for CalEEMod calculations and assumptions.

[1] This threshold only applies if construction is located nearby or upwind of sensitive receptors. In addition, a significant air quality impact related to PM_{10} emissions may occur if a project uses equipment that is not "typical construction equipment" as specified in Section 5.3 of the MBARD CEQA Guidelines.

Operational Emissions

Operation of both the proposed hotel under Phase 1 of the project and future development under the remaining project phases would generate criteria air pollutant emissions associated with area sources (e.g., fireplaces, architectural coatings, consumer products, and landscaping equipment), energy sources (i.e., use of natural gas for space and water heating and cooking), and mobile sources (i.e., vehicle trips to and from the project site). Table 3 summarizes the project's total maximum daily operational emissions by emission source. As shown therein, operational emissions well below MBARD regional thresholds for criteria pollutants. Therefore, operation of both the proposed hotel under Phase 1 of the project and future development under the remaining project phases, including upsizing of the sanitary sewer main, would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment, and impacts would be less than significant.

Table 4 Estimated Unmitigated Maximum Daily Operational Emissions (lbs/day)

Emissions Source	VOC	NO_x	CO	SO_2	PM_{10}	$PM_{2.5}$
Area	11	<1	20	<1	<1	<1
Energy	<1	3	2	<1	<1	<1
Mobile	32	32	272	<1	61	17
Total	**43**	**35**	**294**	**1**	**62**	**17**
MBARD Thresholds	137	137	550	150	82	n/a
Threshold Exceeded?	No	No	No	No	No	No

lbs/day = pounds per day; PM_{10} = particulate matter with a diameter of 10 microns or less; VOC = volatile organic compounds (also referred to as ROG, or reactive organic gases); NO_X = oxides of nitrogen; CO = carbon monoxide; SO_X = oxides of sulfur; SO_2 = sulfur dioxide

Notes: All numbers have been rounded to the nearest tenth. Emissions presented are the highest of the winter and summer modeled emissions. Emission data is pulled from "unmitigated" results. See Appendix B for CalEEMod calculations and assumptions.

LESS THAN SIGNIFICANT IMPACT

c. Would the project expose sensitive receptors to substantial pollutant concentrations?

Certain population groups, such as children, the elderly, and people with health problems, are particularly sensitive to air pollution. Therefore, most sensitive receptor locations are schools, hospitals, and residences (CARB 2005). Sensitive receptors in the project vicinity include single-family residences. The nearest sensitive receptors are single-family residences adjacent to the project site's southeastern boundary. The project also includes the siting of new sensitive receptors. Localized air quality impacts on sensitive receptors typically result from CO hotspots and TACs, which are discussed in the following subsections.

Toxic Air Contaminants

TACs are defined by California law as air pollutants that may cause or contribute to an increase in mortality or an increase in serious illness, or which may pose a present or potential hazard to human health. The following subsections discuss the project's potential to result in impacts related to TAC emissions during construction and operation.

Construction

Construction-related activities would result in temporary project-generated diesel particulate matter (DPM) exhaust emissions from off-road, heavy-duty diesel equipment for site preparation, grading, building construction, and other construction activities. DPM was identified as a toxic air contaminant (TAC) by CARB in 1998. The potential cancer risk from the inhalation of DPM, discussed in the following paragraphs, outweighs the potential non-cancer health impacts (CARB 2017).

Generation of DPM from construction projects typically occurs in a single area for a short period. The proposed project's construction would occur in phases over approximately nine to ten years. The dose to which the receptors are exposed is the primary factor used to determine health risk. Dose is a function of the concentration of a substance or substances in the environment and the extent of exposure that person has to the substance. Dose is positively correlated with time, and a more extended exposure period would result in a higher exposure level for the maximally exposed

individual. The risks estimated for a maximally exposed individual are higher if a fixed exposure occurs over a more extended period. According to the California Office of Environmental Health Hazard Assessment (OEHHA), health risk assessments, which determine the exposure of sensitive receptors to toxic emissions, should be based on a 70-year exposure period. However, such assessments should be limited to the period/duration of activities associated with the project.

The proposed project would be consistent with the applicable AQMP requirements and control strategies intended to reduce emissions from construction equipment and activities. The proposed project would comply with the CARB Air Toxics Control Measure that limits diesel powered equipment and vehicle idling to no more than five minutes at a location, and the CARB In-Use Off-Road Diesel Vehicle Regulation; compliance with these requirements would minimize emissions of TACs during construction. However, given the construction area's proximity to nearby sensitive receptors, impacts from TACs could be potentially significant.

Operation

Common sources of TACs and $PM_{2.5}$ include gasoline stations, dry cleaners, diesel backup generators, truck distribution centers, freeways, and other major roadways (BAAQMD 2017). The project does not propose construction of gas stations, dry cleaners, highways, or roadways or other permitted or non-permitted sources of TAC or $PM2_{.5}$. The project would not include any stationary sources of TACs or $PM_{2.5}$ that would expose both on-site and nearby off-site receptors to substantial TAC or $PM_{2.5}$ emissions. No impact would occur from project operation.

Mitigation Measure

AQ-1 Construction Emissions Reduction

Prior to issuance of grading permits, the following measures shall be implemented:

- All mobile off-road equipment (wheeled or tracked) greater than 50 horsepower used during construction activities shall meet the USEPA Tier 4 interim standards. Tier 4 certification can be for the original equipment or equipment that is retrofitted to meet the Tier 4 interim standards.
- Alternative Fuel (natural gas, propane, electric, etc.) construction equipment shall be incorporated where available. These requirements shall be incorporated into the contract agreement with the construction contractor. A copy of the equipment's certification or model year specifications shall be available upon request for all equipment on-site.
- Electricity shall be supplied to the site from the existing power grid to support the electric construction equipment. If connection to the grid is determined to be infeasible for portions of the project, a non-diesel fueled generator shall be used.
- The project would comply with the CARB Air Toxics Control Measure that limits diesel powered equipment and vehicle idling to no more than five minutes at a location, and the CARB In-Use Off-Road Diesel Vehicle Regulation; compliance with these would minimize emissions of TACs during construction.

Significance After Mitigation

With its incorporation of Mitigation Measure AQ-1, the project would be required to use off-road diesel-powered construction equipment that meets or exceeds the most stringent and environmentally protective CARB and USEPA Tier 4 off-road emissions standards, or alternatively fueled equipment which would substantially reduce DPM emissions. The Tier 4 standards reduce

DPM emissions by approximately 81 to 96 percent as compared to equipment that meet the Tier 2 off-road emissions standards, depending on the specific horsepower rating of each piece of equipment. Thus, with implementation of Mitigation Measure AQ-1, construction activities would not expose sensitive receptors to substantial TAC concentrations that would potentially exceed cancer risk greater than ten per one million population. Construction-related health impacts would be reduced to a less than significant level.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

d. Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

During construction activities, heavy equipment and vehicles would emit odors associated with vehicle and engine exhaust and during idling. However, these odors would be intermittent and temporary and would cease upon completion, and odors disperse with distance. In addition, MBARD Rule 402 prohibits the discharge of air contaminants or other materials which would cause a nuisance or detriment to a considerable number of persons or to the public, with the exception of odors from agricultural activities. Overall, construction of both the proposed hotel under Phase 1 of the project and future development under the remaining project phases would not generate other emissions, such as those leading to odors, affecting a substantial number of people. Construction-related impacts would be less than significant.

Land uses typically producing objectionable odors include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding (MBARD 2008). The project would not facilitate the development of any uses associated with objectionable odors. Operational odor emissions from the project would be limited to odors associated with vehicle and engine exhaust and trash receptacles and would be comparable with those generated by existing residential uses. Therefore, the proposed project and upsizing of the sanitary sewer main would not result in other emissions (including odors) that would adversely affect a substantial number of people. No operational impacts would occur.

LESS THAN SIGNIFICANT IMPACT

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4 Biological Resources

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	■	☐	☐
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☐	☐	■
c. Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	■
d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	■	☐
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	■	☐
f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	■

Special-status species are those plants and animals: 1) listed, proposed for listing, or candidates for listing as Threatened or Endangered by the United States Fish and Wildlife Service (USFWS) and National Marine Fisheries Service under the Federal Endangered Species Act; 2) listed or proposed for listing as Rare, Threatened, or Endangered by the California Department of Fish and Wildlife (CDFW) under the California Endangered Species Act; 3) recognized as Species of Special Concern by the CDFW; 4) afforded protection under Migratory Bird Treaty Act and/or California Fish and Game Code (CFGC); and 5) occurring on lists 1 and 2 of the CDFW California Rare Plant Rank system.

Rincon reviewed agency databases and relevant literature for baseline information on special status species and other sensitive biological resources occurring or potentially occurring at the project site and in the immediate surrounding area. The following sources were reviewed for background information:

- CDFW California Natural Diversity Data Base (CNDDB) (CDFW 2020a)
- CDFW Special Animals List (CDFW 2020b) and Special Vascular Plants, Bryophytes, and Lichens List (CDFW 2020c)
- California Native Plant Society (CNPS) Online Inventory of Rare and Endangered Plants of California (CNPS 2021)
- USFWS Information for Planning and Consultation (IpaC; USFWS 2021a)
- USFWS Critical Habitat Portal (USFWS 2020b)
- USFWS National Wetlands Inventory (NWI; USFWS 2020c)

Rincon conducted a review of applicable sources listed above for recorded occurrences of special status plant and wildlife taxa in the region. For this review, the search included all occurrences within the U.S. Geological Survey 7.5-minute topographic quadrangle encompassing the project site (*Salinas*), and the eight surrounding quadrangles (*Moss Landing, Prunedale, San Juan Bautista, Marina, Natividad, Seaside, Spreckels, and Chualar*). Strictly marine species were excluded from further analysis given the terrestrial nature of the project.

Rincon compiled these sources into a list of regionally occurring special status plants and animals and evaluated each species for potential to occur based on habitat conditions and proximity to known occurrences. Rincon also reviewed the NWI (USFWS 2020c) for potential aquatic resources, including jurisdictional waters of the United States or waters of the State.

Due to an absence of suitable habitat or anthropogenic influences within or near the project site, species identified in the database and literature review would not be expected to occur. It should be noted that while habitat on the project site does not support other specific special-status species that were evaluated, the ruderal vegetation and trees could support various species of migratory nesting birds. Examples of migratory nesting birds that could nest within this type of ruderal habitat include Northern mockingbird (*Mimus polyglottos*), Brewer's blackbird (*Euphagus cyanocephalus*), and loggerhead shrike (*Lanius ludovicianus*).

A. Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

The project site is located in an urbanized area of Salinas and is currently developed with commercial and warehouse buildings, including a produce wholesaler, packing supply store, parking lots, vehicle storage, and other light industrial uses. Ground cover at the site consists of paved

parking areas, as well as various commercial and warehouse buildings, with a few areas of exposed ground surface in landscaped areas.

Minimal landscaping is present on the project site and consists primarily of ornamental trees. Based on the developed nature of the area and lack of suitable habitat located within it, no federal- or state-listed endangered, threatened, rare, or otherwise sensitive flora or fauna are anticipated to be located at the project site (CNPS 2021; CDFW 2020a; USFWS 2021a). However, existing trees on and around the site could contain bird nests and birds that are protected under Sections 3503 and 3503.5 of the CFGC, which specifically protect active nests of native birds and raptors. Protected birds include all common songbirds, waterfowl, shorebirds, hawks, owls, eagles, ravens, crows, native doves and pigeons, swifts, martins, swallows, and others, including their body parts (feathers, plumes etc.), nests, and eggs.

Construction of the proposed hotel under Phase 1 of the project and future development proposed under the remaining project phases would result in the removal of existing trees at the site. Ground disturbance, construction activities, or vegetation removal that would result in destruction of active bird nests or abandonment of an active bird nest could potentially be a violation of the CFGC. Impacts to nesting birds would only be considered a significant impact under CEQA if the species affected were federal or state listed species, or if the result had a population-level effect on non-listed sensitive species. Implementation of Mitigation Measure BIO-1 would ensure protection of nesting birds that may be present on the site during construction activities. This would reduce the potentially significant impacts to special status species to a less than significant level.

Mitigation Measure

BIO-1 Nesting Bird Surveys and Avoidance

For all phases of the proposed project that contain trees, construction, grading, site preparation and other ground disturbance activities required for future development, including vegetation or tree removal, shall not occur during the general avian nesting season (February 1 – August 31), if feasible. If breeding season avoidance is not feasible, the applicant shall retain a qualified biologist, as approved by the City of Salinas, to conduct a preconstruction nesting bird survey to determine the presence/absence, location, and status of nests on or adjacent to the project site. The extent of the survey buffer area surrounding the site shall be established by the qualified biologist to ensure that direct and indirect effects to nesting birds are avoided. To avoid the destruction of active nests and to protect the reproductive success of birds protected by the CFGC, nesting bird surveys shall be performed not more than 14 days prior to scheduled vegetation clearance. In the event that active nests are discovered, a minimum buffer of 300 feet for raptors and 50-foot radius avoidance buffers for passerines shall be established around such active nests and no construction or personnel shall be allowed within the buffer areas until a qualified biologist has determined that the nest is no longer active (e.g., the nestlings have fledged and are no longer reliant on the nest). No ground disturbing activities shall occur within this buffer until the qualified biologist has confirmed that breeding/nesting is completed, and the young have fledged the nest. Nesting bird surveys are not required for construction activities occurring between September 1 and January 31.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

b. Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

The CNDDB contains records of seven sensitive natural communities within the area shown on the U.S. Geological Survey 7.5-minute topographic quadrangle encompassing the project site (*Salinas*), and the eight surrounding quadrangles. These communities include: Central Dune Scrub; Central Maritime Chaparral; Coastal and Valley Freshwater Marsh; Coastal Brackish Marsh; Monterey Pine Forest; Northern Coastal Salt Marsh; and Valley Needlegrass Grassland (CDFW 2020a). As described above, vegetation on the project site consists of minimal landscaping and several scattered and isolated trees. Native grassland, such as Valley Needlegrass Grassland, do not occur on the project site, nor does chaparral vegetation. There are no surface waters or shallow groundwater expressions on or adjacent to the project site and associated riparian and marshland vegetation does not occur within or adjacent to the project site (USFWS 2020c). Scattered trees on the project site do not constitute woodland. Ruderal vegetation cover, such as that found at the project site, is not considered a sensitive natural community. Because no riparian habitat or other sensitive natural communities occur on the site, the project would have no impact.

NO IMPACT

c. Would the project have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

The National Wetlands Inventory was reviewed to determine if wetland and/or non-wetland waters had been previously documented and mapped on or in the vicinity of the project site (USFWS 2021c). No such features occur on or adjacent to the project site. The nearest potential jurisdictional water or wetland feature to the project site is Alisal Creek, a channelized riverine feature, located approximately 0.2 mile east of the project site. Implementation of the proposed project would not involve or require the direct removal, filling, hydrological interruption, or other means to the bed, bank, channel, or adjacent upland area of Alisal Creek. No impact would occur.

NO IMPACT

d. Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

Wildlife movement corridors are generally linear and consist of things such as coastlines, riverways and riparian zones. Additionally, some wildlife species may move through certain corridors in response to topography, such as a canyon through rugged mountains, or in response to its prey. The project site is relatively flat and does not contain wildlife movement corridors. The project site is not part of a known migration route of wildlife species and is surrounded by existing development (CDFW 2020a; USFWS 2021b). As described above, migratory nesting birds may nest on-site, but may also rest or forage on-site during migration or breeding. However, the ruderal vegetation on-site is not unique, and removal of vegetation for the proposed project would not substantially reduce the abundance of this type of ruderal vegetation such that the migration of birds would be at risk. Impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

e. Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Chapter 35 of the SMC sets forth regulations and provisions pertaining to the planting, maintenance, and removal of trees and shrubs in Salinas. According to Section 35-1 of the SMC, the City defines a heritage and/or landmark tree as 1) an oak tree that is at least 24 inches in diameter at two feet above the ground surface; or 2) an oak tree that is visually significant, historically significant, or exemplary in its species. Section 35-18 of the SMC prohibits the removal of heritage or landmark trees from City property unless approved by the City's Public Works Director.

Heritage and landmark trees do not occur on the project site, and construction of the proposed hotel under Phase 1 of the project and future development under the remaining project phases would not result in the removal of heritage or landmark trees.

Pursuant to Section 35-9 of the SMC, no person shall root-trim, trim, prune, plant, injure, remove, or interfere with any tree, shrub or plant upon any street, parkway or alley in the city without written permission from the City's Public Works Director. Vegetation within the project site mainly consists of trees that grow within proximity to public streets. Removal of these trees, if required for construction of the proposed hotel and future development under the remaining project phases, would be in conformance with the SMC, as applicable.

There are no other ordinances or local policies protecting biological resources applicable to the project site. Therefore, the proposed project would not conflict with any local policies or ordinances protecting biological resources, and impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

f. Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

There are no adopted Habitat Conservation Plans, Natural Community Conservation Plans, or other approved local, regional, or state habitat conservation plans applicable to the project site. The proposed project would not conflict with such plans. There would be no impact.

NO IMPACT

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5 Cultural Resources

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	☐	☐	■	☐
b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	■	☐	☐
c. Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	■	☐

To identify known cultural resources in and in the vicinity of project site, Rincon reviewed the results of a records search of the California Historical Resources Information System (CHRIS) at the Northwest Information Center (NWIC). This records search was conducted to identify previously completed cultural resources studies and previously recorded cultural resources within a 0.5-mile radius of the project site. The CHRIS search included a review of the National Register of Historic Places (NRHP), the California Register of Historical Resources (CRHR), the California Points of Historical Interest list, the California Historical Landmarks list, the Archaeological Determinations of Eligibility list, the Built Environment Resource Directory, and the California State Historic Resources Inventory list. See Appendix A for the complete Cultural Resources Study.

The CHRIS records search identified seven previously conducted cultural resource studies within a 0.5-mile radius of the project site, of which, two are located within the project site (S-024139 and S-027128). None of the seven previously conducted cultural resources studies identified cultural resources within the project site. The NWIC records search results identified four previously recorded cultural resources (one historic building and three historic structures) within a 0.5-mile radius of the project site.

A summary of the previous studies that the NWIC records search identified and the previously-recorded cultural resources within a 0.5-mile radius of the project site are presented below in Table 1 and Table 2.

Table 5 Previously Conducted Cultural Resources Studies within 0.5-mile of Project Site

SCCIC Report No.	Author	Year	Study	Relationship to Project Site
S-007317	R. Paul Hampson, Gary Breschini, Trudy Hversat, and Micki Ryan	1985	Preliminary Cultural Resources Reconnaissance of Assessor's Parcel Numbers 002-214-31 and 33, Salinas, Monterey County, California	Outside

SCCIC Report No.	Author	Year	Study	Relationship to Project Site
S-007317a	R. Paul Hampson and Gary Breschini	1985	Secondary Archaeological Testing of Assessors Parcel Numbers 0021-214-31 and 33 in Salinas, Monterey County, California	Outside
S-020573	Barry Price	1998	Cultural Resources Assessment, Pacific Bell Mobile Services Facility SF-724-07, Salinas, Monterrey County, California (letter report)	Outside
S-022657	Izaak Sawer, Laurie Pfeiffer, Karen Rasmussen, and Judy Berryman	2000	Phase 1 Archaeological Survey Along Onshore Portions of the Global West Fiber Optic Cable Project	Outside
S-024139	Robert Cartier	2000	Cultural Resource Evaluation of Lands for the Regional Solid Waste Facilities Project in the County of Monterey	**Within**
S-027128	Terry Joslin	2003	Negative Historic Property Survey Report for the Salinas Highway 68 Rehabilitation Project, Monterey County, 05-MON-68, PM 16.8/21.9 (KP 27.0/35.2), 05-169-491500	**Within**
S-027128a	Terry Joslin	2001	Negative Archaeological Survey Report for the Salinas Highway 68 Rehabilitation Project, Monterey County, 05-MON-68, PM 16.8/21.9 (KP 27.0/35.2), 05-169-491500	Outside
S-029275	None	2004	Archaeological and Historical Investigations for the Tynan Mixed Use Development Project in the City of Salinas, Monterey County	Outside
S-033061	Nancy Sikes, Cindy Arrington, Bryon Bass, Chris Corey, Kevin Hunt, Steve O'Neil, Catherine Pruett, Tony Sawyer, Michael Tuma, Leslie Wagner, and Alex Wesson	2006	Cultural Resources Final Report of Monitoring and Findings for the Qwes Network Construction Project, State of California	Outside
S-033061a	None	2006	Cultural Resources Final Report on Monitoring and Findings for the Qwest Network Construction Project, State of California	Outside
S-033061b	Nancy Sikes	2007	Final Report of Monitoring and Findings for the Qwest Network Construction Project (letter report)	Outside
S-039600	Cher Paterson and Kathleen Crawford	2012	Cultural Resources Records Search and Site Visit Results for T-Mobile West, LLC Candidate SFO5724A (SF724 Salinas), 340 Pajaro Street, Salinas, Monterey County, California	Outside
S-039600a	Kathleen Crawford	2012	Direct APE Historic Architectural Assessment for T-Mobile West, LLC Candidate SF05724A (SF724 Salinas), 340 Pajaro Street, Salinas, Monterey County, California. (letter report)	Outside
S-041437	Mary Doane and Gary Breschini	2013	Preliminary Archaeological Reconnaissance for the Sanborn Road/US 101 Interchange and Elvee Drive Project in Salinas, Monterey County, California	Outside

SCCIC Report No.	Author	Year	Study	Relationship to Project Site
S-046966	Wendy Nelson, Mike Darcangelo, Ed Mike, and Amanda Cannon	2003	Historic Property Survey Report: Airport Boulevard Interchange, U.S. Route 101, Monterey County	Outside
S-046966a	Wendy Nelson	2002	Negative Archaeological Survey Report	Outside
S-046966b	Wendy Nelson	2003	Negative Archaeological Survey Report (Supplemental)	Outside
S-046966c	Kelli Brasket	2003	Second Supplemental Negative Archaeological Survey Report for the Airport Interchange Project in Monterey County, California	Outside
S-046966d	Stephen Wee	2003	Historic Architectural Survey Report: With attached Historic Resources Evaluation Report and Bridge Evaluation: Airport Boulevard Interchange, City of Salinas, Monterey County, California	Outside
S-046966e	Stephen Wee and Jessica Herrick	2003	Historic Resources Evaluation Report, Reclamation Ditch No. 1665: Airport Boulevard Interchange Project, City of Salinas, Monterey County, California	Outside
S-046966f	Christopher McMorris and Theresa Saputo Rogers	2003	Bridge Evaluation: Bride 44-120, Highway 101, at Sanborn Road, Bridge 44-121, State Route 68 (John Street), at Highway 101, Bridge 44-124, Highway 101 at Airport Boulevard, Airport Boulevard Interchange, City of Salinas, Monterey County, California	Outside
S-046966g	Knox Mellon and Gary Hamby	2003	FHWA030618A; HAD-CA, File No. 05-MON-101 KP 136.79/1.9.36, Airport Boulevard Interchange Project, 05-349500, Document No. P 45213 [Section 106 Consultation on the Reconstruction of the Airport Boulevard Interchange, City of Salinas, Monterey County]	Outside

Source: Rincon Consultants, Inc. 2021 (Appendix A)

Table 6 Previously Recorded Cultural Resources within 0.5-mile of Project Site

Primary Number	Resource Type	Description	Recorder(s) and Year(s)	Eligibility Status	Relationship to Project Site
P-27-002322	Historic Structure	El Camino Real (Highway 101)	1999 (John Berg, Steven Mikesell, Far Western & JRP Historical Consulting Services); 2002 (Theresa Rogers, JRP Historical Consulting Services)	Recommended ineligible for CHRR	Outside
P-27-002780	Historic Structure	Tynan Lumber Yard	2004 (Kurt Lambert, Pacific Municipal Consultants)	Recommended ineligible for NRHP and CRHR	Outside
P-27-003192	Historic Building	Pacific Bell	2012 (K.A. Crawford, Crawford Historic Services)	Recommended ineligible for NRHP	Outside

Primary Number	Resource Type	Description	Recorder(s) and Year(s)	Eligibility Status	Relationship to Project Site
P-27-003551	Historic Structure	John Street Overcrossing	2003 (Theresa Rogers, JRP Historical Consulting Services)	Recommended eligible for NRHP	Outside

Source: Rincon Consultants, Inc. 2021 (Appendix A)

In addition to the CHRIS records search, Rincon completed archival research between September and October 2021 and focused on the review of a variety of primary and secondary source materials relating to the history and development of the project site and its surroundings. The following is a list of sources consulted.

- Historic aerial photographs accessed digitally via Nationwide Environmental Title Research Online, Inc. and the University of California, Santa Barbara Map & Imagery Lab
- Historic topographic maps accessed digitally via United States Geologic Survey
- Historic newspaper articles accessed digitally via ancestry.com, newspapers.com, and genealogybank.com
- City of Salinas local register criteria for designation the city's Municipal Code, "Article 2. Historic Resources Board"
- Other sources as identified in the References section of the Cultural Resources Study (Appendix A)

Furthermore, Rincon conducted a cultural resources survey of the project site on October 12, 2021. All accessible portions of the project site were visually inspected. Exposed ground surface was examined for artifacts (e.g., flaked stone tools, tool-making debris, stone milling tools, ceramics, fire-affected rock) and ecofacts (marine shell and bone). The project site was also inspected for soil discoloration that may indicate the presence of a cultural midden, soil depressions, and features indicative of the former presence of structures or buildings (e.g., standing exterior walls, postholes, foundations) or historic debris (e.g., metal, glass, ceramics), and for ground disturbances, such as burrows and drainages. The survey also consisted of a visual inspection of all built environment features on the property to assess their overall condition and integrity, and to identify and document any potential character-defining features.

A. Would the project cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?

The project site was historically a produce packing facility owned by the Monterey County Ice and Development Company (MCIDC), one of the largest producers and sellers of ice and packaged produce for long distance shipments in Monterey County (*Santa Cruz News*, 14 October 1927), and contains three industrial buildings of 45 or more years of age constructed by the MCIDC. The Cultural Resources Study concluded that the MCIDC itself did not make significant contributions to broad patterns of agricultural history and that no individual associated with the MCIDC made singular historical contributions to local, regional, state or national history. In addition, the construction and design of the three existing industrial buildings constructed by the MCIDC are not noteworthy enough for designation. The project site has not yielded and is unlikely to yield information important in prehistory or history. As such, the project site is not recommended eligible

for listing as a contributor to any existing or potential historic district, and is recommended ineligible for listing on the NRHP or CRHR, or for local designation to the City of Salinas Historic Register, and therefore is not considered a historical resource as defined by CEQA (Appendix A).

Furthermore, the CHRIS records search and a review of the City of Salinas Historic Register failed to identify any other cultural resources, including historic districts, within proximity to the project site. Therefore, the project site and existing on-site buildings do not qualify as a historical resource.

The project would require demolition of Building 1 during Phase 1 of the project for construction of the proposed four-story hotel and Building 2 during Phase 6 of the project for construction of future development. Because the buildings do not qualify as a historical resource, their removal would not result in a substantial adverse change in the significance of a historical resource. Impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

b. Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?

The entire project site is developed, and ground visibility is obscured by buildings or non-native ornamental vegetation. No archaeological resources are known to exist in the vicinity of the project site and the records search, Sacred Lands File search, and the pedestrian survey did not identify any archaeological resources on the project site or in a 0.5-mile radius. In addition, no information was identified to suggest that the project area may be sensitive for archaeological resources. However, construction of the proposed four-story hotel, upsizing of the sanitary sewer main, and future development under the remaining project phases would require excavation up to depths of four feet which could result in unanticipated discoveries of previously unrecorded archaeological resources. Impacts would be potentially significant if resources are damaged or destroyed. Accordingly, mitigation would be required to reduce potential impacts. Impacts would be less than significant with implementation of Mitigation Measure CUL-1.

Mitigation Measure

CUL-1 Unanticipated Discovery of Cultural Resources

If archaeological resources are encountered during ground-disturbing activities, work within 50 feet shall be halted and the project archaeologist meeting the Secretary of the Interior's Professional Qualification Standards for archeology (National Park Service 1983) shall be contacted immediately to evaluate the find pursuant to Public Resources Code Section 21083.2. If necessary, the evaluation may require preparation of a treatment plan and archaeological testing for CRHR eligibility. If the discovery proves to be significant under CEQA and cannot be avoided by the project, additional work may be warranted, such as data recovery excavation, to mitigate any significant impacts to significant resources. If the resource is of Native American origin, implementation of Mitigation Measures TCR-1 may be required. Any reports required to document and/or evaluate unanticipated discoveries shall be submitted to the City for review and approval and submitted to the NWIC after completion. Recommendations contained therein shall be implemented throughout the remainder of ground disturbance activities.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

c. Would the project disturb any human remains, including those interred outside of formal cemeteries?

The records search did not identify cemeteries or archaeological resources containing human remains within the project site. However, the discovery of human remains is always a possibility during ground disturbances, as would be required for construction of the four-story hotel and future development under the remaining project phases. Human burials outside of formal cemeteries often occur in prehistoric archaeological contexts. In addition to being potential archaeological resources, human burials have specific provisions for treatment in Section 5097 of the California Public Resources Code. Additionally, the California Health and Safety Code (Sections 7050.5, 7051, and 7054) has specific provisions for the protection of human burial remains. Existing regulations address the illegality of interfering with human burial remains, and protects them from disturbance, vandalism, or destruction. Public Resources Code Section 5097.98 also addresses the disposition of Native American burials, protects such remains, and establishes the Native American Heritage Commission (NAHC) as the entity to resolve any related disputes.

If human remains are found, the State of California Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. In the event of an unanticipated discovery of human remains, the Alameda County Coroner must be notified immediately. If the human remains are determined to be prehistoric, the Coroner will notify the NAHC, which will determine and notify a Most Likely Descendant (MLD). The MLD shall complete the inspection of the site and provide recommendations for treatment to the landowner within 48 hours of being granted access and may recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials. Compliance with Public Resources Code Section 5097.98 and State of California Health and Safety Code Section 7050.5 would ensure impacts to human remains are less than significant.

LESS THAN SIGNIFICANT IMPACT

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6 Energy

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	■	☐
b. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	■	☐

Energy Setting

Electricity

In 2019, California's total electric generation was 279,510 gigawatt-hours (GWh) (California Energy Commission [CEC] 2020a). Monterey County, the location of the proposed project, consumed approximately 2,434 GWh of electricity, or 0.9 percent of the electricity generated in California, in 2019.

The project would be served by Central Coast Community Energy (3CE), the region's community choice electricity provider. 3CE forecasts electricity demand in its service area from 2018 through 2027, during which time Monterey, San Benito, and Santa Cruz counties are anticipated to see an increase in annual electricity demand from 2,567 gigawatt-hours to 3,827 GWh (3CE 2018).

Natural Gas

Natural gas forms a third of energy commodities consumed in California and consumers fall into four sectors: residential, commercial, industrial, and electric power generation (U.S. Energy Information Administration 2020). In 2020, California consumed about 12,331 million U.S. therms (Mthm) of natural gas and Monterey County consumed approximately 110 million U.S. therms (CEC 2020b).

The proposed project would be provided natural gas by PG&E. Table 4 details the natural gas consumption by sector in PG&E's service area. In 2020, PG&E provided approximately 38 percent of the total natural gas and generated in California (CEC 2020c).

Table 7 Natural Gas Consumption in PG&E Service Area in 2020

Agriculture and Water Pump	Commercial Building	Commercial Other	Industry	Mining and Construction	Residential	Total Usage
44	797	51	1,585	140	1,891	4,508

Notes: Usage expressed in MMThm
Source: CEC 2020c

Petroleum

To reduce statewide vehicle emissions, California requires that all motorists use California Reformulated Gasoline (CaRFG), a cleaner formulation of gasoline that results in lower emissions of ozone, CO and other air pollutants when burned. Californians consumed approximately 11,173 million gallons of gasoline and 1,626 million gallons of diesel in 2020 (CEC 2020d). Gasoline is the most used transportation fuel in California and is used by light-duty cars, pickup trucks, and sport utility vehicles (CEC 2020d). Diesel is the second most used fuel in California and is used primarily by heavy duty-trucks, delivery vehicles, buses, trains, ships, boats and barges, farm equipment, and heavy-duty construction and military vehicles (CEC 2020d). Both gasoline and diesel are primarily petroleum-based, and their consumption releases greenhouse gas (GHG) emissions, including carbon dioxide (CO_2) and NOX.

In 2020, approximately 34 percent of the state's energy consumption was used for transportation activities (U.S. Energy Information Administration 2020). Though California's population and economy are expected to grow, gasoline demand is projected to decline from roughly 15.6 billion gallons in 2017 to between 12.1 billion and 12.6 billion gallons in 2030, a 19 percent to 22 percent reduction. This decline comes in response to both increasing vehicle electrification and higher fuel economy for new gasoline vehicles (U.S. Energy Information Administration 2020).

c. Would the project result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Construction Energy Demand

During construction of the proposed hotel under Phase 1 and future development under the remaining project phases, including proposed sanitary sewer main upsizing, energy would be consumed in the form of petroleum-based fuels used to power off-road construction vehicles and equipment on the project site, construction worker travel to and from the project site, and vehicles used to deliver materials to the site. The project would require demolition; site preparation and grading, including hauling material off-site; pavement and asphalt installation; building construction; architectural coating; and landscaping and hardscaping.

The total consumption of gasoline and diesel fuel during project construction was estimated using the assumptions and factors from CalEEMod (Appendix B). Table 5 presents the estimated construction energy consumption, indicating construction equipment, hauling and vendor trips, and worker trips would consume approximately 69,537 gallons of gasoline and 372,116 gallons of diesel fuel over Phase 1 and future development under the remaining project phases.

Table 8 Estimated Fuel Consumption During Construction

Phase	Gallons of Gasoline	Gallons of Diesel	Combined MMBtu
Phase 1	9,448	63,751	9,162
Phase 2	7,945	66,634	8,706
Phase 3	1,971	45,334	5,994
Phase 4	1,015	16,145	2,172
Phase 5	3,708	27,068	3,857
Phase 6	26,572	77,704	12,821
Phase 7	18,878	75,480	11,692
Total	**69,537**	**372,116**	**54,404**

Source: Appendix B

The construction energy estimates are conservative because the equipment used in each phase of construction was assumed to be operating every day. In reality, not all equipment would be used on every construction day. Construction at the project site would be temporary and typical of similar projects. Construction equipment would be maintained to all applicable standards, and construction activity and associated fuel consumption and energy use would be temporary and typical for construction sites. It is also reasonable to assume contractors would avoid wasteful, inefficient, and unnecessary fuel consumption during construction to reduce construction costs. In addition, construction contractors would be required to comply with the provisions of 13 California Code of Regulations (CCR) Sections 2449 and 2485, which prohibit diesel-fueled commercial motor vehicles and off-road diesel vehicles from idling for more than five minutes, which would minimize unnecessary fuel consumption. Construction equipment would be subject to the United States Environmental Protection Agency Construction Equipment Fuel Efficiency Standard (40 Code of Federal Regulations Parts 1039, 1065, and 1068), which would minimize inefficient fuel consumption. Therefore, neither the proposed hotel under Phase 1 of the project nor future development under the remaining project phases would involve the inefficient, wasteful, and unnecessary use of energy during construction, and the construction-phase impact related to energy consumption would be less than significant.

Operational Energy Demand

Project operation would increase energy demand in the form of gasoline consumption, electricity, and natural gas. Increased gasoline consumption would be associated with new trips to and from the site. The estimated of number of daily trips that would be generated by the proposed hotel under Phase 1 of the project and future development under the remaining project phases (Appendix B) is used to calculate operational gasoline consumption. Table 6 shows the estimated total annual fuel consumption of the project using the estimated VMT and the assumed vehicle fleet mix (Appendix B).

Table 9 Estimated Project Annual Transportation Energy Consumption

Source	Energy Consumption[1]	
Gasoline	972,862 gallons	106,807 MMBtu
Diesel	148,332 gallons	18,906 MMBtu
Electricity	235,539 kWh	804 MMBtu
Natural Gas Usage	10,571 MMBtu	10,571 MMBtu
Total Project Energy Consumption		**137,088 MMBtu**

MMBtu = million metric British thermal units; kWh = kilowatt hours

[1] Energy consumption is converted to MMBtu for each source.

[2] The estimated number of average daily trips associated with the project is used to determine the energy consumption associated with fuel use from operation of the project. According to CalEEMod calculations (see Appendix B) the project would result in approximately 21,790,093 annual VMT.

See Appendix C for transportation energy calculation sheets and Appendix B for CalEEMod output results for electricity and natural gas usage.

In addition to fuel consumption, operation of future development at the site would consume approximately 3.65 GWh of electricity per year, or less than one percent of total electricity use in Monterey County in 2020 (CEC 2020a). The proposed hotel would require approximately 500 MWh of electricity per year and approximately 3,074 MMBtu of natural gas per year, and estimated natural gas consumption for full buildout of project would be approximately 10,570 MMBtu per year, or less than one percent of total natural gas use in Monterey County in 2020 (CEC 2020b). Operationally, upsizing the sanitary sewer main would not require additional electricity.

Future development facilitated by the project would be required to comply with all standards set in California Building Code (CBC) Title 24, which would minimize the wasteful, inefficient, or unnecessary consumption of energy resources during operation. California's Green Building Standards Code (CALGreen; California Code of Regulations, Title 24, Part 11) requires the use of energy efficient light fixtures and building materials in the design of new construction projects. Furthermore, the 2019 Building Energy Efficiency Standards (CBC Title 24, Part 6) requires newly constructed buildings to meet energy performance standards set by the Energy Commission. As the name implies, these standards are specifically crafted for new buildings to result in energy efficient performance so that the buildings do not result in wasteful, inefficient, or unnecessary consumption of energy. The standards are updated every three years and each iteration is more energy efficient than the previous standards. For example, according to the CEC, nonresidential buildings built with the 2019 standards will use about 30 percent less energy due mainly to lighting upgrades (CEC 2018b). The project would be required to comply with the 2019 Building Energy Efficiency Standards or the latest iteration in effect at the time of project construction. Furthermore, the project would further reduce its use of nonrenewable energy resources as the electricity generated by renewable resources provided by 3CE and PG&E continues to increase to comply with state requirements through SB 100, which requires electricity providers to increase procurement from eligible renewable energy resources to 33 percent of total retail sales by 2020, 60 percent by 2030, and 100 percent by 2045.

Furthermore, development under future phases of the project would facilitate increased housing density in Salinas, near existing office and commercial uses, which would facilitate the use of transit and alternative transportation modes such as walking and biking. As described in Section 17, *Transportation*, the site is near bus route 23 with multiple stops along the project site frontage on Abbott Street. As a result, the use of alternate modes of transportation would be encouraged by the

project through greater accessibility to destinations and transit. This would minimize the potential of the project to result in the wasteful, inefficient, or unnecessary consumption of vehicle fuels.

As noted above, future development facilitated by the project would demand less than one percent of existing total electricity and natural gas use in the County; would be required to comply with all standards set in CBC Title 24, California's Green Building Standards Code, and the latest Building Energy Efficiency Standards; and would be located in proximity to existing alternative transportation modes, reducing vehicle fuel consumption. Therefore, project operation would not result in wasteful or unnecessary energy consumption.

LESS THAN SIGNIFICANT IMPACT

d. Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

SB 100 mandates 100 percent clean electricity for California by 2045. Because the project would be powered by the existing electricity grid, the project would eventually be powered by renewable energy mandated by SB 100 and would not conflict with this regulation. The project would be required to comply with California's Green Building Standards Code and the Building Energy Efficiency Standards, which contain energy efficiency requirements. The City of Salinas does not have an adopted plan for renewable energy or energy efficiency. However, the City's Conservation/Open Space Element in the General Plan contains policies which seek to encourage energy conservation. Table 7 includes a consistency analysis of energy policies that are applicable to the proposed project.

Table 10 General Plan Energy Policy Consistency Analysis

Applicable Policies	Consistency
Policy COS-8.1: Enforce State Title 24 building construction requirements	**Consistent.** Future development facilitated by the project would be required to comply with the latest iteration of Title 24 standards. Therefore, the project would be consistent with Policy COS-8.1.
Policy COS-8.2: Apply standards that promote energy conservation in new and existing development	**Consistent.** Future development facilitated by the project would be required to comply with the California Building Energy Efficiency Standards and the California Green Building Standards code, which include energy conservation measures. Therefore, the project would be consistent with Policy COS-8.2.
Policy COS-8.6: Encourage the creation and retention of neighborhood-level services (e.g., family medical offices, dry cleaners, grocery stores, drug stores) throughout the City in order to reduce energy consumption through automobile use.	**Consistent.** The project would facilitate the construction of up to 240,800 square feet of residential space and 160,300 square feet of commercial space on the project site, which is currently developed with commercial and light industrial uses. The demolition of neighborhood services would not occur as part of the project. Neighborhood-level services in the vicinity of the sites include Seven Eleven (Abbott Street), Chester Dental Lab (Abbott Street), and La Mexicana Market (John Street). The mixed-use nature of the project and its proximity to existing neighborhood-level services would reduce reliance on automobile energy consumption, as some services would be provided on the site, in addition to nearby commercial services walkable from the site. Therefore, the project would be consistent with Policy COS-8.6.

As shown in Table 7, the project would not conflict with the applicable policies in the City's General Plan. Therefore, the project would not conflict with or obstruct a local plan for renewable energy or energy efficiency and impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

7 Geology and Soils

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
1. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?	☐	☐	■	☐
2. Strong seismic ground shaking?	☐	☐	■	☐
3. Seismic-related ground failure, including liquefaction?	☐	☐	■	☐
4. Landslides?	☐	☐	■	☐
b. Result in substantial soil erosion or the loss of topsoil?	☐	☐	■	☐
c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	☐	☐	■	☐
d. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	☐	☐	■	☐
e. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	■
f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	■	☐

Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?

a.2. Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking?

a.3. Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction?

a.4. Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving landslides?

c. Would the project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?

Based on fault maps from the California Department of Conservation (DOC), the project site is not located in or adjacent to an Alquist-Priolo Fault Zone (DOC 2021), and there are no known active or potentially active faults trending toward or through the site. The closest active fault is the San Andreas Fault, which is located approximately 13 miles northeast of the project site. Thus, the likelihood of surface rupture occurring from active faulting at the project site is remote.

While no faults have been mapped within the city of Salinas itself, the city and surrounding areas could still experience damage from strong seismic shaking. The project site is in a zone of very high seismic hazards (Salinas 2002b).

The proposed four-story hotel and future development would be required to meet the current CBC seismic-resistance standards that ensure new structures are engineered to withstand the expected ground acceleration at any given location. Additionally, compliance with Section 31-401.4(d) of the SMC would require the preparation of a preliminary engineering geology and/or seismic safety report that would investigate potential geologic and seismic hazards and would include specific mitigation measures if the presence of any hazards are found (Salinas 2021a). Compliance with all applicable provisions of State and local construction and designs standards and Section 31-401.4(d) of the SMC and implementation of the recommendations of the preliminary geotechnical investigation prepared for the proposed hotel and future development would reduce the risk of loss, injury, or death due to strong seismic ground shaking. Impacts would be less than significant.

Liquefaction is a condition that occurs when unconsolidated, saturated soils change to a near-liquid state during ground shaking. The city primarily experiences earthquake hazards in the form of liquefaction, due to recently deposited sands and silts in areas of high groundwater levels (Salinas 2002b). The liquefaction susceptibility of the Phase 1 portion of the project site is mapped as moderate and is bordered to the east by an area mapped as high liquefaction susceptibility, and the liquefaction susceptibility of the portions of the project site envisioned for Phases 2 through 7 are mostly mapped as moderate, with portions of the Phase 5 and 6 areas mapped as high liquefaction susceptibility (County of Monterey 2020). In addition, the surrounding area consists of high, moderate, and low zones of liquefaction susceptibility (County of Monterey 2020). The preliminary geotechnical report would investigate geologic and seismic hazards, including those related to liquefaction, and provide recommendations that the project proponent would be required to comply with. Additionally, the CBC includes specific requirements to address liquefaction hazards. The proposed hotel and future development would conform to the CBC as required by law.

Compliance with the CBC and Section 31-401.4(d) of the SMC would result in less than significant impacts related to seismic-related ground failure and liquefaction.

The project site is relatively flat and is not located within a mapped landslide area; therefore, there is a very low potential for landslides on the project site (County of Monterey 2020). Additionally, with modern construction and adherence to the geology and soil provisions of the CBC, which sets forth seismic design standards (Chapters 16 and 18) and geohazard study requirements (Chapter 18), impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

b. Would the project result in substantial soil erosion or the loss of topsoil?

The project site is currently developed, and portions of the project site proposed for Phases 1, 2, 3, 4, and 7 contain a small portion of landscaped area. The site is generally flat, which limits the potential for substantial soil erosion. However, construction activities associated with development of the proposed four-story hotel proposed and future development could result in erosion or loss of topsoil.

The grading and excavation phase, when soils are exposed, has the highest potential for erosion. Ground-disturbing activities that would occur with implementation of the proposed hotel and future development would include site-specific grading for foundations, ground-level parking, and building pads. The proposed four-story hotel would involve cutting approximately 3,900 CY of earth and filling with 8,700 CY, for a net fill of 4,800 CY and future development would involve cutting approximately 6,400 CY of earth and filling with 9,800 CY, for a net fill of 3,400 CY. Therefore, temporary erosion could occur during project construction. However, the proposed hotel and future development would be required to comply with SMC Section 29-15(d), Best Management Practices for Construction Sites, which requires all construction to comply with the City's Standards to Control Excavations, Cuts, Fills, Clearing, Grading, Erosion and Sediments. All projects requiring a grading permit are required to submit a Stormwater Pollution Prevention Plan (SWPPP) to the City for control of erosion and stormwater runoff quality during construction. These standards provide direction concerning erosion control, including keeping debris and dirt out of the city's storm drain system during construction, requiring submittal of a SWPPP, and requiring low impact development strategies or structural treatment control best management practices (BMPs).

Since the proposed hotel, future on-site development, and future off-site improvements (sanitary sewer main upsizing) would disturb more than one acre of land, the project proponent would be required to obtain coverage under the statewide National Pollutant Discharge Elimination System (NPDES) General Permit for Discharges of Storm Water Associated with Construction Activity Construction General Permit Order 2009-0009-DWQ (Construction General Permit), administered by the State Water Resources Control Board (SWRCB). Section 10, *Hydrology and Water Quality*, describes how coverage under the NPDES Permit would require implementation of a SWPPP and various BMPs to reduce erosion and loss of topsoil during project construction. Compliance with the NPDES permit, identified BMPs, and appropriate sections of the SMC would ensure impacts related to erosion and loss of topsoil would be less than significant.

LESS THAN SIGNIFICANT IMPACT

d. Would the project be located on expansive soil, as defined in Table 1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?

Expansive soils have the potential to cause damage to structures through soil movement as the soil changes volume in response to changes in the water content. The project site is underlain by Salinas clay loam soil, which is moderately expansive as it has a moderate shrink-swell potential, and Cropley silty clay, which is moderately to highly expansive as it has a moderate to high shrink-swell potential (Natural Resources Conservation Service [NRSC] 2019). Areas proposed for Phases 1 through 5 and Phase 7 are mapped as Salinas clay loam soil. In addition, the northeastern portion of the proposed Phase 6 area is mapped as moderately expansive Cropley silty clay and the southeastern portion is mapped as highly expansive Cropley silty clay (NRCS 2019). The remaining portions of Phase 6 are mapped as Salinas clay loam soil.

Since the project site is located on moderate to highly expansive soils, there is the potential for structural damage to occur to the proposed hotel and future development. Section 31-402.5(b) of the SMC requires a soils report for all development projects that investigates soil expansion potential and proposes mitigation for critically expansive soils (Salinas 2021a). Construction of the proposed four-story hotel and future development would be required comply with the CBC, including structural and foundation design requirements such as those pertaining to soil/fill suitability, retaining wall and foundation design, and structural setbacks, and the SMC, as applicable, which would ensure construction on potentially expansive soils is designed to withstand potential soil movement. Therefore, potential impacts from expansive soils would be less than significant.

LESS THAN SIGNIFICANT IMPACT

e. Would the project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

The proposed four-story hotel and development of future phases would connect to the local wastewater treatment system and would not require the installation of septic tanks or alternative wastewater disposal systems. No impact would occur.

NO IMPACT

f. Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

The paleontological sensitivities of the geologic units underlying the project site were evaluated based on an online paleontological locality search and review of existing information in the scientific literature concerning known fossils within geologic units mapped within the project site. Fossil collections records from the Paleobiology Database and University of California Museum of Paleontology (UCMP) online database were reviewed for known fossil localities in Monterey County (Paleobiology Database 2020; UCMP 2020). Based on the available information contained within existing scientific literature and the UCMP database, paleontological sensitivities consistent with the Society of Vertebrate Paleontology (SVP) were assigned to the geologic units underlying the project site. The

The project site is situated within the Salinas Valley in the Coast Ranges Geomorphic Province, one of eleven major provinces in the California (California Geological Survey 2002). The Salinas Valley is bounded by the Gabilan and Santa Lucia Mountain ranges to the east and west, respectively (California Geological Survey 2002*;* Norris and Webb 1990). The project site is entirely mapped at

the surface by a single geologic unit: Quaternary young (middle to late Holocene) alluvium (Qa), which generally consists of unconsolidated to moderately consolidated alluvial gravel, sand, silt, and clay of valley areas and floodplains (Dibblee and Minch 2007).

Although not mapped within the project boundaries, exposures of Quaternary old (early Holocene to Pleistocene) alluvium (Qoa) are prevalent throughout the Salinas Valley (Dibblee and Minch 2007). The nearest exposure of Quaternary old alluvium is mapped approximately 0.3 mile east of the project site. Quaternary old (early Holocene to Pleistocene) alluvium consists of dissected, weakly to moderately indurated alluvial gravel, sand, and clay (Dibblee and Minch 2007).

Middle to late Holocene sedimentary deposits within the project site (e.g., Qa) are typically too young (i.e., less than 5,000 years old) to preserve paleontological resources and are determined to have a low paleontological sensitivity at the surface. However, older alluvial deposits are mapped at the surface not far from the project site, and the stratigraphic setting in the vicinity is indicative that Pleistocene (i.e., Qoa) units underlie the middle to late Holocene units mapped at the surface at potentially shallow depths (Dibblee and Minch 2007).

Quaternary old deposits have a well-documented record of abundant and diverse vertebrate fauna throughout California, including Monterey County (Jefferson 2010; Paleobiology Database 2020; UCMP 2020). A search of the paleontological locality records at the UCMP resulted in 17 fossil localities, which yielded specimens of horse (*Equus*), ground sloth (*Glossotherium*), bison (*Bison*), and camel (*Camelops*), from Pleistocene-aged sediments in Monterey County (Paleobiology Database 2020; UCMP 2020). Therefore, in accordance with SVP guidelines, Quaternary old (early Holocene to Pleistocene) alluvium (Qoa) is assigned a high paleontological sensitivity.

Accurately assessing the boundaries between middle to late Holocene (i.e., Qa) and Pleistocene (i.e., Qoa) units is generally not possible without site-specific stratigraphic data, some form of radiometric dating, or fossil analysis. The depths at which these units become old enough to yield fossils is highly variable, but generally does not occur at depths of less than five feet based on the proximity of geologic units with high paleontological sensitivity (i.e., Qoa) mapped near the project site (Dibblee and Minch 2007).

The project's grading and excavation phase would involve cutting approximately 10,300 CY of earth and filling with 18,500 CY, for a net fill of 8,200 CY. Ground disturbance to intact (native) geologic units within the project site mapped as Quaternary young alluvium (Qa) has the potential to impact paleontological resources at depths greater than five feet. Construction of the proposed four-story hotel and future development under the remaining project phases would require excavation up to depths of four feet. Therefore, ground-disturbing construction activities at the project site would not result in the destruction, damage, or loss of undiscovered, scientifically important paleontological resources. Impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

8 Greenhouse Gas Emissions

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	■	☐
b. Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	■	☐

Overview of Climate Change and Greenhouse Gases

Climate change is the observed increase in the average temperature of the Earth's atmosphere and oceans along with other substantial changes in climate (such as wind patterns, precipitation, and storms) over an extended period. Climate change is the result of numerous, cumulative sources of greenhouse gases (GHG) emissions contributing to the "greenhouse effect," a natural occurrence which takes place in Earth's atmosphere and helps regulate the temperature of the planet. Most radiation from the sun hits Earth's surface and warms it. The surface, in turn, radiates heat back towards the atmosphere in the form of infrared radiation. Gases and clouds in the atmosphere trap and prevent some of this heat from escaping into space and re-radiate it in all directions.

GHG emissions occur both naturally and from human activities, such as fossil fuel combustion, decomposition of landfill wastes, raising livestock, deforestation, and some agricultural practices. GHGs produced by human activities include carbon dioxide (CO_2), methane (CH_4), nitrous oxides (N_2O), hydrofluorocarbons (HFC), perfluorocarbons (PFC), and sulfur hexafluoride (SF_6). Different types of GHGs have varying global warming potentials (GWP). The GWP of a GHG is the potential of a gas or aerosol to trap heat in the atmosphere over a specified timescale (generally, 100 years). Because GHGs absorb different amounts of heat, a common reference gas (CO_2) is used to relate the amount of heat absorbed to the amount of the gas emitted, referred to as "carbon dioxide equivalent" (CO_2e), which is the amount of GHG emitted multiplied by its GWP. Carbon dioxide has a 100-year GWP of one. By contrast, methane has a GWP of 30, meaning its global warming effect is 30 times greater than CO_2 on a molecule per molecule basis (Intergovernmental Panel on Climate Change [IPCC] 2021).

The United Nations IPCC expressed that the rise and continued growth of atmospheric CO_2 concentrations is unequivocally due to human activities in the IPCC's Sixth Assessment Report (2021). Human influence has warmed the atmosphere, ocean, and land, which has led the climate to warm at an unprecedented rate in the last 2,000 years. It is estimated that between the period of 1850 through 2019, that a total of 2,390 gigatonnes of anthropogenic CO_2 was emitted. It is likely that anthropogenic activities have increased the global surface temperature by approximately 1.07 degrees Celsius between the years 2010 through 2019 (IPCC 2021). Furthermore, since the late

1700s, estimated concentrations of CO_2, CH_4, and N_2O in the atmosphere have increased by over 43 percent, 156 percent, and 17 percent, respectively, primarily due to human activity (United States Environmental Protection Agency [USEPA] 2021a). Emissions resulting from human activities are thereby contributing to an average increase in Earth's temperature. Potential climate change impacts in California may include loss of snowpack, sea level rise, more extreme heat days per year, more high ozone days, more large forest fires, and more drought years (California Natural Resource Agency 2018).

Most projects do not generate sufficient GHG emissions to directly influence climate change. However, physical changes caused by a project can contribute incrementally to cumulative effects that are significant, even if individual changes resulting from a project are limited. The issue of climate change typically involves an analysis of whether a project's contribution towards an impact would be cumulatively considerable. "Cumulatively considerable" means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, other current projects, and probable future projects (*CEQA Guidelines* Section 15064[h][1]).

According to *CEQA Guidelines* Section 15183.5, project analysis can tier from a qualified GHG reduction plan, which allows for project-level evaluation of GHG emissions through the comparison of the project's consistency with the GHG reduction policies included in a qualified GHG reduction plan. This approach is considered by the Association of Environmental Professionals (AEP) in their white paper, *Best Practices in Implementing Climate Action Plans*, to be the most defensible approach presently available under CEQA to determine the significance of a project's GHG emissions (AEP 2018). To date, neither the City of Salinas nor Monterey Bay Air Resource District (MBARD) has adopted a qualified Climate Action Plan to address significance.

In the absence of any adopted numeric threshold, the significance of the project's GHG emissions is evaluated consistent with *CEQA Guidelines* Section 15064.4(b) by considering whether the project complies with applicable plans, policies, regulations, and requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions. The City of Salinas has not adopted a numerical significance threshold for assessing impacts related to GHG emissions and has not formally adopted a local plan for reduction GHG emissions. Neither has the MBARD, the California Office of Planning and Research, California Air Resource Board (CARB), the California Air Pollution Control Officers Association (CAPCOA), or any other state or applicable regional agency has adopted a numerical significance threshold for assessing GHG emissions that is applicable to the project.

Therefore, the significance of the project's potential impacts regarding GHG emissions and climate change are evaluated solely on consistency with plans and polices adopted for the purposes of reducing GHG emissions and mitigating the effects of climate change. The most directly applicable adopted regulatory plans to reduce GHG emissions are the 2017 Scoping Plan, 2045 Metropolitan Transportation Plan (MTP)/Sustainable Community Strategy (SCS), and City of Salinas' General Plan. GHG emissions from the construction and operation of the project are provided for informational purposes.

Methodology

GHG emissions generated by project construction and operation were estimated using CalEEMod, version 2020.4.0, as described in Section 3, *Air Quality*.

Project Impacts and Mitigation Measures

a. Would the project generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?

Construction and operation of the proposed project would generate GHG emissions. This analysis considers the combined impact of GHG emissions from both construction and operation. Calculations of CO_2, CH_4, and N_2O emissions are provided to identify the magnitude of potential project effects.

Construction of the proposed hotel under Phase 1 and future development under the remaining project phases, including required sanitary sewer main upsizing, would generate temporary GHG emissions primarily from the use of heavy construction equipment on-site, vehicles transporting construction workers to and from the project site, and heavy trucks to transport building materials and soil export. Total construction emissions would be 3,906 metric ton (MT) CO_2e. Amortized over a 30-year period per industry standard, construction-related GHG emissions would be equivalent to 130 MT CO_2e per year.

Operation of the proposed project would generate GHG emissions associated with area sources (e.g., fireplaces, landscape maintenance), energy and water usage, vehicle trips, and wastewater and solid waste generation. As shown in Table 8 annual operational emissions generated by the proposed project, combined with amortized construction emissions, would total approximately 8,385 MT CO_2e per year at buildout.

The City of Salinas is in the process of completing a Climate Action Plan, which will influence development within the City, including future phases of this project. In addition, the future phases of this project will be subject to updated Title 24 requirements as well as new state laws and programs adopted to achieve the 2045 State goal of net zero emissions. Compliance with current plans and programs identified to reduce GHG emissions, as detailed under threshold (b) below.

Table 11 Combined Annual GHG Emissions

Emission Source	Annual Emissions (MT CO_2e per year)
Construction	130
Operational	
Area	4
Energy	952
Mobile	6,593
Solid Waste	315
Water	391
Total Emissions	**8,385**

Notes: MT = metric tons, CO_2e = carbon dioxide equivalent.
Emissions modeling was completed using CalEEMod. See Appendix B for modeling results.

LESS THAN SIGNIFICANT IMPACT

b. Would the project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Several plans and policies have been adopted to reduce GHG emissions in the north central coast California region, including the State's 2017 Scoping Plan, Association of Monterey Bay Area Governments (AMBAG) 2045 MTP/SCS, and local policies contained in the City's General Plan. The proposed project's consistency with these plans is discussed in the following subsections.

2017 Scoping Plan

The principal State plan and policy is AB 32, the California Global Warming Solutions Act of 2006, and the follow up, SB 32. The quantitative goal of AB 32 was to reduce GHG emissions to 1990 levels by 2020. According to CARB, California achieved its 2020 GHG emission reduction target in 2016. The goal of SB 32 is to reduce GHG emissions to 40 percent below 1990 levels by 2030. Pursuant to the SB 32 goal, the 2017 Scoping Plan was created to outline goals and measures for the state to achieve the reductions. The 2017 Scoping Plan's goals include reducing fossil fuel use and energy demand and maximizing recycling and diversion from landfills. The project would be required to be solar-ready or include the installation of photovoltaic systems on all low-rise residential buildings, equal to the expected electricity usage, in accordance with Section 150.1(b)14 of the 2019 Building Energy Efficiency Standards. The project would meet the requirements of the 2022 California Energy Code. All proposed residences would be equipped with Energy Star appliances, WaterSense fixtures, and high-performance ventilation systems. The project would be consistent with the 2017 Scoping Plan's goal of increasing renewable energy in the state, and energy efficiency efforts to reduce GHG emissions to meet the State's climate goals. Therefore, the project would be consistent with the 2017 Scoping Plan.

While the 2022 Scoping plan is currently in draft form and out for public review, it has yet to be adopted and therefore compliance with the scoping plan is based on compliance with the current adopted 2017 Scoping Plan as discussed above.

Consistency with the Association of Monterey Bay Area Governments 2045 MTP/SCS

AMBAG adopted an updated MTP/SCS, *Moving Forward Monterey Bay 2045*, in June 2022. AMBAG prepares a long-range transportation plan every four years consistent with state and federal laws. The 2045 MTP/SCS is reflective of legislation SB 375 described in Section 4.5.2 above, to focus land use development around high-quality transit corridors as a means to reduce passenger vehicle GHG emissions. Table 9 below describes the project's consistency with applicable goals of the 2045MTP/SCS.

Table 12 Project Consistency with the AMBAG 2045 MTP/SCS

Policy	Consistency
Access and Mobility. Provide convenient, accessible, and reliable travel options while maximizing productivity for all people and goods in the region.	**Consistent.** The project would include interior roadways and sidewalks to provide vehicle, bicycle, and pedestrian access to residences. Internal roads would connect the project to the Abbott Street to the south and John Street to the west. The City of Salinas is part of the Monterey-Salinas Transit system. The Northridge-Williams Ranch line runs directly past the project site with an existing bus stop (Abbott/Maple stop) directly adjacent to the project site on Abbot Street, and a second existing stop (Abbot/John stop) located just south of the intersection of Abbot Street and John Street on the west side of Abbot Street. This provides direct access to the Salinas Transit Center which has Amtrak train services, Greyhound bus services, and the Monterey-Salinas Transit bus services. Both Amtrak and Greyhound have routes that travel across the California and the United States. The Monterey-Salinas Transit system has bus routes from Watsonville to King City. Therefore, the project would have accessible and reliable travel options and be designed to reduce reliance on solo vehicle trips, and the project would be consistent with this policy.
Environment. Promote environmental sustainability and protect the natural environment.	**Consistent.** The project would include several sustainable design features, including those required by Title 24 and CalGreen standards. The project would include solar ready or PV systems would be installed on each building. All proposed residences would be equipped with Energy Star appliances, WaterSense fixtures, and high-performance ventilation systems. The project would meet the requirements of the 2022 California Energy Code. Therefore, the project would be consistent with this policy.
Land Use & Housing. Investment in safe bicycle and pedestrian routes that improve connectivity and access to common destinations, such as connections between residential areas and schools, employment centers, neighborhood shopping, and transit stops and stations, supporting efforts throughout the region to improve connectivity and realize public health benefits from these investments.	**Consistent**. The project would include interior roadways and sidewalks to provide vehicle, bicycle, and pedestrian access to proposed residences. Internal roads would connect the project to the Abbot Street to the south and John Street to the west. Therefore, the project would provide connectivity with planned neighboring residential developments, and would be consistent with this policy.

Source: AMBAG 2022

Consistency with the City of Salinas General Plan

While the City of Salinas General Plan does not contain specific GHG reduction policies, it does contain policies that encourage higher density development, energy efficiency, and multimodal transportation, that would reduce GHG emissions from new development. Table 10 summarizes the project's consistency with the City of Salinas General Plan goals and policies indirectly related to GHG emissions.

Table 13 Project Consistency with the City of Salinas General Plan

Policy	Consistency
Policy H-1.8: Encourage the development of higher density apartments, townhouses and condominiums served by major transit corridors or other non-automotive transport.	**Consistent.** The project would involve locating high density housing close to the existing bus stops of Abbot/John and Abbot/Maple, which are adjacent and directly across Abbot Street from the project site. This provides direct access to the Salinas Transit Center which has Amtrak train services, Greyhound bus services, and the Monterey-Salinas Transit bus services. Both Amtrak and Greyhound have routes that travel across the California and the United States. The Monterey-Salinas Transit system has bus routes from Watsonville to King City. Therefore, the project would be consistent with Policy H-1.8.
Policy CD-3.8: Promote the use of alternative modes of transportation, including bus, rail, bicycling and walking. **Policy COS-8.5**: Encourage land use arrangements and densities that facilitate the use of energy efficient public transit.	**Consistent.** The project would encourage the use of existing nearby public transit and would promote the use of alternative modes of transportation, due to the proximity to the Abbot/John and Abbot/Maple which provides direct access to the Salinas Transit Center. Therefore, the project would be consistent with Policy CD-3.8 and COS-8.5.
Policy COS-8.1: Enforce State Title 24 building construction requirements. **Policy COS-8.2**: Apply standards that promote energy conservation in new and existing development.	**Consistent.** Future development facilitated by the project would be required to comply with Title 24 standards, which promote energy conservation in new buildings. Therefore, the project would comply with Policy COS-8.1 and COS-8.2.

Source: City of Salinas 2002

In summary, the plan consistency analysis provided above demonstrates that the project complies with or exceeds the plans, policies, regulations and GHG reduction actions/strategies outlined in the 2017 Scoping Plan, AMBAG's 2045 MTP/SCS, and the City of Salinas General Plan. Consistency with the above plans, policies, regulations and GHG reduction actions/strategies would reduce the project's incremental contribution of GHG emissions. Therefore, the project would not conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing emissions of GHG emissions. Impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

9 Hazards and Hazardous Materials

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	■	☐
b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	■	☐	☐
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school?	☐	■	☐	☐
d. Be located on a site that is included on a list of hazardous material sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	■
e. For a project located in an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	☐	☐	■	☐
f. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	■	☐
g. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?	☐	☐	■	☐

Analysis in this section is based on a Hazardous Materials Technical Study prepared by Rincon in May 2022 and included as Appendix D to this document. Appendix D summarizes Rincon's review of six environmental documents, including one Phase I Environmental Site Assessment (ESA), two Phase II ESAs, and three other case documents, available online at the State Water Resources Control Board (SWRCB) GeoTracker website. While areas of the site have been previously studied, the entire site is not covered by these prior investigations, and no investigation has been done on development Lots 4, 5 and 6.

According to a review of online aerial photographs and topographic maps, the project site was developed with industrial buildings from at least 1948 to present day. Eight railroad spurs were formerly located on the project site from at least 1910 to 1998, and two sets of railroad tracks have been located adjacent to the east of the project site from at least 1910 to present day.

a. Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Demolition and Construction

The proposed project would require demolition of Building 1 during Phase 1 of the project for construction of the proposed four-story hotel and Building 2 during Phase 6 of the project for construction of future development. Existing buildings on site may contain asbestos and/or lead-based paint (LBP) due to their age. Structures built before the 1970s were typically constructed with asbestos-containing materials (ACM). In addition, since many of the existing buildings were constructed before the time of the federal ban on the manufacture of PCBs, it is possible that light ballasts in the structures contain PCBs. Demolition of the existing structures could therefore result in health hazard impacts to workers if not remediated prior to construction activities. However, demolition and construction activities would be required to adhere to MBARD Rule 424, which governs the proper handling and disposal of ACM for demolition, renovation, and manufacturing activities, and Cal/OSHA regulations regarding lead-based materials. California Code of Regulations (CCR) Section 1532.1 requires testing, monitoring, containment, and disposal of lead-based materials, such that exposure levels do not exceed Cal/OSHA standards. DTSC has classified PCBs as a hazardous waste when concentrations exceed 50 parts per million in non-liquids, and the DTSC requires that materials containing those concentrations of PCBs be transported and disposed of as hazardous waste. Light ballasts to be removed would be evaluated for the presence of PCBs and managed appropriately. With required adherence to MBARD, Cal/OSHA, and DTSC regulations regarding ACM, LBP, and PCBs, demolition activities would not create a significant hazard to the public or the environment through accidental release or the routine transport use, or disposal of hazardous materials.

Normal operating amounts of construction fluids (e.g., diesel fuel, motor oil, etc.) would be on-site during project construction. During construction of the four-story hotel proposed under Phase 1 and future development under the remaining project phases, accidental conditions could occur as a result of any of the following, which may occur during ground disturbance and earthmoving phases of construction: direct dermal contact with hazardous materials, incidental ingestion of hazardous materials, or inhalation of airborne dust released from dried hazardous materials. The transportation of hazardous materials could result in accidental spills, leaks, toxic releases, fire, or explosion. Limited quantities of hazardous substances, such as gasoline, diesel fuel, hydraulic fluid, solvents, and oils would be used to fuel and maintain vehicles and motorized equipment. Appropriate documentation for all hazardous waste that is transported, stored, or used in

connection with specific project-site activities would be provided as required for compliance with existing hazardous materials regulations codified in the CCR. Transport, use, and storage of hazardous materials during the construction of the proposed project would be conducted pursuant to all applicable local, state, and federal laws, including but not limited to Title 49 of the Code of Federal Regulations implemented by CCR Title 13, which describes strict regulations for the safe transportation of hazardous materials, and in cooperation with the County's Department of Environmental Health. Adherence to existing hazardous materials regulations would provide compliance with existing safety standards related to the handling, use and storage of hazardous materials, and compliance with the safety procedures mandated by applicable federal, state, and local laws and regulations.

Because construction of the proposed project, including upsizing of the sanitary sewer main, would disturb more than one acre of land, implementation of a SWPPP would be required pursuant to state regulations (see Section 10, *Hydrology and Water Quality*). In addition to measures to prevent soil erosion and sedimentation, the SWPPP would also include measures to implement in the event of accidental spills during construction, such as mandatory spill clean-up kits in equipment, as a possible example. Given that spill clean-up measures would be implemented, and that only normal operating amounts of construction fluids (e.g., diesel fuel, motor oil, etc.) would be on-site during construction, the operation of construction equipment would not create a significant hazard to the public or the environment.

Operation

Potential hazardous materials, such as fuels/oils, paint products, lubricants, solvents, cleaning products, and pesticides/herbicides may be used and/or stored on-site during operation of the proposed project. Operation of the proposed project would likely involve an incremental increase in the use of common household and commercial hazardous materials, such as cleaning and degreasing solvents, fertilizers, pesticides, and other materials used in regular property and landscaping maintenance. Transport, use, and storage of hazardous materials during operation of the proposed project would be conducted pursuant to all applicable local, state, and federal laws, including Title 49 of the Code of Federal Regulations implemented by CCR Title 13. As required by California Health and Safety Code Section 25507, a business shall establish and implement a Hazardous Materials Business Emergency Plan for emergency response to a release or threatened release of a hazardous material. As required, the hazardous materials would be stored in locations according to compatibility and in storage enclosures (i.e., flammable material storage cabinets and biological safety cabinets) or in areas or rooms specially designed, protected, and contained for such storage, in accordance with applicable regulations.

Under the California Hazard Communication Regulation, chemical manufacturers, distributors, or importers must provide Safety Data Sheets (formerly Material Safety Data Sheets) for each hazardous chemical to downstream users to communicate information on these hazards. Businesses are also required to train employees on protocols in the event of a chemical spill or a leak from a sealed container (California Department of Industrial Relations 2020).As discussed under criterion (d), the project site includes residual soil, soil vapor, and groundwater contamination and there are several listings for off-site facilities within proximity of the project site, including small-quantity hazardous waste generators, registered and historical underground storage tanks and aboveground storage tanks. Due to the contaminated soil, soil vapor, and groundwater on site as well as the proximity of off-site hazardous facilities to the project site, there is a possibility that contaminated soil, soil vapor, or groundwater could be encountered beneath the project site, which could

potentially migrate into the proposed hotel building or future development and potentially expose future employees, visitors, and residents.

Adherence to Monterey County Hazardous Materials Management Services' (HMMS) programs and regulations would reduce the potential for contamination from hazardous materials through proper cleanup, disposal, and remediation. The Monterey County HMMS regulates and enforces the provisions of the Uniform Fire Code relating to hazardous materials, including the use and storage of hazardous materials that are ignitable, reactive, corrosive, or toxic. Businesses using such materials are subject to permitting and inspection (Monterey County 2021). Therefore, impacts due to reasonably foreseeable upset and accident conditions during operation of the project would be less than significant.

However, due to the limited quantities of these materials to be used by the project, they are not considered hazardous to the public at large. Impacts associated with construction and/or operation of the project would be less than significant.

LESS THAN SIGNIFICANT IMPACT

b. Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Hazards Due to Known On-Site Contamination

Based on the results of the Phase II ESAs conducted at the project site, there are known metals, TPHs (gasoline, diesel, and motor oil), VOCs, SVOCs, and OCPs in on-site soil and/or soil vapor. These impacts will likely be encountered during grading and construction-related work on-site. Benzene, naphthalene, perchloroethylene (PCE), and trichloroethylene (TCE) were detected in soil vapor at the project site at concentrations exceeding the residential and/or commercial/industrial Environmental Screening Levels (ESLs). Total petroleum hydrocarbons-diesel (TPH-d) was detected in soil at the project site at a concentration exceeding the residential ESL. Additionally, a concrete trench is present in the southeastern portion of the project site and railroad spurs were formerly located on the project site from at least 1910 to 1998. Stained concrete flooring was also observed within and/or next to on-site buildings which could be encountered during ground disturbance and earthmoving phases of project construction, such as grading. Therefore, there is a potential for construction workers, off-site receptors, and future building occupants to be exposed to contaminants via dust, soil, and/or soil vapor on the project site. Additionally, if off-site disposal of soils would occur during project construction, the soil may require special handling or disposal as a waste. Construction activities at the project site and excavation for off-site sanitary sewer main upsizing are not expected to encounter groundwater, which is anticipated to be approximately 60 to 70 feet below ground surface.

Consequently, potentially significant impacts exist at this known release site (similar to a hazardous material site compiled pursuant to Government Code Section 65962.5) and, as a result, would create a significant hazard to the public or the environment during grading/construction.

Implementation of Mitigation Measures HAZ-1 through HAZ-5 during project construction would reduce potential hazardous material impacts to less than significant by providing additional investigation and remedial measures and/or soil management practices to ensure construction worker safety and the health of future workers, off-site receptors, and building occupants.

Therefore, implementation of Mitigation Measures HAZ-1 through HAZ-5 would reduce the impacts to less than significant.

Active Railway Hazards

The Union Pacific Railroad tracks adjacent to the project site support both passenger and freight traffic. Freight trains may carry hazardous materials, which could be released during an accident. The public health risk posed by an accidental release would depend upon the materials involved, their toxicity, and the wind direction that could carry emissions from the release. The possibility of impact is determined by a combination of the probability of an accident, the probability that the released cargo is hazardous, and the probability that winds are blowing from the spill toward occupied receptor sites.

Of the infrequent daytime freight traffic, only a percentage would involve transport of hazardous materials, and that transport is regulated by the federal Department of Transportation (DOT) to minimize risks of accidents or spills. For example, train cars often carry inert materials, such as lumber or steel. In addition, because of the urban context in the site vicinity, trains travel through the area at relatively low speeds, further minimizing the likelihood of accidents.

Furthermore, the California Supreme Court in a December 2015 opinion (*BIA v. BAAQMD*) confirmed that CEQA is primarily concerned with the impacts of a proposed project on the environment, not the effects of the environment on the proposed project. The proposed project would not involve changes to the tracks or easement and would not modify or expand access to the tracks. Therefore, construction and/or operation of the project would not exacerbate railway hazards, and such hazards would be considered less than significant.

Mitigation Measures

HAZ-1 RWQCB Regulatory Agency Submittal

Prior to issuance of a grading permit, the project applicant shall retain a qualified environmental professional (EP), as defined by the American Society of Testing and Materials (ASTM) E-1527, to prepare a Phase I ESA in accordance with standard ASTM methodologies to assess the project site (including development Lots 4, 5, and 6). The project applicant shall submit the Phase I ESA to the Central Coast RWQCB project manager of the open Cleanup Program Site case. Additionally, the project applicant shall submit the following documents to the Central Coast RWQCB Cleanup project manager:

- Current development plan and any modifications to the development plan for Lots 1-9
- All environmental documents completed for the project (Lots 1-9), including this HMTS
- All future environmental documents completed for the project (Lots 1-9)

Upon submittal of the information above, the Central Coast RWQCB may require actions such as: development of subsurface investigation workplans; completion of soil, soil vapor, and/or groundwater subsurface investigations; installation of soil vapor or groundwater monitoring wells; soil excavation and offsite disposal; completion of human health risk assessments; and/or completion of remediation reports or case closure documents. Subsurface soil, soil vapor, and groundwater investigations, if required, shall be conducted in accordance with a sampling plan that shall be reviewed and approved by the Central Coast RWQCB.

The Central Coast RWQCB closure and agency approval documents shall be submitted and reviewed by the City prior to issuance of grading permits.

It should also be noted that the Central Coast RWQCB may determine that Monterey County HMMS or the DTSC may be best suited to perform the cleanup oversight agency duties for the assessment and/or remediation of this project. Should the cleanup oversight agency be transferred from the RWQCB to the Monterey County HMMS or the DTSC, this and other mitigation measures will still apply.

HAZ-2 Subsurface Investigation

The project applicant shall retain a qualified environmental consultant (Professional Geologist [PG] or Professional Engineer [PE]) to prepare subsurface investigations, as required by the Central Coast RWQCB, prior to construction. The subsurface investigations may include sampling of the following suspect release areas:

- Stained asphalt and concrete flooring
- Drainage trench with unlined effluent ponds and discolored fluids
- Onsite hazardous materials storage and abandoned unidentified wastes
- Onsite ASTs (waste oil and ammonia)
- Former onsite USTs
- Former onsite auto repair, machine shop, and gasoline station
- Former (potentially remaining onsite) railroad tracks and spurs
- Former oil storage warehouse

Additionally, these subsurface investigations may include, but are not limited to, completion of:

- Geophysical surveys
- Soil, soil vapor, and/or groundwater sampling assessments
- Laboratory analysis for TPH, VOCs, SVOCs, OCPs, and metals

The subsurface investigations shall provide recommendations to address identified hazards and indicate when to apply those recommended actions in relation to proposed project activities. As part of the subsurface investigation, analytical results shall be screened against the Central Coast RWQCB environmental screening levels (ESLs). These ESLs are risk-based screening levels for direct exposure of a construction worker under various depth and land use scenarios.

Appropriate steps shall be undertaken to protect site workers during project construction and if necessary, the public during project operation. This would include the preparation of a Soil and Soil Vapor Management Plan (see Mitigation Measure HAZ-3).

If contaminants are detected at concentrations exceeding hazardous waste screening thresholds for contaminants in soil (CCR Title 22, Section 66261.24), appropriate steps shall be undertaken to protect site workers during project construction and if necessary, the public during project operation (see Mitigation Measures HAZ-3, HAZ-4, and HAZ-5).

HAZ-3 Soil and Soil Vapor Management Plan

The project applicant shall retain a qualified environmental consultant (PG or PE) to prepare a Soil and Soil Vapor Management Plan (SSVMP) prior to construction. Where groundwater impacts are

identified during implementation of Mitigation Measure HAZ-2, a groundwater management section shall be added to the SSVMP. The SSVMP, or equivalent document, shall be prepared to address onsite handling and management of impacted soils, soil vapor, or other impacted wastes, and reduce hazards to construction workers and offsite receptors during construction. The plan must establish remedial measures and/or soil management practices to ensure construction worker safety, the health of future workers and visitors, and the offsite migration of contaminants from the site. These measures and practices may include, but are not limited to:

- Stockpile management including stormwater pollution prevention and the installation of Best Management Practices (BMPs)
- Proper disposal procedures of contaminated materials
- Monitoring and reporting
- A health and safety plan for contractors working at the site that addresses the safety and health hazards of each phase of site construction activities with the requirements and procedures for employee protection
- The health and safety plan will also outline proper soil handling procedures and health and safety requirements to minimize worker and public exposure to hazardous materials during construction.

Prior to demolition and grading (construction), the City shall confirm the Central Coast RWQCB's approval of the SSVMP. The project applicant shall review and implement the SSVMP prior to demolition and grading (construction).

If odorous or visually stained soils, other indications of hydrocarbon piping or equipment, or debris are encountered during ground-disturbing activities, work in the immediate area shall be halted and a qualified environmental consultant shall be contacted immediately to evaluate the situation. Work may continue on other parts of the project while impacted soil investigation and/or remediation takes place.

HAZ-4 Remediation

Where soil is known to be impacted, or is identified during implementation of Mitigation Measure HAZ-2 (subsurface investigation) to be present, within the construction envelope at chemical concentrations exceeding hazardous waste screening thresholds for contaminants in soil (CCR Title 22, Section 66261.24), the project applicant shall retain a qualified environmental consultant (PG or PE), to conduct additional analytical testing and recommend soil disposal recommendations, or consider other remedial engineering controls, as necessary.

The qualified environmental consultant shall utilize the development site analytical results for waste characterization purposes prior to offsite transportation or disposal of potentially impacted soils or other impacted wastes. The qualified environmental consultant shall provide disposal recommendations and arrange for proper disposal of the waste soils or other impacted wastes (as necessary), and/or provide recommendations for remedial engineering controls, if appropriate.

Remediation of impacted soils and/or implementation of remedial engineering controls may require additional delineation of impacts; additional analytical testing per landfill or recycling facility requirements; soil excavation; and offsite disposal or recycling.

The City shall confirm the Central Coast RWQCB's approval of the development site disposal recommendations prior to transportation of waste soils offsite and review and approve remedial

engineering controls, prior to construction. The project applicant shall review and implement the disposal recommendations prior to transportation of waste soils offsite and review and implement the remedial engineering controls prior to construction.

HAZ-5 Vapor Mitigation System

Where soil vapor is known (or is identified during implementation of Mitigation Measures HAZ-2, HAZ-3, or HAZ-4) to be present at chemical concentrations exceeding the ESLs for sub-slab/soil gas (vapor) intrusion, the project applicant shall retain a qualified environmental consultant (PG or PE) or other qualified person to prepare a vapor mitigation system design for the proposed project.

The plan shall include, but is not limited to:

- Design specifications
- Material specifications
- Installation requirements
- Monitoring requirements

The project applicant shall design and implement engineering measures or institutional controls (e.g., soil vapor barrier) to prevent potential soil vapor intrusion into new residences or businesses in accordance with the measures included in the DTSC's Vapor Intrusion Guidance Document – Final (October 2011) and Vapor Intrusion Mitigation Advisory, Revision 1 (October 2011).

Engineering measures or institutional controls shall be submitted to the City's Permit Services Division and Current Planning Division prior to the issuance of any grading or building permits. Said engineering measures and institutional controls shall be peer reviewed by a qualified third-party contractor hired by the City at the project applicant's expense to confirm such measures and controls comply with applicable regulations. Consultation with the DTSC or a local cleanup agency may be required to confirm the appropriateness of the measures and controls.

The project applicant and/or contractor shall retain a qualified professional to certify that the accepted measures and controls are properly constructed and functioning at each residence. Written verification shall be submitted to the City.

The efficacy of the measures and controls shall be confirmed and certified by a qualified professional pursuant to the construction quality assurance/quality control testing guidance of the DTSC's Vapor Intrusion Guidance Document – Final (October 2011).

The project applicant and contractor shall incorporate a sub-slab vapor barrier during construction, the implementation of which would prevent the potential for soil gas VOCs from migrating to indoor air.

The City shall confirm the Central Coast RWQCB's approval of the Vapor Mitigation System Design prior to construction. The project applicant shall review the Vapor Mitigation System Design and install the system during construction.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

c. Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school?

The project site is approximately 0.16 mile east of Lincoln Elementary School at 705 California Street. Hazardous materials used during construction of the project would be disposed of off-site in accordance with all applicable laws and regulations, including but not limited to the California Building and Fire Codes, as well as regulations of the federal and state Occupational Safety and Health Administrations. However, as discussed under criterion (b), there is the potential for off-site receptors to be exposed to contaminants via dust, soil, and/or soil vapor on the project site during grading and construction. Implementation of Mitigation Measures HAZ-1 through HAZ-5 would reduce potential impacts to a less than significant level by providing additional investigation and remedial measures and/or soil management practices. Implementation of these measures would assist with protecting the health of nearby school occupants. In addition, potential uses of hazardous materials during project operation would be subject to all applicable federal, state, and local regulations and limited to the physical boundaries of the project site. Therefore, impacts would be less than significant with mitigation incorporated.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

d. Would the project be located on a site that is included on a list of hazardous material sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

The project site is not currently listed as a hazardous material site compiled pursuant to Government Code Section 65962.5. However, a portion of the project site is an open RWQCB Cleanup Program Site (case #T10000016190) as of September 2020 and residual soil, soil vapor, and groundwater impacts are present onsite. Additionally, the project site was listed on several environmental databases, which indicate that former occupants of the project site used and stored hazardous materials, generated hazardous waste, and were associated with a closed-in-placed fuel underground storage tank. There are several listings for off-site facilities within the applicable search radii. These listings (i.e., small-quantity hazardous waste generators, registered and historical underground storage tanks and aboveground storage tanks) are not indicative of a contamination concern with respect to the project site. Therefore, operation and construction of the project could create a public health and environmental hazard at the proposed project. However, implementation of Mitigation Measures HAZ-1 through HAZ-5 would reduce construction and operational hazardous material impacts to less than significant by providing additional investigation and remedial measures and/or soil management practices to ensure construction worker safety and the health of future workers, off-site receptors, and building occupants. As the site is not included on a list compiled pursuant to Government Code Section 65962.5, there would be no impact.

NO IMPACT

e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?

The compatibility of existing and planned land uses in the vicinity of an airport is usually associated with the extent of the airport's noise impacts. Typically, significant impacts will occur over noise-sensitive areas in the 65 Community Noise Equivalent Level (CNEL) noise contour, based upon the Federal Aviation Administration's (FAA) Integrated Noise Model, which describes aircraft noise in either the Yearly Day-Night Average Sound Level (DNL) or the CNEL. DNL accounts for the increased

sensitivity to noise at night (10:00 p.m. to 7:00 a.m.) and is the metric preferred by the FAA. The DNL represents the total accumulation of all sound energy but spread out uniformly over a 24-hour period.

The nearest airport to the project site is Salinas Municipal Airport (SNS), located approximately 1.3 mile to the southeast. According to the Airport Land Use Plan for the SNS, the project site is located outside the ultimate 65 CNEL noise exposure contour for the airport (Salinas Community Development Department 1982). Therefore, the project site is not located in an area with noise over 65 CNEL and would not expose employees or visitors to excessive noise.

A majority of the areas proposed for Phases 2 through 7 are within the City's AR Overlay District and Airport Influence Area, with a small portion of Phases 5 and 6 located outside the Airport Influence Area (Salinas 2002b). The purpose of the AR Overlay District is to fulfill the City's obligations, in accordance with requirements of state law (Government Code Section 65302.3), to implement the airport land use compatibility policies adopted by the Monterey County Airport Land Use Commission; regulate land use development within the vicinity of Salinas Municipal Airport to protect it from potential encroachment by land uses which are incompatible with airport activities and which may impair the future development and use of the airport; and minimize the public's exposure to excessive noise and safety hazards that would result from incompatible land use development within areas around airport (Salinas 2021a).

The proposed four-story hotel and future development would comply with Chapter 4, *Airport*, of the SMC which provides requirements and development regulations, including building height limitations, and SMC Section 37-40.450 which requires the dedication of an avigation easement as a condition of approval (Salinas 2021a). Therefore, impacts related to airport safety would be less than significant.

LESS THAN SIGNIFICANT IMPACT

f. Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

As discussed above under criteria (b) and (d), there are known metals, TPHs, VOCs, SVOCs, and OCPs in soil and/or soil vapor as well as residual groundwater contamination on the project site that could be encountered by construction workers and off-site receptors during grading and construction-related work as well as by future project employees, visitors, and residents during project operation.

The proposed four-story hotel under Phase 1 and future development under the remaining project phases, including off-site sanitary sewer main upsizing, would be required to comply with applicable Salinas codes and regulations pertaining to emergency response and evacuation plans maintained by the Salinas Fire and Police Departments.

Salinas implements the Multi-Hazard Emergency Plan which serves as an extension of the California Emergency Plan and the Emergency Resource Management Plan. The Multi-Hazard Emergency Plan addresses the City's planned response to extraordinary emergency situations associated with natural disasters, technological incidents, terrorist activities, and war-related operations, as well as the evacuation and movement of people in the event of an emergency (Salinas 2002b).

No roads would be permanently closed as a result of the construction or operation of the proposed project, and no structures would be developed that could potentially impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. The proposed project would be accessed from John and Abbott Streets, which would provide sufficient

capacity for passenger vehicles and light- and heavy-duty trucks that would frequent the project site during construction and operation. The proposed project would be developed in accordance with applicable geotechnical, hazardous materials, transportation, and fire safety standards.

If temporary lane closures (potentially on John, Abbott and Maple Streets) during construction of the proposed hotel or future development, including proposed sanitary sewer main upsizing, occur, construction activities would avoid interference with an emergency plan through the use of traffic control measures to maintain traffic flow and access and/or road detours. Due to the temporary nature of construction and the use of traffic control measures to avoid interference with an emergency plan, potential impacts from construction of the proposed project would be less than significant. As such, operation of the proposed project would not interfere with existing emergency evacuation plans or emergency response plans in the area.

Furthermore, new development is required to help provide fire and police protection facilities necessary to provide adequate response times through the collection of development fees. A building permit application for the proposed hotel and future development would be reviewed by the Department of Public Works and the Salinas Fire and Police Departments for potential problems with emergency access within the city. Therefore, the proposed project would not result in buildings that would block emergency response or evacuation routes or interfere with adopted emergency response and emergency evacuation plans. Impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

g. Would the project expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?

The project site is located within an urbanized area of the City of Salinas and is surrounded by existing urban development. The proposed project would not be located in or near a California Department of Forestry and Fire Protection (CAL FIRE) recommended Very High Fire Hazard Severity Zone (VHFHSZ) or State Responsibility Area (SRA) (CAL FIRE 2021). The nearest VHFHSZ occurs approximately five miles south of the site. Site access for the proposed project would be provided via John and Abbott Streets. The proposed hotel and future development would be designed, constructed, and operated pursuant to applicable standards outlined in the 2019 California Fire Code, as amended by Salinas and adopted in Section 13-8 of the SMC. Such requirements include building and emergency access, adequate emergency notification, and means of egress for emergency vehicles. In addition, the proposed hotel and future development would not be situated near slopes or create slopes, and would adhere to applicable standards outlined in the 2019 California Fire Code, as amended by Salinas to increase prevention and protection efforts due to impacts from winds and other conditions that may increase the propensity and intensity of wildfires.

While construction of the proposed hotel and future development may require temporary lane closures near John and Abbott Streets, truck and equipment access, and parking on the project site, construction would not permanently or temporarily impair emergency response or evacuation.

The proposed project would not create a significant risk of loss, injury, or death involving wildfires, and this impact would be less than significant. For more discussion of potential impacts related to wildfire, please refer to Section 20, *Wildfire*.

LESS THAN SIGNIFICANT IMPACT

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10 Hydrology and Water Quality

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	☐	☐	■	☐
b. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	■	☐
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
(i) Result in substantial erosion or siltation on- or off-site;	☐	☐	■	☐
(ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;	☐	☐	■	☐
(iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	☐	☐	■	☐
(iv) Impede or redirect flood flows?	☐	☐	■	☐
d. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	■	☐
e. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	■	☐

The federal Clean Water Act establishes the framework for regulating discharges to Waters of the United States to protect their beneficial uses. The Porter-Cologne Water Quality Act regulates water quality within California and establishes the authority of the SWRCB and the nine Regional Water Quality Control Boards (RWQCBs). The SWRCB requires construction projects to provide careful management and close monitoring of runoff during construction, including on-site erosion protection, sediment management, and prevention of non-storm discharges. The SWRCB and RWQCBs issue NPDES permits to regulate specific discharges. The NPDES Construction General Permit regulates stormwater discharges from construction sites that disturb more than one acre of land.

The project site overlies the Salinas Valley Groundwater Basin (SVGB), which extends from north of Marina and Salinas to the Monterey County/San Luis Obispo County line throughout the Salinas Valley. The project site is within the 180-400 Foot Aquifer Subbasin of the SVGB (Salinas Valley Groundwater 2016), which covers 89,700 acres (140 square miles) of the SVGB. Groundwater is primarily recharged naturally through infiltration of surface water, deep percolation of excess irrigation water, and deep percolation of infiltrating precipitation. Recharge of the aquifer is limited due to the permeability of the Salinas Valley Aquitard, and there are no mapped springs, seeps, or discharge to streams identified in the Subbasin (Salinas Valley Basin Groundwater Sustainability Agency [SVBGSA] 2020).

Water for the proposed project would be provided by Cal-Water. The Cal-Water Salinas District relies entirely on groundwater, with wells that extract water from five different groundwater basins, including the Corralitos-Pajaro Valley Subbasin, Salinas Valley-Langley Area Subbasin, Salinas Valley-180/400 Foot Aquifer Subbasin, Salinas Valley-East Side Aquifer Subbasin, and Salinas Valley-Monterey Subbasin. Cal-Water has prepared a 2020 Urban Water Management Plan (UWMP) for the Salinas District pursuant to the California Urban Water Management Planning Act which provides an assessment of the reliability of its water supply during normal, dry, and multiple dry years.

a. Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

Development of the proposed four-story hotel and future development would introduce heavy equipment to the site during construction and increase traffic to and from the site during operation. This increase in heavy construction equipment and operational traffic could result in an increase in fuel, oil, and lubricants in the stormwater runoff due to leaks or accidental releases. Construction activities resulting in ground disturbance of one acre or more are subject to the permitting requirements of the NPDES General Permit for Stormwater Discharges associated with Construction and Land Disturbance Activities (Construction General Permit Order No. 2009-0009-DWQ). The Construction General Permit requires the preparation and implementation of a SWPPP, which must be prepared before construction begins. The SWPPP includes specifications for BMPs implemented during construction to minimize or prevent sediment or pollutants in stormwater runoff.

Construction of the proposed hotel and future development, including off-site sewer line improvements, would comply with the requirements of the Construction General Permit. In addition, the project proponent would be required to implement BMPs identified in the SWPPP to prevent construction pollution via stormwater and minimize erosion and sedimentation into waterways as a result of construction. In addition, the proposed hotel and future development would be required to comply with the City of Salinas MS4 Permit (Order No. R3-2019-0073, NPDES Permit No. CA0049981), which requires the volume of runoff from an 95th percentile storm event be retained on site through either retention basins or bioretention facilities. The proposed hotel

would include an underground storm water chamber and tree box filters in the northern portion of the Phase 1 area and introduce landscaped areas, and future development would include underground storm water chambers, tree box filters, and bioretention planter areas and would introduce landscaped areas to a site that is mostly impermeable (covered with paving and structures as well as a small areas of landscaping and exposed ground surface) currently. The proposed hotel and future development would include additional on-site stormwater capture, retention and treatment compared to existing conditions. This would reduce the potential for polluted stormwater to enter the storm drain system. Compliance with the NPDES Construction General Permit would ensure that development of the proposed hotel and future development would not violate any water quality standards or WDRs, and impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

b. Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

e. Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

The project site overlies the SVGB, 180-400 Foot Aquifer Subbasin. The SVBGSA developed a Groundwater Sustainability Plan (GSP) for the subbasin, which was adopted in January 2020. The GSP describes current groundwater conditions, develops a hydrogeologic conceptual model, establishes a water budget, outlines local sustainable management criteria, and provides projects and programs for reaching sustainability in the Subbasin by 2040 (SVBGSA 2020).

Currently, the project site is developed with impervious surfaces (paving and structures) that cover the majority of the site. Water supply to the proposed project would be sourced from the local groundwater aquifer. The groundwater basin currently has issues with lowered groundwater elevations, seawater intrusion, and groundwater contamination.

As discussed in Section 19, *Utilities and Service Systems*, the proposed four-story hotel would have an estimated water demand of 9.4 acre-feet per year (AFY) and future development would increase water demand by approximately 171 AFY at full buildout. The project's water demands would be served by California Water Service-Salinas District (Cal-Water). Cal-Water utilizes groundwater, with wells extracting from five groundwater basins: Corralitos-Pajaro Valley, Salinas Valley-Langley Area, Salinas Valley-180/400 Foot Aquifer, Salinas Valley-East Side Aquifer, and Salinas Valley-Monterey subbasins. As described in Section 19, *Utilities and Service Systems*, water supplies in the Salinas District would be adequate to serve projected demand through 2045 in normal, single dry, and multiple dry year scenarios. Furthermore, as discussed in Section 14, *Population and Housing*, the project would not introduce unplanned population growth. As such, the project's water supply needs are considered in the supply/demand estimates in the UWMP. As shown in Table 17 in Section 19, *Utilities and Service Systems*, the Cal-Water Salinas District would have adequate water supply to serve projected water demand for the normal, single dry, and multiple dry years through 2045. Therefore, the project would not substantially deplete groundwater resources via water demand.

Development of the project would include additional landscaped areas and an urban park/open space area along the eastern site boundary and therefore, would increase pervious surfaces, reducing the volume of runoff from the site when compared to existing conditions. In addition, the project proponent would be required to comply with the City of Salinas MS4 Permit (Order No. R3-

2019-0073, NPDES Permit No. CA0049981), which requires the volume of runoff from an 95th percentile storm event be retained on site through either retention basins or bioretention facilities. The proposed hotel would include an underground storm water chamber and tree box filters in the northern portion of the Phase 1 area, and future development would include underground storm water chambers, tree box filters, and bioretention planter areas which would allow for groundwater recharge on the project site. Currently, almost no recharge occurs on the project site due to the paved nature and limited landscaping. Therefore, the proposed project would increase groundwater recharge across the project site compared to existing conditions. Impacts to groundwater recharge would be less than significant.

Because the project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin, development of the prosed hotel and future development would not conflict with or obstruct implementation of the 180-400 Foot Aquifer GSP.

As discussed under item (a), the proposed project would not degrade surface or groundwater quality. Therefore, development of the project would not conflict with or obstruct implementation of a water quality control plan or groundwater management plan. Impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

c. Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

(i) Result in substantial erosion or siltation on- or off-site?

(ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?

(iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

(iv) Impede or redirect flood flows?

Drainage on the project site generally follows the gently sloping topography of the site. Existing stormwater drainage systems include curb and gutter along John, Abbott, and Spicer Streets. The proposed four-story hotel would involve cutting approximately 3,900 CY of earth and filling with 8,700 CY, for a net fill of 4,800 CY. Future development of remaining phases would involve cutting approximately 6,400 CY of earth and filling with 9,800 CY, for a net fill of 3,400 CY. The project would also include improvements to the existing stormwater drainage of the site, including underground storm water chambers, tree box filters, bioretention planter areas, and landscaping. Construction would not substantially change the topography of the site. Currently, the project site is developed with impervious surfaces (paving and structures) that cover the majority of the site. Development of the project would include additional landscaped areas and an urban park/open space area along the eastern site boundary and therefore, would increase pervious surfaces, reducing the volume of runoff from the site when compared to existing conditions. In addition, the project proponent would be required to comply with the City of Salinas MS4 Permit (Order No. R3-2019-0073, NPDES Permit No. CA0049981), which requires the volume of runoff from an 95th percentile storm event be retained on site through either retention basins or bioretention facilities. Stormwater leaving the project site would enter the City's existing stormwater conveyance system.

Therefore, development of the hotel would not result in increased surface runoff that could result in flooding or exceed the capacity of existing stormwater drainage systems. Additionally, the hotel would not result in additional sources of polluted runoff.

As stated previously, construction of the proposed hotel and future development, including upsizing the existing sanitary sewer main, would be conducted in compliance with the State's Construction General Permit (Order No. 2009-0009-DWQ). Preparation of the SWPPP in accordance with the Construction General Permit would require erosion-control BMPs at the construction area. BMPs that are typically specified within the SWPPP may include, but would not be limited to, temporary measures during construction, revegetation, and structural BMPs. Therefore, development of the proposed hotel and future development would not result in substantial erosion or siltation during construction.

According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps, the project site and surrounding area are located within Flood Zone X, 0.2 percent Annual Chance Flood Hazard, which is an area of moderate flood hazard (FEMA 2009). Therefore, development of the proposed hotel and future development would not alter the flood zone boundaries, cause excess flooding downstream of the project site, or impede or redirect flood flows. Impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

d. In flood hazard, tsunami, or seiche zones, would the project risk release of pollutants due to project inundation?

According to FEMA Flood Insurance Rate Maps, the project site and surrounding area are located within Flood Zone X, 0.2 percent Annual Chance Flood Hazard (FEMA 2009), which is an area of moderate flood hazard. Any materials stored on the project site that could pollute runoff from flood events would be properly contained and stored per applicable local, state, and federal regulations (refer to Section 9, *Hazards and Hazardous Materials*, for additional information). The project site is not located near any dams, levees, or other major bodies of water that could produce seiche impacts at the site. Further, the project site is not located in a tsunami inundation zone and there are no large bodies of water that would be subject to seiche (DOC 2020).

The project would be required to comply with City design standards, which require sites greater than five acres to mitigate floodwater for 10-year (10 percent annual chance) and 100-year (1 percent annual chance) storm events. Pursuant to SMC Chapter 29, which outlines stormwater management and discharge measures, the project will be required to incorporate stormwater control measures to mitigate existing pre-project and resulting post-project flood flows to prevent downstream flooding. Therefore, inundation of the site would not occur during the one-percent annual flood, and development of the four-story hotel proposed under Phase 1 of the project and future development under the remaining project phases would not release pollutants into floodwaters. Impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

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11 Land Use and Planning

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Physically divide an established community?	☐	☐	☐	■
b. Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	■

a. Would the project physically divide an established community?

The PUD site is within a completely developed area, and the proposed project and upsized sanitary sewer main would not separate connected neighborhoods or land uses from each other. The project would not require new roadways outside of the project site that would divide existing communities or make them inaccessible; planned roadways and internal drives within the project would not divide any established communities. No impact would occur.

NO IMPACT

b. Would the project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

As discussed in Section 6, *General Plan Designation*, the PUD site is located on a site designated as Office and General Industrial. The project site also falls within the Abbott Street Focused Growth Overlay District, which the City's General Plan describes as an existing urbanized area where additional growth and/or redevelopment and revitalization would be appropriate and provide benefits to the community (City of Salinas 2006).

As stated in Section 7, *Zoning*, the site is zoned as Commercial Office and General Industrial, sharing the same boundaries as the General Plan designations. Salinas Municipal Code (SMC) defines Commercial Office as areas primarily for offices, personal services, financial services, mixed-use residential and for residential uses (SMC Section 37-30.190(k)(2)). The code defines General Industrial as areas that provide for the full range of manufacturing, industrial processing, general service, and distribution uses deemed suitable (SMC Section 37-30.300(e)(3)).

Table 1 lists applicable General Plan policies intended to reduce environmental effects of projects (City of Salinas 2002) and indicates the project's consistency with those policies. This table also includes policies related to land use and planning for informational purposes.

Table 14 Project Consistency with General Plan Policies

Policy	Consistency
Policy LU-1.1: Balanced Land Use Pattern. Achieve a balance of land uses to provide for a range of housing, jobs, libraries, and educational and recreational facilities that allow residents to live, work, shop, learn, and play in the community.	**Consistent.** The project would facilitate the development of an under-utilized area with a mix of uses, specifically residential and commercial.
Policy LU-1.2: Accommodate Projected Growth. Provide a plan for land uses that includes capacity to accommodate growth projected for 2020 and beyond.	**Consistent.** The project would develop 242 residential units that would assist in accommodating population growth.
Policy LU-2.1 Minimize Growth Impacts to Agricultural Lands. Minimize disruption of agriculture by maintaining a compact city form and directing urban expansion to the north and east, away from the most productive agricultural land.	**Consistent.** The project would involve infill development in an already urbanized area, where no active agricultural lands exist.
Policy LU-2.4: In-fill Development. Utilized well-designed infill development and selective increase density within Focused Growth Areas to maintain compact city form.	**Consistent.** The project would involve development within the Abbott Street Focused Growth Area and would maintain compact city form.
Policy LU-2.5. Future Growth and the Environment. Ensure that negative impacts of future growth on environmental quality and quality of life are minimized and adequate levels of urban services and facilities are maintained.	**Consistent.** This IS-MND demonstrates that the project would not have significant impacts on the environment. Mitigation measures are provided where applicable, including under *Biological Resources, Cultural Resources, Hazards and Hazardous Materials, Transportation,* and *Tribal Cultural Resources*, implementation of which would ensure potential impacts are mitigated to less than significant levels. The project would involve commercial and residential development, which would contribute to the urban services and facilities within the city.
Policy LU-3.7. Revitalization of Commercial and Industrial Areas. Revitalize the existing commercial and industrial areas within the City including: the Central City and Sunset Avenue Redevelopment Project Areas; the commercial areas along North and South Main Streets, West Market and Abbott Street.	**Consistent.** The project would involve commercial and residential development along Abbott Street and would revitalize an existing commercial area.
Policy LU-3.8: Essential Worker Housing. Encourage the production of housing that meets the needs of agricultural and other essential workers within the community.	**Consistent.** The project would develop 242 residential units that could serve essential worker populations.

Source: City of Salinas 2002

As demonstrated in Table 1, the project would be consistent with the applicable land use policies of the 2002 General Plan. The project would also be consistent with other land use policies and regulations. As described in Section 3, *Air Quality*, the project would not conflict with the current AQMP that MBARD adopted to provide a strategy for the attainment of state and federal air quality standards. As described in Section 6, *Energy*, development facilitated by the project would not conflict with General Plan energy-related policies, and in Section 9, *Greenhouse Gas Emissions*, development facilitated by the project would not conflict with GHG-related policies provided in the City's General Plan. Additionally, as described in Section 10, *Hydrology and Water Quality*, the project would not conflict with adopted water quality standards or policies.

The project would be consistent with applicable 2002 General Plan policies and other plans the City has adopted to avoid or reduce environmental impacts. Impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

12 Mineral Resources

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	■
b. Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	☐	☐	☐	■

a. Would the project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

b. Would the project result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?

Although quarrying operations have previously occurred in the City, most mineral extraction sites are no longer considered significant resources (City of Salinas 2002). The General Plan does not identify mineral resources within or near the site, including the location of the off-site sanitary sewer main replacement (City of Salinas 2002). The site and sanitary sewer main footprint is fully developed, and no mineral extraction presently occurs or is proposed to occur on or near the site. Therefore, the PUD would not affect the availability of any mineral resources. There would be no impact.

NO IMPACT

13 Noise

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project result in:				
a. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	■	☐
b. Generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	■	☐
c. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	■

Overview of Noise and Vibration

Noise

Sound is a vibratory disturbance created by a moving or vibrating source, which is capable of being detected by the hearing organs. Noise is defined as sound that is loud, unpleasant, unexpected, or undesired and may therefore be classified as a more specific group of sounds. The effects of noise on people can include general annoyance, interference with speech communication, sleep disturbance, and, in the extreme, hearing impairment (California Department of Transportation [Caltrans] 2013).

HUMAN PERCEPTION OF SOUND

Noise levels are commonly measured in decibels (dB) using the A-weighted sound pressure level (dBA). The A-weighting scale is an adjustment to the actual sound pressure levels so that they are consistent with the human hearing response. Decibels are measured on a logarithmic scale that quantifies sound intensity in a manner similar to the Richter scale used to measure earthquake magnitudes. A doubling of the energy of a noise source, such as doubling of traffic volume, would increase the noise level by 3 dB; dividing the energy in half would result in a 3 dB decrease (Caltrans 2013).

Human perception of noise has no simple correlation with sound energy: the perception of sound is not linear in terms of dBA or in terms of sound energy. Two sources do not "sound twice as loud" as one source. It is widely accepted that the average healthy ear can barely perceive changes of 3 dBA, increase or decrease (i.e., twice the sound energy); that a change of 5 dBA is readily perceptible (8 times the sound energy); and that an increase (or decrease) of 10 dBA sounds twice (half) as loud (10.5 times the sound energy) (Caltrans 2013).

DESCRIPTORS

The impact of noise is not a function of loudness alone. The time of day when noise occurs and the duration of the noise are also important factors of project noise impact. Most noise that lasts for more than a few seconds is variable in its intensity. Consequently, a variety of noise descriptors have been developed. The noise descriptors used for this study are the equivalent noise level (L_{eq}), Day-Night Average Level (L_{dn}), and the community noise equivalent level (CNEL; may also be symbolized as L_{den}).

L_{eq} is one of the most frequently used noise metrics; it considers both duration and sound power level. The L_{eq} is defined as the single steady-state A-weighted sound level equal to the average sound energy over a time period. When no time period is specified, a 1-hour period is assumed. The L_{max} is the highest noise level within the sampling period, and the L_{min} is the lowest noise level within the measuring period. Normal conversational levels are in the 60 to 65-dBA L_{eq} range; ambient noise levels greater than 65 dBA L_{eq} can interrupt conversations (Federal Transit Administration [FTA] 2018).

Noise that occurs at night tends to be more disturbing than that occurring during the day. Community noise is usually measured using Day-Night Average Level (L_{DN}), which is the 24-hour average noise level with a +10 dBA penalty for noise occurring during nighttime hours (10:00 p.m. to 7:00 a.m.). Community noise can also be measured using Community Noise Equivalent Level (CNEL or L_{DEN}), which is the 24-hour average noise level with a +5 dBA penalty for noise occurring from 7:00 p.m. to 10:00 p.m. and a +10 dBA penalty for noise occurring from 10:00 p.m. to 7:00 a.m. (Caltrans 2013).[4] The relationship between the peak-hour L_{eq} value and the L_{DN}/CNEL depends on the distribution of noise during the day, evening, and night; however noise levels described by L_{DN} and CNEL usually differ by 1 dBA or less. Quiet suburban areas typically have CNEL noise levels in the range of 40 to 50 CNEL, while areas near arterial streets are in the 50 to 60+ CNEL range (FTA 2018).

Groundborne Vibration

Groundborne vibration of concern in environmental analysis consists of the oscillatory waves that move from a source through the ground to adjacent buildings or structures and vibration energy may propagate through the buildings or structures. Vibration may be felt, may manifest as an audible low-frequency rumbling noise (referred to as groundborne noise), and may cause windows, items on shelves, and pictures on walls to rattle. Although groundborne vibration is sometimes noticeable in outdoor environments, it is almost never annoying to people who are outdoors. The primary concern from vibration is that it can be intrusive and annoying to building occupants at vibration-sensitive land uses and may cause structural damage.

Typically, ground-borne vibration generated by manmade activities attenuates rapidly as distance from the source of the vibration increases. Vibration amplitudes are usually expressed in peak

[4] Because DNL and CNEL are typically used to assess human exposure to noise, the use of A-weighted sound pressure level (dBA) is implicit. Therefore, when expressing noise levels in terms of DNL or CNEL, the dBA unit is not included.

particle velocity (PPV) or root mean squared (RMS) vibration velocity. The PPV and RMS velocity are normally described in inches per second (in/sec). PPV is defined as the maximum instantaneous positive or negative peak of a vibration signal. PPV is often used as it corresponds to the stresses that are experienced by buildings (Caltrans 2020).

Project Noise Setting

Sensitive Receivers

Noise exposure goals for various types of land uses reflect the varying noise sensitivities associated with those uses. Noise sensitive receivers include residences, schools, hospitals, religious meetings, and recreation areas (City of Salinas 2002b). The nearest noise-sensitive receivers are multi-family homes located approximately 105 feet west of the project site along Abbott Street. Additional sensitive receivers include residences approximately 330 feet west of the project site along Winham Street.

Noise Measurements

The most prevalent source of noise in the project site vicinity is vehicular traffic on Abbott Street to the west, John Street to the north, and the Union Pacific Railroad to the east. To characterize ambient sound levels at and near the project site, four 15-minute sound level measurements and one 24-hour sound level measurement were conducted on Thursday, December 9, 2021 and Friday, December 10, 2021. An Extech, Model 407780A, ANSI Type 2 integrating sound level meter was used to conduct the measurements. Figure 1 shows the noise measurement locations, and Table 11 and Table 12 summarizes the results of the noise measurements. Detailed sound level measurement data are included in Appendix E.

Table 15 Project Site Vicinity Sound Level Monitoring Results: Short-Term

	Measurement Location	Sample Times	Approximate Distance to Primary Noise Source	L_{eq} (dBA)	L_{min} (dBA)	L_{max} (dBA)
ST1	Northern property boundary, adjacent to John Street	12:43 – 12:58 p.m.	Approximately 35 feet to John Street centerline	71	54	79
ST2	West of project site, adjacent to Abbott Street	1:11 – 1:26 p.m.	Approximately 40 feet to Abbott Street centerline	71	53	93
ST3	Center of project site, near existing buildings	9:18 – 9:33 a.m.	Approximately 525 feet to Abbott Street centerline	58	53	69
ST4	South of project site, near adjacent properties along Spicer Street	1:50– 2:05 p.m.	Approximately 25 feet to adjacent properties along Spicer Street	59	49	76

L_{eq} = average noise level equivalent; dBA = A-weighted decibel; L_{min} = minimum instantaneous noise level; L_{max} = maximum instantaneous noise level

Detailed sound level measurement data are included in Appendix E.

Table 16 Project Site Vicinity Noise Monitoring Results: Long Term

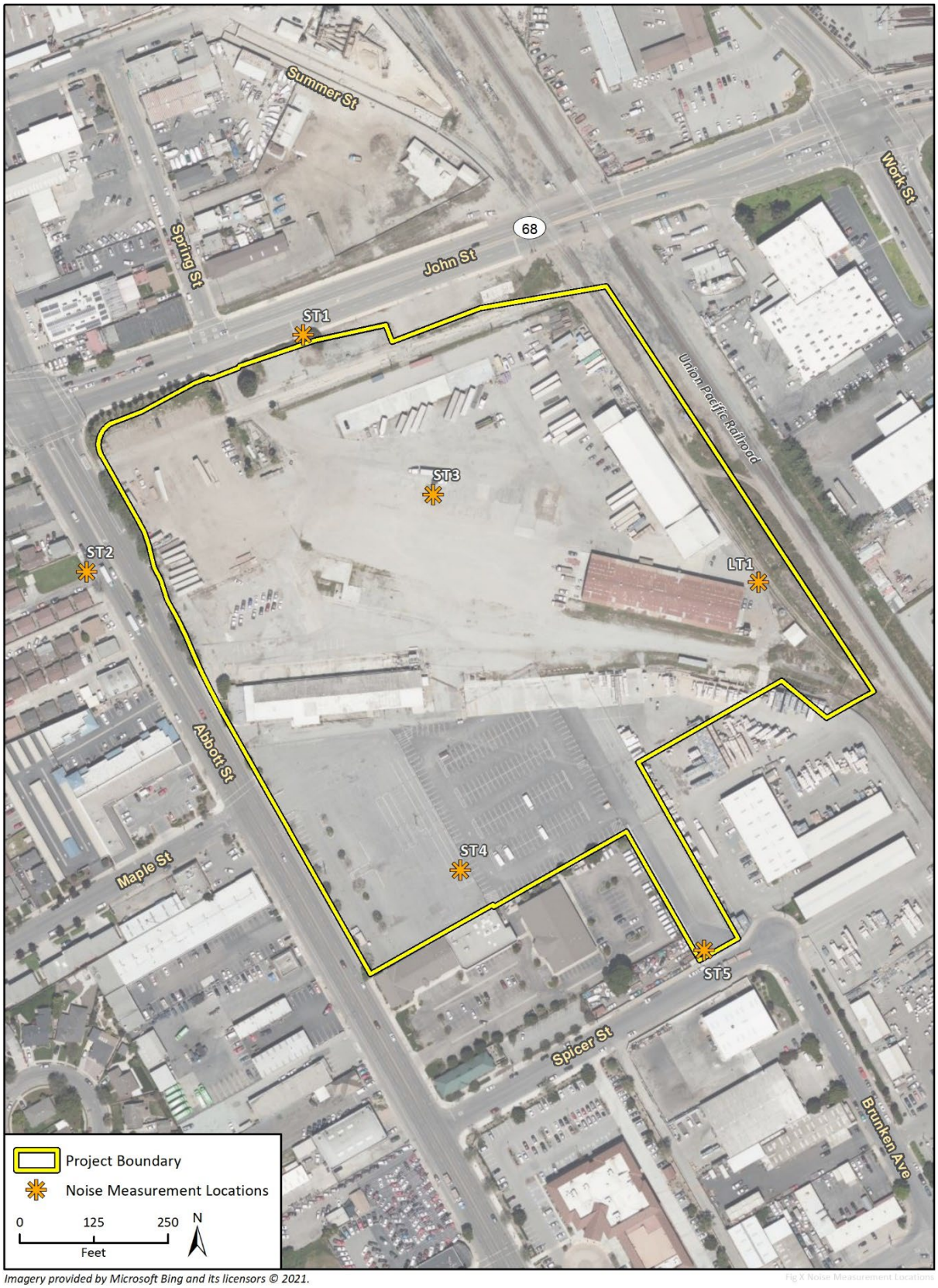
Sample Time	dBA L_{eq}	Sample Time[1]	dBA L_{eq}
24-hour Measurement – 12/09, 12/10			
2:30 p.m.	70	2:30 a.m.	49
3:30 p.m.	49	3:30 a.m.	52
4:30 p.m.	50	4:30 a.m.	53
5:30 p.m.	49	5:30 a.m.	54
6:30 p.m.	48	6:30 a.m.	54
7:30 p.m.	55	7:30 a.m.	58
8:30 p.m.	50	8:30 a.m.	55
9:30 p.m.	47	9:30 a.m.	49
10:30 p.m.	47	10:30 a.m.	48
11:30 p.m.	47	11:30 a.m.	54
12:30 a.m.	45	12:30 p.m.	55
1:30 a.m.	47	1:30 p.m.	50
24-hour Noise Level (dBA CNEL)			**59**

dBA = A-weighted decibels; L_{eq} = equivalent noise level; CNEL = community equivalent noise level

[1]Sample times shown in this table are the correct sample times. The date and time located in the raw data is not shown correctly due to an input error.

See Figure 1 for noise measurement locations; see Appendix E for full measurement details.

Figure 6 Noise Measurement Locations



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Fig X Noise Measurement Locations

a. Would the project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Construction

Construction noise was estimated using the FHWA Roadway Construction Noise Model (RCNM) (FHWA 2006). RCNM predicts construction noise levels for a variety of construction operations based on empirical data and the application of acoustical propagation formulas. Using RCNM, construction noise levels were estimated at noise sensitive receivers near the project site. RCNM provides reference noise levels for standard construction equipment, with an attenuation rate of 6 dBA per doubling of distance for stationary equipment.

Variation in power from construction equipment imposes additional complexity in characterizing the noise source level. Power variation is accounted for by describing the noise at a reference distance from the equipment operating at full power and adjusting it based on the duty cycle of the activity to determine the L_{eq} of the operation (FHWA 2006). Each phase of construction has a specific equipment mix, depending on the work to be accomplished during that phase. Each phase also has its own noise characteristics; some will have higher continuous noise levels than others, and some have high-impact noise levels.

Construction activity would result in temporary noise in the project site vicinity, exposing surrounding nearby receivers to increased noise levels, but only during certain times of a day. Construction noise would typically be higher during the heavier periods of initial construction (i.e., site preparation and grading) and would be lower during the later construction phases (i.e., building construction and paving). Noise levels are based on a grader, dozer and excavator operating simultaneously, which would occur under the most intensive construction phase, grading. The type of equipment utilized during the grading phase was based on applicant provided information. It is assumed that diesel engines would power all construction equipment. However, construction equipment would not all operate at the same time or location. In addition, construction equipment would not be in constant use during the 8-hour operating day.

Pursuant to Section 5-13.01 of the Salinas Municipal Code, noise generated by construction activities would only be allowed to occur between the hours of 7:00 a.m. to 10:00 p.m. Project construction would comply with the allowed hours. Because the City does not state a quantifiable noise construction equipment noise threshold and for purposes of analyzing impacts from this project, the FTA *Transit Noise and Vibration Impact Assessment Manual* (FTA 2018) criteria were used. The FTA provides reasonable criteria for assessing construction noise impacts based on the potential for adverse community reaction. For residential uses, the daytime noise threshold is 80 dBA L_{eq} for an 8-hour period (FTA 2018).

Over the course of a typical construction day, construction equipment would be located as close as 105 feet to adjacent properties (e.g., the residences to the west) but would typically be located at an average distance farther away due to the nature of construction and the size of the project site. Therefore, it is assumed that over the course of a typical construction day the construction equipment would operate at an average distance of 730 feet from the nearest residential property to the west. Construction of the upsized sanitary sewer main would occur along Abbott Street would be as close as 50 feet to existing residences. While excavation and pipeline installation would generate noise, construction of the sanitary sewer main would be linear. Therefore, construction

equipment would move along the pipeline alignment. Construction would not affect individual residences for an extended period of time.

Construction noise is typically loudest during activities that involve excavation and moving soil, such as site preparation and grading. A potential high-intensity construction includes a dozer, grader, and excavator working during grading and excavation. At a distance of 730 feet, a dozer, grader and excavator would generate a noise level of 60 dBA L_{eq} (RCNM calculations are included in Appendix E). Therefore, construction noise levels would not exceed the FTA noise threshold of 80 dBA L_{eq} for residential uses, and impacts would be less than significant.

Operation

Mechanical Equipment

Typical HVAC equipment generates noise levels up to 72 dBA L_{eq} at three feet. Like idling noise, HVAC noise is considered a steady state noise source, and the L_{max} would also generally not be more than 5 dBA higher than the L_{eq}. The L_{max} would be approximately 78 dBA at three feet. To determine the noise level at the nearest residential receptors, the distance between source and receiver is measured from the edge of the proposed building to the noise-sensitive property line. The building is set back approximately 115 feet from the residences across Abbott Street to the west. At this distance, noise levels would attenuate to approximately 40 dBA L_{max} or less. This would not exceed the City's noise limit of below 60 dBA CNEL for noise sources, and impacts would be less than significant.

Other Operational Noise

Other noise sources associated with operation of the proposed hotel under Phase 1 of the project and future development under the remaining project phases would consist of vehicular noise on internal roadways and parking lots, landscaping maintenance, general conversations, pool and spa activities, park activities, and trash hauling activity. As shown in Figure 2-3 in Section 2, *Project Description*, new parking spaces would be distributed through the project site next to internal roadways. Parking lot activities can generate instantaneous or short-term noise from car doors slamming, beeps, alarms, tire movements, engines, radios, and infrequent use of sweepers. However, parking lot noise would be consistent with adjacent commercial land uses in the vicinity of the project site. Parking lot noise also would not typically have a substantial contribution to hourly equivalent noise levels from transportation sources near the project site, relative to measured noise levels reaching 71 dBA L_{eq} along Abbott Street and John Street. Additional on-site noise sources such as landscape maintenance, low-speed traffic on internal roadways, conversations, pool and spa activities, park activities, and trash hauling also would be typical of noise generated by neighboring land uses and would not substantially contribute to overall ambient noise levels. Therefore, on-site operations would have a less than significant impact on noise-sensitive receivers.

Off-site Roadway Noise

A project will normally have a significant effect on the environment related to noise if it will substantially increase the ambient noise levels for adjoining areas. The following thresholds of significance similar to those recommended by the Federal Aviation Administration (FAA), are used to assess traffic noise impacts at sensitive receptor locations. A significant impact would occur if traffic noise increases the existing noise environment by the following:

- Greater than 1.5 dBA for ambient noise environments of 65 dBA CNEL and higher

- Greater than 3 dBA for ambient noise environments of 60 to 64 CNEL
- Greater than 5 dBA for ambient noise environments of less than 60 dBA CNEL

The project's contribution to a traffic noise increase was estimated using the PM peak hour traffic volumes from the project traffic analysis to estimate the average daily traffic (ADT) on study roadway segments (Keith Higgins Traffic Engineer 2022). It was assumed that peak hour traffic represents 10 percent of the ADT. The posted speed limit on Abbott Street and John Street is 35 miles per hour. Maple Street, Spicer Street and Spring Street were not included in the analysis because these are minor side streets. In addition, traffic on the driveway extensions into the project site were not analyzed as they would be low speed roadways generating noise within the project site. The vehicle classification mix for modeling assumed 97 percent automobiles, 2 percent medium-duty trucks, and 1 percent heavy-duty trucks. Traffic distribution through the day was modeled assuming 85 percent of total daily vehicle traffic during daytime hours and 15 percent of daily vehicle traffic during nighttime hours.

Noise levels with and without project-generated traffic for the existing and existing plus project scenarios are shown in Table 13. As shown below, the project would not result in traffic noise increases that exceed the FAA criteria. Therefore, impacts would be less than significant.

Table 17 Project Traffic Noise Increases

Roadway	Segment	Speed (mph)	Existing Volume (ADT)	Existing + Project Volume (ADT)	Existing Noise Level (dBA CNEL)	Existing + Project Noise Level (dBA CNEL)	Noise Level Increase (dBA CNEL)
John Street	From Abbott Street to Spring Street	35	20,500	26,830	70.9	72.1	1.2
John Street	From Abbott Street to Front Street	35	15,510	17,630	69.7	70.3	0.6
Abbott Street	From John Steet to Maple Street	35	17,610	23,140	69.0	70.2	1.2
Abbott Street	From Maple Street to John Street	35	17,550	23,460	69.0	70.2	1.3
Abbott Street	From Maple Street to Spicer Street	25	17840	21,000	71.0	71.7	0.7
Abbott Street	From Spicer Street to Maple Street	25	17770	20,930	71.0	71.7	0.7
Abbott Street	From Spicer Street to Alameda Avenue	35	16630	20,190	68.8	69.6	0.8

dBA = A-weighted decibels; ADT = average daily trips; mph = miles per hour

Noise levels with and without project-generated traffic for the cumulative and cumulative plus project scenarios are shown in Table 14. As shown in Table 14, the project would not result in cumulative traffic noise increases that exceed the FAA criteria. Therefore, impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

Table 18 Cumulative Traffic Noise Increases

Roadway	Segment	Speed (mph)	Existing Volume (ADT)	Cumulative No Project (ADT)	Cumulative+ Project Volume (ADT)	Existing Noise Level (dBA CNEL)	Cumulative No Project Noise Level (dBA CNEL)	Cumulative + Project Noise Level (dBA CNEL)	Cumulative Noise Level Increase (dBA CNEL)	Project Contribution to Cumulative Noise Increase (dBA CNEL)
John Street	From Abbott Street to Spring Street	35	20,500	27,060	30,740	70.9	70.9	72.7	1.8	0.6
John Street	From Abbott Street to Front Street	35	15,510	15,870	17,990	69.7	69.7	70.3	0.6	0.5
Abbott Street	From John Steet to Maple Street	35	17,610	29,140	34,660	69.0	69.0	71.9	2.9	0.8
Abbott Street	From Maple Street to John Street	35	17,550	28,940	34,000	69.0	69.0	71.9	2.9	0.8
Abbott Street	From Maple Street to Spicer Street	25	17,840	29,050	31,360	71.0	73.1	73.4	2.4	0.3
Abbott Street	From Spicer Street to Maple Street	25	17,770	29,370	31,680	71.0	71.4	73.5	2.5	0.3
Abbott Street	From Spicer Street to Alameda Avenue	35	16,630	27,770	30,080	68.8	71.0	71.3	2.6	0.3

dBA = A-weighted decibels; ADT = average daily trips; mph = miles per hour

b. Would the project result in generation of excessive groundborne vibration or groundborne noise levels?

Operation of the proposed project would not include any substantial vibration sources. Thus, construction activities have the greatest potential to generate ground-borne vibration affecting nearby receivers, especially during grading and excavation of the project site. The greatest vibratory source during construction would be a dozer. Neither blasting nor pile driving would be required for construction of the proposed project. Construction vibration estimates are based on vibration levels reported by Caltrans and the FTA (Caltrans 2020a; FTA 2018). Table 15 shows typical vibration levels for various pieces of construction equipment used in the assessment of construction vibration at a reference distance of 25 feet (FTA 2018).

Table 19 Vibration Levels Measured during Construction Activities

Equipment	PPV at 25 feet (inches/second)
Large Bulldozer	0.089
Loaded Trucks	0.076
Small Bulldozer	0.003

Source: FTA 2018

As stated previously, the greatest anticipated source of vibration during general project construction activities would be from a dozer, which would be used during site preparation and grading activities and may be used within 105 feet of the nearest off-site residential structures to the west. A dozer would create approximately 0.089 in/sec PPV at 25 feet (Caltrans 2020). This would equal a vibration level of 0.02 in/sec PPV at a 105 feet.[5] This would be lower than what is considered a distinctly perceptible impact for humans of 0.24 PPV in/sec, and the structural damage impact to school structures of 0.2 in/sec PPV. Therefore, temporary vibration impacts associated with the dozer (and other potential equipment) would be less than significant.

Operation

As a mixed-use development with residential and commercial uses, the proposed project would not generate significant stationary sources of vibration, such as manufacturing or heavy equipment operations. No operational vibration impact would occur.

LESS THAN SIGNIFICANT IMPACT

c. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

The nearest public airport to the site is the Salinas Municipal Airport located approximately 2.6 miles southeast of the project site. The site is not within the airport's 55 dBA CNEL contour (City of Salinas 2002b). Because the site is located outside the noise contours of the Salinas Municipal

[5] $PPV_{Equipment} = PPV_{Ref} (25/D)^n$ (in/sec), PPV_{Ref} = reference PPV at 25 feet, D = distance ,and n = 1.1

Airport, and no other airports are located nearby, the project would not expose people residing or working in the project area to excessive aircraft-related noise. No impacts would occur.

NO IMPACT

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14 Population and Housing

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Induce substantial unplanned population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure)?	☐	☐	■	☐
b. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	■

a. Would the project induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

At its completion, the proposed mixed-use project would develop 242 residential units, 107,900 square feet of retail use, 70,000 square feet of hotel space, and 30,900 square feet of office use in the city. As such, the project would directly generate population growth. Based on a per-person household rate of 3.85 for the City of Salinas (DOF 2021), the 242 residential units would add an estimated 932 new residents to the city's population at full buildout.[6] Phase 1, which would only include development of the hotel, would not involve the addition of any permanent residents. As shown in Table 2, the hotel would add approximately 47 jobs.

Furthermore, the retail, hotel, and office use included in the PUD would increase the employee population of the city. The US Green Building Council establishes average square feet per employee rates (US Green Building Council 2008), which can be used to estimate the number of jobs/employees generated by development. Table 2 below shows the average square feet per employee for retail, hotel, and office use, and potential project employee generation.

Table 20 Employee Population Estimates

Commercial Use	Average Square Feet per Employee	Proposed Project Buildout	Number of Employees Generated
Retail	550 sf	107,900 sf	197
Hotel	1,500 sf	70,000 sf	47
Office	250 sf	30,900 sf	124
Total			**368**

Source: US Green Building Council 2008

6 242 units multiplied by an average of 3.85 persons per unit is approximately 932 residents.

As shown above, the PUD's retail, hotel, and office uses would generate approximately 368 employees at full buildout.

The current population of Salinas is estimated at 160,206 (DOF 2021); therefore, the addition of new residents at the PUD site would increase the City's population to 161,138. The Association of Monterey Bay Area Governments (AMBAG) estimates that the City's population will increase to 184,599 by 2040, a projected increase of 24,393 residents from 2021 (AMBAG 2018). The population increase facilitated by the PUD would therefore be within AMBAG's population forecast for the city. In a conservative, maximum-growth scenario in which every employee relocates to Salinas with their household, the proposed commercial uses would facilitate the addition of approximately 974 new residents to Salinas, which would still be within AMBAG's population projections. However, this scenario is highly unlikely as most jobs generated by the project would be filled by existing residents.

Additionally, the city currently has 43,579 housing units (DOF 2021). The addition of 242 units would increase the total number of housing units to 43,821. The latest AMBAG projections estimate that the number of housing units in the city by 2040 will be 53,043 (AMBAG 2018). The housing growth facilitated by the project is therefore well within AMBAG projections. Therefore, the proposed project would not induce unplanned population growth through the provision of new housing units.

As shown in Table 2, the project would generate approximately 368 new jobs, including 47 jobs associated with the hotel under Phase 1. This increase in jobs would be within AMBAG's projected 2040 employment increase of 9,024 jobs in Salinas between 2020 and 2040. Therefore, the proposed project would not facilitate substantial unplanned population growth in the area through the provision of additional jobs.

Overcrowding is a documented issue in the City, with 7,351 households, or 18 percent of all households, categorized as overcrowded in 2016 (County of Monterey 2019). This is further evidenced by the persons per household rate in the City of Salinas (3.85) as compared to Monterey County (3.32) and the State of California as a whole (2.93) (DOF 2021). The PUD would assist in alleviating overcrowding in the City by providing more available units to existing residents. Upsizing of the sanitary sewer main would only serve the proposed project development and would not induce additional growth in the project area. Overall, the number of residents, housing units, and jobs that would be facilitated by the proposed project are within applicable AMBAG growth projections. Therefore, the project would not induce substantial unplanned population growth in Salinas. Impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

b. Would the project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

The only structures located at the PUD site are a produce wholesaler building, a packing supply store, and vehicle storage. There are no existing housing units or people residing at the site. Therefore, future buildout facilitated by the proposed project would not displace any existing housing units or people. No impact would occur.

NO IMPACT

15 Public Services

		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a.	Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
	1 Fire protection?	☐	☐	■	☐
	2 Police protection?	☐	☐	■	☐
	3 Schools?	☐	☐	■	☐
	4 Parks?	☐	☐	■	☐
	5 Other public facilities?	☐	☐	■	☐

a.1. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered fire protection facilities, or the need for new or physically altered fire protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives?

The Salinas Fire Department (SFD) provides all-risk fire protection to the City of Salinas in the form of fire suppression, search and rescue, emergency medical services, operational training, disaster preparedness, community education, and other services based on community needs. Total authorized staffing for the SFD is 99 personnel, 93 of which are sworn public safety employees. A second truck company was added to the city in July of 2016, resulting in increased fire protection services in the city and a minimum of 24 fire personnel on-duty at all times (Sparks 2022). SFD operates with three platoons. Each platoon has six engine companies that are made up of a Captain, Engineer, and one Firefighters, with one of the members being a Paramedic. The department has six pumper trucks, two ladder trucks, a crash truck for airport emergencies and other service vehicles (Salinas 2021b).

The SFD has established performance goals for the first unit response time of within five minutes, 20 seconds, 90 percent of the time for fire incidents; within five minutes, 90 percent of the time for emergency medical incidents; and within five minutes, 20 seconds, 90 percent of the time for all other priority incidents. Overall, response time for all priority incidents was within seven minutes,

23 seconds, 90 percent of the time during 2018, indicating that the SFD is not meeting its performance goals (Salinas 2019a).

SFD Fire Station #3 is closest to the project site at 827 Abbott Place, approximately 0.6 mile south. The project site is in the existing service area of the SFD. All future development at the project site would be required to comply with current Fire Code requirements and project design plans would be reviewed by the SFD prior to construction. The project would facilitate population growth and would result in an increased demand for services proportional to the population increase; however, the increase would be incremental and within the growth projections for Salinas (AMBAG 2018). The addition of an estimated 932 future residents would not create excessive demand for emergency services or introduce development to areas outside of normal service range that would necessitate new fire protection facilities. Pursuant to the California Fire Code, future development of the project site would undergo review by the SFD during the Building Permitting process to ensure adequate access, consistency with existing facilities, and acceptable response times. Therefore, the project would not place an unanticipated burden on fire protection services or affect response times or service ratios such that new or expanded fire facilities would be needed. Impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

a.2. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered police protection facilities, or the need for new or physically altered police protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives?

The Salinas Police Department (SPD) provides police protection in the City of Salinas. The SPD has 139 full-time sworn officers (Sparks 2022). Based on the city's current population of approximately 160,206 residents (DOF 2021), the SPD has approximately one sworn officer for every 1,153 residents. The SPD is divided into three divisions: Field Operations, Investigations, and Administration. The Field Operations Division is headed by one Assistant Chief who oversees the Patrol Division, K-9 Unit, Traffic Unit, Crime Scene Investigators Unit, and Special Operations (SPD 2021).

The SPD communications center screens and assigns calls on a priority basis based on the nature of the problem. SPD response time data is currently unavailable; however, the highest priority calls are typically answered within a few minutes. Less urgent calls can take longer depending on availability of the police officers and other calls the department is responding to at the time.

The nearest police station to the project site is located at 312 East Alisal Street, approximately 0.3-mile northeast. The project site is in the SPD service area. The project would generate new population and associated demand for services; however, the increase would be incremental and within the growth projections for Salinas (AMBAG 2018). The addition of an estimated 932 residents would not create excessive demand for police services or introduce development to areas outside of normal service range that would necessitate new police protection facilities. Therefore, the proposed project would not result in the need for new or physically altered police protection facilities that could have an environmental impact. Impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

a.3. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered schools, or the need for new or physically altered schools, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios or other performance objectives?

The project site is located in the Salinas City Elementary and Salinas Union High School Districts (Salinas 2017). In the 2019-2020 school year, Salinas City Elementary School District had an enrollment of 8,689 students (California Department of Education 2021a) and Salinas Union High School District had an enrollment of 15,818 students (California Department of Education 2021b). Salinas City Elementary School District has a total capacity of approximately 8,900 students (Ed-Data 2021a) and Salinas Union High School District has a total enrollment capacity of approximately 16,800 students (Ed-Data 2021b). Based on the school districts' current enrollment, Salinas City Elementary School District has an available capacity of 211 students and Salinas Union High School District has an available capacity of 982 students, resulting in a total available capacity of 1,193 students. Development facilitated by the proposed project would add 242 new housing units in Salinas and would not result in an exceedance in capacity of the local elementary and high school districts. Assuming a conservative student generation rate of one student per residential unit, the development of the project site would generate up to 242 additional students at local schools. While future development would generate up to 242 additional students, the Salinas City Elementary School District and Salinas Union High School District would have a remaining total available capacity of 951 students. Therefore, new school facilities would not be required as the increase in students would be incremental. Furthermore, school developer fees would be collected for construction of the proposed project. The Salinas City Elementary School District requires $0.23 per square foot and $1.42 per square foot for commercial and residential development, respectively (Salinas City Elementary School District 2022), and the Salinas Union High School District requires $0.30 per square foot and $1.95 per square foot for commercial and residential development, respectively (Salinas Union High School District 2022). As stated in California Government Code Section 65997, payment of school developer fees is deemed to constitute full and complete mitigation for potential impacts to schools caused by development. Therefore, impacts related to the need for new school facilities as a result of implementing the proposed project would be less than significant.

LESS THAN SIGNIFICANT IMPACT

a.4. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered parks, public facilities, or the need for new or physically altered parks, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios or other performance objectives?

As described in Section 16, *Recreation*, the Salinas General Plan establishes a standard of 3.0 acres of developed community parkland per 1,000 residents. The city's current estimated population is 160,206 residents (DOF 2021). According to a recreational facility inventory conducted in 2019, Salinas provides approximately 648 acres of public parkland and recreational facilities distributed throughout 52 park sites and numerous open space parcels (Salinas 2019b). Therefore, the ratio of all public parkland, facilities and open space parcels to residents in the city is approximately 4.04 acres for every 1,000 residents. The construction of 242 housing units under the proposed project would result in a parkland, facilities and open space parcels ratio of approximately 4.02 acres of developed public parkland, facilities and open space parcels for every 1,000 residents. This would result in an incremental reduction in available recreation space per resident in the city. However, the parkland, facilities and open space parcels ratio would still be above the minimum required

parkland, facilities and open space parcels standard of 3.0 acres of all public parkland, facilities and open space parcels per 1,000 residents. In addition, under Phase 6 of the project, an urban park/open space is envisioned in the eastern portion of the site that would provide additional outdoor recreational space to residents. Therefore, while the project would facilitate new housing development that would contribute additional residents to the city's population, the incremental increase in residents would not result in overuse of parks such that substantial physical alteration of parks would occur or require the construction of new park facilities. Impacts would be less than significant. Refer to Section 16, *Recreation*, for further discussion.

LESS THAN SIGNIFICANT IMPACT

a.5. Would the project result in substantial adverse physical impacts associated with the provision of other new or physically altered public facilities, or the need for new or physically altered public facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives?

As described in criteria a.1 – a.4 above, impacts related to expanded or altered government facilities, including fire, police, school, and park facilities, would be less than significant.

Other government facilities include library services, which are provided by the Salinas Public Library. The public library system in Salinas is comprised of three branch libraries: John Steinbeck Library, Cesar Chavez Library, and El Gabilan Library. The library collection includes more than 100,000 books, magazines, movies, and audiobooks, and a separate Steinbeck Collection of more than a thousand books, articles, and historical items. The closest library branch is the John Steinbeck Library located at 350 Lincoln Avenue, approximately 0.6 mile northwest of the project site.

As described in Section 14, *Population and Housing*, development facilitated by the proposed project would generate population growth of approximately 932 residents. This level of population growth would not be substantial in relation to the City's overall population and would thus not require construction of new library facilities. Therefore, impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

16 Recreation

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	■	☐
a. Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	■	☐

a. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

b. Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

Pursuant to the City's Park Classifications and Sports Facilities Standards that were adopted in 2018, parkland is classified to assist in planning for the community's recreational needs. The six classifications of parks in Salinas include community parks, neighborhood parks, small parks, school parks, greenways, and special use areas (Salinas 2019b). Each classification corresponds to a different size and type of park as well as a different population-based standard for parks to person ratios. According to a recreational facility inventory conducted in 2019, Salinas provides more than 648 acres of public parkland and recreation facilities distributed throughout 52 park sites and numerous open space parcels (Salinas 2019b). Table LU-4 of the Salinas General Plan establishes public services and facility service standards in the city, including standards for the city's parks and recreation services (Salinas 2002b). The service standard for parks in Salinas, as described by the Salinas General Plan is 3.0 acres of developed community parkland per 1,000 residents. The city's current estimated population is 160,206 residents (DOF 2021). Therefore, the existing ratio of all public parkland, facilities and open space parcels to residents in the city is approximately 4.04 acres for every 1,000 residents.

Recreational facilities nearest to the project site include the Salinas Parks and Recreation Center, La Paz Park, Clay Street Park, Bataan Memorial Park, and Cesar Chavez Community Park. Cesar Chavez Community Park is a larger community park facility with a minimum of 20 acres or larger of developed recreational space that serves several neighborhoods. La Paz Park is a medium-sized neighborhood park, which provides a social focus and recreational activities within a half mile walking distance of the neighborhood it serves. Clay Street Park and Bataan Memorial Park are small parks that are generally less than two acres in size and provide some recreation services to residents within a quarter mile walking distance (Salinas 2019b). The project would also be served by the

Hebbron Heights Recreation Center, which is scheduled to be rebuilt by 2025. These parks and recreation facilities are all within a one-mile radius of the project site.

As described in Section 14, *Population and Housing*, the proposed project would facilitate the development of 242 housing units and up to 149,300 square feet of new retail and office space at the project site and would increase the population of Salinas to 161,138. Therefore, the construction of 242 housing units under the proposed project would result in a parkland ratio of approximately 4.02 acres of all public parkland, facilities and open space parcels for every 1,000 residents. This would result in an incremental reduction in available recreation space per resident in the city. However, all public parkland, facilities and open space parcels ratio would still be above the minimum required standard of 3.0 acres of developed community parkland per 1,000 residents, and under Phase 6 of the project, an urban park/open space is envisioned in the eastern portion of the site that would provide additional outdoor recreational space to residents. Because the project would not appreciably decrease parkland-to-resident ratios and would include an urban park/open space, the project would not create substantial new demand on or cause substantial deterioration of parks such that new park facilities would be required. Accordingly, the project would have a less than significant impact on recreational facilities.

LESS THAN SIGNIFICANT IMPACT

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17 Transportation

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	☐	☐	■	☐
b. Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	☐	■	☐	☐
c. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible use (e.g., farm equipment)?	☐	☐	■	☐
d. Result in inadequate emergency access?	☐	☐	■	☐

This section is based in part on existing setting information included in the Salinas Mixed Use Master Plan Traffic Impact Analysis (Appendix F) completed by Keith Higgins, Traffic Engineer in February 2022, and on VMT Analysis (Appendix G) completed by Hexagon Transportation Consultants, Inc. in December 2022. The VMT Analysis was peer-reviewed by Kimley Horn in August 2022; their peer review is attached to Appendix G.

Existing Setting

Roadway Facilities

The project site is located at the southeast corner of Abbott Street and John Street (State Route [SR] 68), approximately 0.5 mile southeast of downtown Salinas and 0.4 mile west of U.S. Highway 101. The key roadways in the vicinity of the project include John Street, Abbott Street, Front Street, East Alisal Street, and U.S. Highway 101. These facilities are described below (Appendix F).

- **John Street** is a two- to four-lane major arterial south of downtown Salinas immediately north of the project site. It provides access to residential neighborhoods, commercial uses, and industrial and agricultural industrial facilities. Between South Main Street and South Wood Street in Salinas, John Street is also SR 68, which connects Salinas and Monterey. The posted speed limit on John Street is 30 mph west of Abbott Street and 35 mph east of Abbott Street.
- **Abbott Street** is a four-lane major arterial street immediately west of the project site, providing access to residential neighborhoods, commercial uses, and industrial and agricultural industrial facilities west of the Union Pacific railroad tracks. Its posted speed limit is 35 mph.

- **Front Street** is a two- to four-lane street in Salinas. Abbott Street terminates at its intersection with East San Luis Street northwest of the project site, with Front Street continuing on the northern side of East San Luis Street. North of Abbott Street, Front Street is a four-lane major arterial street providing access to residential and commercial properties. South of Abbott Street, Front Street is a two-lane local street that also provides access to residential neighborhoods and commercial properties. The posted speed limit on Front Street is 35 mph between East Alisal Street and Abbott Street and 25 mph north of East Alisal Street. The presumed speed limit on Front Street south of Abbott Street is 25 mph.
- **East Alisal Street** is a two- to four-lane major arterial street located approximately 0.4 mile north of the project site, providing access to residential neighborhoods and commercial properties east and west of downtown Salinas. It also provides access to downtown Salinas. Its posted speed limit is 35 mph east of Front Street and 25 mph west of Front Street.
- **U.S. Highway 101** is a regional north-south facility through the City of Salinas, located 0.4 mile east of the project site. It is currently a four-lane roadway with interchanges in the city. The posted speed limit through the city is 65 mph. The nearest and most direct interchange access point to the project from US 101 is the John Street (SR 68) interchange.

Bicycle Facilities

There are four types of bicycle facilities defined by the California Department of Transportation (Caltrans). Types of bicycle facilities are described below (Appendix F):

- **Bike Path (Class I):** A separate right-of-way designed for the exclusive use of bicycle and pedestrian traffic with crossflow minimized.
- **Bike Lane (Class II):** A striped lane for one-way bike travel on a street or highway, typically including signs placed along the street segment.
- **Bike Route (Class III):** Provides a shared use with pedestrian or motor vehicle traffic. Typically, these facilities are city streets with signage designating the segment for Bike Route without additional striping or facilities.
- **Separated Bikeways (Class IV):** A bikeway for the exclusive use of bicycles and includes a separation between the bikeway and the through vehicular traffic. The separation may include, but is not limited to, grade separation, flexible posts, inflexible posts, inflexible barriers, or on-street parking.

Bike lanes (Class II) are located along both sides of Abbott Street between Harkins Road and Front Street, or for approximately 1.6 miles. Bike lanes are also located along both sides of John Street between Wood Street and South Sanborn Road east of the project site, and along Front Street between Abbott Street and East Alisal Street. Bike routes (Class III) are located along Maple Street west of Abbott Street. All of SR 68 in Salinas, including John Street, is designated as a Caltrans bike route; however, there are not physical bicycle facilities or signs on John Street indicating this designation.

Pedestrian Facilities

Sidewalks are nearly continuous in the area surrounding the project site. There is a sidewalk approximately five feet in width along project site frontages on John Street and Abbott Street, and these sidewalks connect to nearly all other sidewalks in the surrounding area. Gaps in the sidewalk identified by the Salinas Mixed Use Master Plan Traffic Impact Analysis (Appendix F) include John Street at the at-grade Union Pacific railroad crossing in both directions. Crosswalks are striped at all

intersections studied by the traffic impact analysis. Near the project site, all crosswalks are striped across all approaches at the intersection of John Street and Abbott Street. Crosswalks are partially striped at the following intersections near the project site (Appendix F):

- Spring Street and John Street (across northern portion of Spring Street)
- Front Street and John Street (across northern and southern portions of Front Street)
- Abbott Street and Maple Street (across Maple Street and northern portion of Abbott Street)
- Abbott Street and Alameda Avenue (across western portion of Alameda Avenue and northern portion of Abbott Street)

Transit Facilities

Monterey-Salinas Transit (MST) provides fixed route bus service near the project site, and both Greyhound and Amtrak provide regional transit options from the Intermodal Transportation Center, located approximately one mile northwest of the project site. Two MST bus lines provide service near the project site (Appendix F, MST 2022):

- **Line 23, Salinas – King City.** This line provides weekday and weekend service roughly every 30-120 minutes between roughly 4:00 AM – 10:30 PM.
- **Line 86, King City – San Jose Airport.** This line provides weekday service via four runs (two AM runs and two PM runs) and weekend service via eight runs (four AM runs and four PM runs).

There are three MST bus stops in the vicinity of the project site, all along Abbott Street served by Line 23. Bus stops are located at (Appendix F, MST 2022):

- North of Maple Street adjacent to the project site, providing northbound service.
- South of John Street across Abbott Street from the project site, providing southbound service.
- North of Summer Street, 700 feet north of the project site along Abbott Street, providing northbound service.

Impact Analysis

a. Would the project conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

Roadway Facilities

Level of Service (LOS) is a qualitative measure used to describe the operating conditions of a roadway or intersection based on speed, travel time, and delay. LOS is described in a ranking system from A to F, with LOS A describing free-flow traffic with individual roadway users primarily unaffected by other vehicles and LOS F describing forced traffic flow characterized by stop and go waves of movement. Senate Bill (SB) 743 has phased out the use of LOS to determine potential transportation impacts under CEQA and replaces the metric with vehicle miles traveled (VMT), or the total number of miles of vehicle travel associated with a project or area divided by its population. SB 743 became effective in July 2020; however, the City of Salinas' General Plan includes policies related to LOS that still apply to the City and new development. Policy C-1.2 states that the City shall strive to maintain LOS D or better at all intersections and roadways, and Policy C-1.3 requires new development to demonstrate that traffic levels meeting established General Plan standards will be maintains on arterial and collector streets. In evaluating project consistency with

the City's General Plan, a comparison of LOS is still required per General Plan Policies C-1.2 and C-1.3. This analysis is provided for informational purposes.

The Salinas Mixed Use Master Plan Traffic Impact Analysis prepared for the project (Appendix F) studied 11 intersections in the vicinity of the project site and evaluated their existing LOS during AM and PM peak hours. Of these intersections, four currently operate at LOS D or lower and their LOS deficiencies would be exacerbated by the project. These intersections, their current AM and PM LOS, and their projected LOS with implementation of the project are shown in Table 16.

Table 21 Intersections with Below-Standard Level of Service

Intersection	Existing LOS	LOS with Project
John Street and Abbott Street	LOS D (AM), LOS E (PM)	LOS E (AM, PM)
Spring Street and John Street	LOS D (AM), LOS F (PM)	LOS F (AM, PM)
Abbott Street and Maple Street	LOS F (AM), LOS E (PM)	LOS F (AM, PM)
Abbott Street and Alameda Avenue	LOS E (AM, PM)	LOS E/F (AM), LOS F (PM)

As indicated above, the LOS of these intersections would be impacted by the project, which would result in intersection LOS inconsistent with General Plan Policies C-1.2 and C-1.3. The City of Salinas would require the following recommendations in Appendix F be incorporated to the project as conditions of approval, which would improve LOS at the impacted intersections.

Recommendations included in the Salinas Mixed Use Master Plan Traffic Impact Analysis to be incorporated as conditions of approval:

- **John Street and Abbott Street**
  - Add a second westbound left turn lane on John Street
  - Add a second northbound right turn lane on Abbott Street
  - Would improve conditions to LOS D
- **Spring Street and John Street**
  - Prevent eastbound left turn movement on John Street
  - Eliminate the existing westbound left turn movement on John Street
  - Prevent northbound left and through movements on Spring Street
  - Prevent southbound left and through movements on Spring Street
  - Would improve conditions to LOS C
- **Abbott Street and Maple Street (project driveway)**
  - Add an eastbound right turn lane on Maple Street by prohibiting on-street parking along approximately 75 feet of Maple Street near this intersection
  - Add a northbound left turn lane on Abbott Street
  - Add a southbound left turn lane on Abbott Street
  - Provide separate westbound left/through and right turn lanes on Maple Street (project exit)
  - Would improve conditions to LOS B (AM) and LOS D (PM)

Implementation of the above conditions of approval, in addition to the payment of Traffic Ordinance Fees, would improve the LOS of the intersections of John Street and Abbott Street, Spring

Street and John Street, and Abbott Street and Maple Street. Therefore, the project would be consistent with General Plan Policies C-1.2 and C-1.3. Impacts to roadways would be less than significant.

Bicycle Facilities

As discussed under *Existing Setting,* there are several Class II and Class III bicycle facilities located in the vicinity of the project site, including bicycle lanes on Abbott Street along the project frontage. The project is anticipated to generate a minor amount of bicycle traffic (Appendix F), and levels would not exceed those anticipated by the Transportation Agency for Monterey County's Bicycle and Pedestrian Master Plan (Appendix F). Additionally, the project would provide the required number of bicycle parking spaces pursuant to Section 37-50.400 of Salinas Municipal Code. Therefore, existing facilities would adequately accommodate additional bicycle traffic generated by the project, and impacts would be less than significant.

Pedestrian Facilities

As discussed under *Existing Setting,* sidewalks are nearly continuous in the area surrounding the project site, including along project frontages. Pedestrian activity is anticipated to increase due to the project; however, the existing signal at the intersection of John Street and Abbott Street and the recommended signal at Abbott Street and Maple Street would adequately facilitate anticipated pedestrian crossings on John Street and Abbott Street (Appendix F). Therefore, impacts to pedestrian facilities would be less than significant.

Transit Facilities

As discussed under *Existing Setting,* three MST bus lines provide service near the project site with three stops located along the project site frontage. Projected transit demand associated with the project would be minimal and would be accommodated by existing transit service in the project area. Furthermore, the project would be required to pay applicable fees pursuant to the City's Traffic Fee Ordinance and the Transportation Agency for Monterey County's Regional Development Impact Fee. Payment of these fees would support development and maintenance of transit facilities serving the project site. Therefore, project impacts associated with transit facilities would be less than significant.

Development of the project site would not conflict with a program, plan, ordinance or policy addressing the circulation system, including pedestrian, bicycle, and transit facilities. This impact would be less than significant.

LESS THAN SIGNIFICANT IMPACT

b. Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?

Section 15064.3 of the CEQA Guidelines replace congestion-based metrics, such as auto delay and LOS, with VMT as the basis for determining significant impacts. In adherence to SB 743, the City of Salinas has adopted its SB 743 Implementation Policy, which aligns with the Office of Planning and Research (OPR) *Technical Advisory on Evaluating Transportation Impacts in CEQA.* The City's VMT Evaluation Tool (shown in Appendix G) was used to determine VMT generated by the project. In accordance with the City's SB 743 Implementation Policy and OPR guidance, the project would result in a significant impact if it would generate VMT greater than 6.6 VMT per employee or 9.7 per

resident, both of which are 15 percent below the countywide average. If it is anticipated that a project would have a significant impact on VMT, the impact must be reduced by modifying the project and/or implementing mitigation measures, which could include a travel demand management program, to reduce its VMT to an acceptable level.

Hotel Use

The project would include a 111-room hotel, which would be constructed under Phase 1 of the project. Hotels are not explicitly included in the City of Salinas' VMT policy or in the OPR VMT guidelines; however, the VMT analysis for the proposed hotel can be considered equivalent to retail use. Hotels exhibit similar vehicle mode share characteristics, travel patterns, and trip length characteristics to that of local retail uses (Appendix G). Therefore, based on trip generation estimates, the 111-room hotel would generate daily trips equivalent to 9,000 square feet of retail space (see Appendix G for further information). This small amount of equivalent retail space meets the screening criterion set forth in the City's VMT Guidelines, which are established to screen out projects not anticipated to result in significant impacts related to VMT. The applicable screening criterion is defined as local serving retail of 50,000 square feet or less; therefore, the proposed hotel component of the project would be expected to result in less than significant VMT impacts.

Other Project Uses

The project would include other mixed use land uses, including 242 dwelling units and 107,900 square feet of retail to be constructed during future phases of future development. The City of Salina's VMT Guidelines include screening criteria for projects that are expected to result in a less-than-significant VMT impact based on the project description, characteristics, and/or location. The screening criteria set forth in the City's VMT Guidelines retail, medical office, and residential uses are based upon local-serving retail, local essential services, and residential uses. These screening criteria and the project's consistency are demonstrated in the following sections and discussed further in Appendix G.

Local-Serving Retail

Projects are presumed to cause a less than significant impact if:

- No single store on-site exceeds 50,000 square feet; and
- Project is local-serving as determined by the City of Salinas, unless the nature of the service is regionally focused as determined by the City of Salinas

The project would include 109,700 square feet of local-serving retail spaces across several buildings, with a maximum store size of 13,000 square feet in one building. Therefore, the proposed retail component of the project site would meet this screening criterion, and impacts would be less than significant.

Local Essential Service

Projects are presumed to cause a less than significant impact if:

- Building is less than 50,000 square feet; and
- Land use consists of day care center, a public K-12 school, a police or fire facility, a medical or dental office building, or government offices, unless the nature of the service is regionally focused as determined by the City of Salinas.

The project would include 13,440 square feet of medical office space, which is considered local essential service, the size of which is below 50,000 square feet. Therefore, the proposed medical office space component of the project would meet this screening criterion, and impacts would be less than significant.

Residential

Based on the City's VMT Guidelines, the VMT impact threshold for residential development is 9.7 VMT, which is 15 percent below existing countywide average VMT per capita. As specified in the City's VMT Guidelines, residential development is presumed to cause a less than significant impact if:

- The area of development is under threshold as shown on the City's screening map, as allowed by the City of Salinas; unless
- The project would represent significant growth that would substantially change regional travel patterns, as determined by the City of Salinas.

The project site is located in Traffic Analysis Zone (TAZ) 1263, which is located within an area indicated to have residential VMT per capita that is at or below 15 percent below the countywide average, as shown on the Residential VMT per Capita Map (Appendix G). Therefore, the project's residential component would have a less than significant impact.

Office

The project would include approximately 17,460 square feet of office space, which would be constructed under Phase 3 and Phase 7 of the project. The project is located in TAZ 1263, as shown in Appendix G; the existing daily VMT per employee for office uses within this TAZ is estimated to be 7.57. Assuming office use VMT would be similar under the proposed project, 7.57 VMT per project employee would exceed the threshold of 6.6 VMT per employee. Therefore, the future office components of the project would be required to implement Mitigation Measure TRA-1 to reduce its VMT to a less than significant level.

TRA-1 Office Use VMT Reduction Program

The applicant for future office use development shall prepare and implement a VMT Reduction Program that reduces VMT generated by the office components of the project to VMT per employee of 6.6 or less. The VMT Reduction Program shall be reviewed and approved by the City prior to approval of permits for proposed office uses. The strategies shall include the following:

- **Reduce Transit Headways and Improve On-Street Bike Facilities.** Queue jump lanes shall be installed for northbound MST buses at the Maple Street and Abbott Street intersection, and bike lanes shall be installed along project site frontages with John Street and Abbott Street. The project applicant shall pay for the cost of installation of queue jump lanes and bike lanes.
- **Safe and Well-Lit Access to Transit**. Office uses shall include pedestrian facility improvements along street frontages, which shall include exterior lighting along project frontages served by transit.
- **Preferential Carpool/Vanpool Parking Spaces**. Office uses shall include reserved carpool/vanpool spaces close to the building entrances based on the City's parking requirements.

- **Designated Parking Spaces for Car Sharing Vehicles.** Office uses shall provide designated parking spaces for car sharing vehicles.
- **Bike Charging Facility.** Office uses shall include a secure bike charging facility on site.
- **Pedestrian Network Improvements**. Office uses shall involve pedestrian network improvements throughout and around the project site that encourage people to walk.
- **Multimodal Wayfinding Signage.** Office uses shall include multimodal wayfinding signage to orient users to locations of sustainable transportation.
- **Bicycle Repair Station/Services.** Office uses shall include on-site bicycle repair tools and space to use them to support on-going use of bicycles for transportation.

As shown in the VMT summary report generated by the City's VMT Evaluation Tool (Appendix G), implementing the above listed mitigation measures would lower the project VMT to 6.555 per employee, which would reduce the project impact to a less-than-significant level.

Proposed components of the project meet the appliable VMT screening criteria as established by the City's VMT Guidelines. Therefore, the project would not conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b), and impacts would be less than significant with mitigation.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

c. Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible use (e.g., farm equipment)?

The project would utilize existing vehicle driveways on John Street, Abbott Street, Spicer Street, as well as future driveways included in the project. The project plans would also be subject to review by the Salinas Fire Department prior to issuance of building permit, and the project would not introduce sharp curves, dangerous intersections, or other hazards due to design features. Furthermore, the project would involve development of residential, hotel, retail, and medical office uses, which would involve typical passenger vehicle traffic of the area and would not introduce incompatible uses on the project site. Therefore, impacts related to hazards or incompatible uses would be less than significant.

LESS THAN SIGNIFICANT IMPACT

d. Would the project result in inadequate emergency access?

The design of the project is required to comply with the County's standards for emergency vehicle access (including providing adequate points of access, vertical clearance, and turning radius). Emergency vehicle access would be provided via existing vehicle driveways on John Street, Abbott Street, and Spicer Street, and future driveways included as part of the project. Should any phase of future development require a lane closure of any of the surrounding roadways, including during upsizing of the sanitary sewer main along Abbott Street, clear signage (e.g., closure and detour signs) would be provided to ensure vehicles, pedestrians and bicyclists are able to adequately reach their intended destinations safely. In operation, the applicant would be required to provide the City with a detailed plan demonstrating that each floor of the proposed buildings would be accessible by a fire aerial apparatus, fire hoses, and other emergency vehicles from surrounding roadways. The project plans would also be subject to review by the Salinas Fire Department to ensure that adequate emergency access would be available prior to issuance of building permits. Therefore, the

project would not result in inadequate emergency access and the impact would be less than significant.

LESS THAN SIGNIFICANT IMPACT

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18 Tribal Cultural Resources

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in a Public Resources Code Section 21074 as either a site, feature, place, or cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
a. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k)?	☐	■	☐	☐
b. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1? In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	■	☐	☐

California Public Resource Code (PRC) Section 21074 (a)(1)(A) and (B) defines tribal cultural resources as "sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe" and is:

1. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or
2. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying these criteria, the lead agency shall consider the significance of the resource to a California Native American tribe.

Assembly Bill 52 (AB 52) establishes a formal consultation process for California tribes regarding those resources. The consultation process must be completed before a CEQA document can be

certified. Under AB 52, lead agencies are required to "begin consultation with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project." Native American tribes to be included in the process are those that have requested notice of projects proposed within the jurisdiction of the lead agency.

On November 3, 2021, the City of Salinas, pursuant to Public Resources 21080.3.1 and AB 52, sent via certified mail notification letters to 14 California Native American Tribes that are traditionally and culturally affiliated with the project area. The letter was sent to representatives of the Amah Mutsun Tribal Band, Amah Mutsun Tribal Band of Mission San Juan Bautista, Costanoan Rumsen Carmel Tribe, Esselen Tribe of Monterey County, Indian Canyon Mutsun Band of Costanoan, KaKoon Ta Ruk Band of Ohlone-Costanoan Indians of the Big Sur Rancheria, Ohlone/Costanoan-Esselen Nation, Rumšen Am:a Tur:ataj Ohlone, Salinan Tribe of Monterey and San Luis Obispo Counties, Santa Rosa Rancheria Tachi Yokut Tribe, Wuksachi Indian Tribe/Eshom Valley Band, and the Xolon Salinan Tribe. As of December 4, 2021, the City did not receive requests for additional consultation.

As part of the process of identifying cultural resources for this project, Rincon contacted the Native American Heritage Commission (NAHC) on September 13, 2021 and requested a Sacred Lands File (SLF) search. On October 20, 2021, Rincon received a response from the NAHC stating the SLF search results were negative for site-specific information.

a. *Would the project cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code Section 21074 that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k)?*

b. *Would the project cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code 21074 that is a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1?*

Neither the cultural resources records search nor Native American consultation through AB 52 identified cultural resources listed on or eligible for listing on the CRHR or a local register within the project site. However, there is always potential to uncover buried archaeological and tribal cultural resources during ground disturbing activities, which could potentially be considered tribal cultural resources eligible for listing in the CRHR or a local register or be considered tribal cultural resources. Should project construction activities encounter and damage or destroy a tribal cultural resource or resources, impacts would be potentially significant. Mitigation Measure TCR-1 would ensure that tribal cultural resources are preserved in the event they are uncovered during construction and would reduce impacts regarding disrupting tribal cultural resources to a less than significant level.

Mitigation Measure

TCR-1 Inadvertent Discoveries During Construction

In the event that cultural resources of Native American origin are identified during grading or construction, all earth disturbing work within the vicinity of the find shall be temporarily suspended or redirected until a qualified archaeologist has evaluated the nature and significance of the find; an appropriate Native American representative, based on the nature of the find, is consulted; and mitigation measures are put in place for the disposition and protection of any find pursuant to Public Resources Code Section 21083.2. If the City, in consultation with local Native Americans,

determines that the resource is a tribal cultural resource and thus significant under CEQA, a mitigation plan shall be prepared and implemented in accordance with state guidelines and in consultation with local Native American group(s) prior to continuation of any earth disturbing work within the vicinity of the find. The plan shall include avoidance of the resource or, if avoidance of the resource is infeasible, shall outline the appropriate treatment of the resource in coordination with the appropriate local Native American tribal representative and, if applicable, a qualified archaeologist. Examples of appropriate mitigation for tribal cultural resources include, but are not limited to, protecting the cultural character and integrity of the resource, protecting traditional use of the resource, protecting the confidentiality of the resource, or heritage recovery.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

19 Utilities and Service Systems

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☐	☐	■	☐
b. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	☐	☐	■	☐
c. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	■	☐
d. Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	■	☐
e. Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	■	☐

Water

Water for the proposed project would be provided by Cal-Water via existing utilities on and adjacent to the project site. The Cal-Water Salinas District relies entirely on groundwater, with wells that extract water from five different groundwater basins, including the Corralitos-Pajaro Valley Subbasin, Salinas Valley-Langley Area Subbasin, Salinas Valley-180/400 Foot Aquifer Subbasin, Salinas Valley-East Side Aquifer Subbasin, and Salinas Valley-Monterey Subbasin.

The California Urban Water Management Planning Act requires that each water supplier provide an assessment of the reliability of its water supply during normal, dry, and multiple dry years. Table 17

shows Cal-Water's assessment for normal, single dry, and multiple dry year periods, estimating supply and demand for the Salinas District during the years 2025, 2030, 2035, 2040, and 2045.

Table 22 Multiple Dry Years Water Supply and Demand – Salinas District

	2025	2030	2035	2040	2045
Normal Year					
Total Supply (AFY)	16,609	16,988	17,575	18,175	18,853
Total Demand	16,609	16,988	17,575	18,175	18,853
Supply Shortage?	**No**	**No**	**No**	**No**	**No**
Single Dry Year					
Total Supply (AFY)	17,152	17,542	18,147	18,765	19,464
Total Demand	17,152	17,542	18,147	18,765	19,464
Supply Shortage?	**No**	**No**	**No**	**No**	**No**
First Dry Year					
Total Supply (AFY)	17,489	17,886	18,501	19,130	19,842
Total Demand	17,489	17,886	18,501	19,130	19,842
Supply Shortage?	**No**	**No**	**No**	**No**	**No**
Second Dry Year					
Total Supply (AFY)	17,489	17,886	18,501	19,130	19,842
Total Demand	17,489	17,886	18,501	19,130	19,842
Supply Shortage?	**No**	**No**	**No**	**No**	**No**
Third Dry Year					
Total Supply (AFY)	17,489	17,886	18,501	19,130	19,842
Total Demand	17,489	17,886	18,501	19,130	19,842
Supply Shortage?	**No**	**No**	**No**	**No**	**No**
Fourth Dry Year					
Total Supply (AFY)	17,489	17,886	18,501	19,130	19,842
Total Demand	17,489	17,886	18,501	19,130	19,842
Supply Shortage?	**No**	**No**	**No**	**No**	**No**
Fifth Dry Year					
Total Supply (AFY)	17,489	17,886	18,501	19,130	19,842
Total Demand	17,489	17,886	18,501	19,130	19,842
Supply Shortage?	**No**	**No**	**No**	**No**	**No**

Source: Cal-Water 2021

Wastewater

Monterey One Water (M1W) provides wastewater collection, treatment, and disposal services for the City of Salinas. Wastewater is transported to the M1W Regional Treatment Plant (RTP) located in Marina. The RTP is designed with a daily capacity of 29.6 million gallons for secondary and tertiary treatment, and 5 million gallons for advanced purification for groundwater replenishment (M1W 2021). The RTP treats an average of 17 million gallons per day and has a remaining capacity of 12.6 million gallons per day (M1W 2021).

Stormwater

The City of Salinas owns and operates a municipal storm drainage system for the residents and businesses within its service area. The storm drain system consists of approximately 74 miles of pipeline ranging in diameter from 18 inches to 84 inches, and is organized according to watersheds within the City, including Carr Lake, Gabilan Creek, Natividad Creek, and the Salinas River. The drainage system within each watershed consists of branches of pipes that drain to the receiving watershed, flowing by gravity except for the Salinas River outfall (City of Salinas 2004).

Electricity, Natural Gas, and Telecommunications

As described under Section 6, *Energy,* the project site would receive power from 3CE, the region's community choice electricity provider, and natural gas from PG&E. PG&E maintains power lines along several streets east of the project site including Winham Street, Harvest Street, and Maple Street, as well as west of the project site along Work Street (PG&E 2021a). TV and internet services provided by AT&T, Spectrum, EarthLink, Xfinity, and other service providers are available in the project area and would be used at the discretion of future residents and tenants.

a. Would the project require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

Water

Development of the proposed hotel and future development would increase demand for water above existing conditions on the project site. According to CalEEMod outputs (Appendix B), the hotel's estimated water demand would be approximately 9.4 AFY at full buildout, which represents less than a one percent increase above Cal-Water Salinas District's 2020 water demand of 16,497 AFY. Based on normal year water supply estimates, the increase in water demand from the proposed hotel would not exceed available water supplies of 23,569 AFY in the Salinas District. Existing supplies would be sufficient to meet forecasted water demand for the hotel. Furthermore, according to CalEEMod outputs (Appendix B), the estimated water demand from future development would be approximately 171 AFY at full buildout, which is an approximately 1 percent increase above Cal-Water Salinas District's 2020 water demand of 16,497 AFY (Appendix B). Based on normal year water supply estimates, the increase in water demand from Phases 2 through 7 would not exceed available water supplies of 23,569 AFY in the Salinas District. Accordingly, the hotel under Phase 1 and future development under remaining project phases would be accommodated adequately by existing water supplies and would not require additional water supply facilities that would cause significant environmental effects.

Wastewater

The hotel's estimated wastewater generation would be approximately 7.5 AFY, or 2.04 million gallons per year (assuming water use is approximately 120 percent of wastewater generation), or approximately 5,590 gallons per day. The estimated wastewater generation from future development under the remaining phases would be approximately 137 AFY, or 44.6 million gallons per year, or approximately 122,190 gallons per day. This would represent approximately 1 percent of the RTP wastewater treatment plant remaining capacity. Combined, the estimated wastewater generated by the hotel and future development would represent approximately 1 percent of the RTP wastewater treatment plant's remaining capacity. Therefore, the RTP has capacity to meet the wastewater treatment demands that would be generated by the proposed hotel and future development.

The project would increase wastewater flows in the sanitary sewer main lines that serve the project site. According to information provided by the City, the sanitary sewer main lines that would serve the project are anticipated to exceed peak flow capacity in future conditions. The net increase in wastewater generated by the proposed project would contribute to the sanitary sewer main lines exceeding capacity. The project would involve upsizing of a portion of the sanitary sewer main beneath Abbott Street from an 8-inch sewer to a 12-inch sanitary sewer main to serve the proposed project development. As discussed throughout this document, the project, including the upsized sanitary sewer main, would not result in significant effects to the environment. Other new or expanded wastewater facilities would not be required, and impacts would be less than significant.

Stormwater

The project would be designed and engineered with appropriate drainage features. As discussed in Section 10, *Hydrology and Water Quality*, the project proponent would be required to comply with the City of Salinas MS4 Permit (Order No. R3-2019-0073, NPDES Permit No. CA0049981), which requires the volume of runoff from an 95th percentile storm event be retained on site through either retention basins or bioretention facilities. The project would not require the construction of new off-site stormwater drainage facilities or expansion of existing facilities. Impacts would be less than significant.

Electricity, Natural Gas, and Telecommunications

A significant impact to electricity, natural gas, and telecommunications facilities may occur if a project's demand for these services exceeds the capacity of local providers. Telecommunications are generally available in the project area, and facility upgrades would not likely be necessary.

As described in Section 6, *Energy*, the proposed hotel would require approximately 500 MWh of electricity per year and approximately 3,074 MMBtu of natural gas per year. Future development proposed under the remaining project phases would require approximately 4,116 MWh of electricity per year and approximately 10,570 MMBtu of natural gas per year. The substation that powers lines in the vicinity of the project site has a capacity of approximately 202 megawatts (MW) and a typical load of approximately 110 MW, with a remaining capacity of 92 MW (PG&E 2021a). The proposed four-story hotel would require approximately 0.06 MW,[7] less than 1 percent of the remaining capacity of the PG&E substation that serves the project site, and the future development

[7] Full buildout of the proposed hotel under Phase 1 of the project would require 500 MWh per year. 500 MWh per year/365 days per year/24 hours per day = 0.06 MW.

proposed under the remaining project phases would require approximately 1.2 MW,[8] approximately 1.3 percent of the remaining capacity of the PG&E substation. Furthermore, PG&E has adequate natural gas storage to ensure adequate natural gas supply, with an average inventory of approximately 4,186 million cubic feet (MMcf) per day (PG&E 2021b). Accordingly, the hotel under Phase 1 and future development under the remaining project phases would be accommodated adequately by existing electricity, natural gas, and telecommunication facilities and would not require improvements to existing facilities, or the provision of new facilities, that would cause significant environmental effects. This impact would be less than significant.

b. Would the project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

Estimated water demand for the proposed four-story hotel is 9.4 AFY at buildout, and estimated water demand for future development proposed under the remaining project phases is 171 AFY at buildout. As shown in Table 17, available supply is expected to be adequate to serve projected water demand for the normal, single dry, and multiple dry year scenarios assessed through 2045. Considering the additional water demand resulting from the proposed hotel and future development, adequate water supply would be available to serve full buildout of the project site in any of the above water year scenarios through 2045. However, it should be noted that water supply available through the Cal-Water Salinas District experience small shortfalls, specifically a 2 percent and 4 percent shortfall, respectively, anticipated in 2040 under single dry year and multiple dry year conditions as well as a slight shortfall increase in 2045 (Cal-Water 2021). Any potential dry year shortfalls in 2040 or 2045 in the Cal-Water Salinas District service areas would be alleviated through implementation of the Salinas District's Water Shortage Contingency Plan and other supply augmentation measures (Cal-Water 2021). Therefore, adequate water supply facilities would be available to serve the hotel and future development for the reasonably foreseeable future, and the project site's water system would connect to existing water supply infrastructure. Water supply impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

c. Would the project result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

Sanitary sewer service for the project would be provided by M1W, which operates the RTP. As described above, the RTP has a remaining capacity of 12.6 million gallons per day (M1W 2021). The proposed four-story hotel's estimated wastewater generation would be approximately 7.5 AFY or 2.04 million gallons per year (assuming water use is approximately 120 percent of wastewater generation), or approximately 5,590 million gallons per day. This demand would amount to less than 1 percent of RTP wastewater treatment plant remaining capacity. Under Phases 2 through 7, estimated wastewater generation would be approximately 137 AFY, or 44.6 million gallons per year, or approximately 122,190 gallons per day. This would represent approximately 1 percent of the remaining capacity of the RTP wastewater treatment plant.

As discussed under threshold (a), the project would involve upsizing of a portion of the sanitary sewer main beneath Abbott Street from an 8-inch to a 12-inch line to serve project buildout. The

[8] Full buildout of the development under the remaining project phases would require 10,570 MWh per year. 10,570 MWh per year/365 days per year/24 hours per day = 1.2 MW.

upsized sanitary sewer main, completed as part of the project, would ensure that future development facilitated by the project would be served by wastewater treatment facilities with adequate capacity. Therefore, the project would be served by a wastewater treatment plant with sufficient capacity, and impacts related to wastewater treatment would be less than significant.

LESS THAN SIGNIFICANT IMPACT

d. Would the project generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

e. Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

To comply with the California Integrated Waste Management Act of 1989 (AB 939), the City must divert at least 50 percent of its solid waste from landfills. In addition, Assembly Bill 341 (AB 341) sets a statewide 75 percent recycling goal by 2020. AB 341 also requires businesses generating more than four cubic yards of solid waste to recycle and requires owners of multi-family housing with five or more units to provide recycling for their tenants.

The Salinas Valley Solid Waste Authority transports solid waste generated in the City of Salinas to the Johnson Canyon Landfill. The landfill is permitted to receive a maximum throughput of 1,574 tons per day. The landfill has remaining capacity of 6,923,297 cubic yards an estimated closure date of 2055 (California Department of Resources Recycling and Recovery [CalRecycle] 2019).

Based on CalEEMod outputs (Appendix B), the proposed four-story hotel developed under Phase 1 would generate approximately 61 tons per year (approximately 334 pounds of solid waste per day). Assuming a minimum of 50 percent diversion from landfills in accordance with AB 939, the project would send approximately 167 pounds per day, or 0.083 tons per day, to the Johnson Canyon Landfill. This represents less than one percent of the landfill's allowable daily throughput. Development under future project phases would generate approximately 626 tons per year (approximately 3,430 pounds of solid waste per day) (Appendix B). Assuming a minimum of 50 percent diversion from landfills in accordance with AB 939, the project would send approximately 1,715 pounds per day, or 0.85 tons per day, to the Johnson Canyon Landfill, which represents less than one percent of the landfill's remaining capacity. Therefore, the project would be served by a landfill with sufficient available capacity and would comply with applicable regulations related to solid waste. Impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

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20 Wildfire

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
a. Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	■
b. Due to slope, prevailing winds, and other factors, exacerbate wildfire risks and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☐	☐	■
c. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☐	■
d. Expose people or structures to significant risks, including downslopes or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	☐	■

While nearly all of California is subject to some degree of wildfire hazard, there are specific features that make certain areas more hazardous. CAL FIRE is required by law to map areas of significant fire hazards based on fuels, terrain, weather, and other relevant factors (Public Resources Code [PRC] 4201-4204, California Government Code 51175-89). The primary factors that increase an area's susceptibility to fire hazards include topography and slope, vegetation type and vegetation condition, and weather and atmospheric conditions. CAL FIRE maps fire hazards based on zones, referred to as Fire Hazard Severity Zones. Each of the zones influence how people construct buildings and protect property to reduce risk associated with wildland fires. Under state regulations, areas within Very High Fire Hazard Severity Zones (VHFHSZ) must comply with specific building and vegetation management requirements intended to reduce property damage and loss of life within these areas.

In California, responsibility for wildfire prevention and suppression is shared by federal, state, and local agencies. Federal agencies have legal responsibility to prevent and suppress wildfires in Federal Responsibility Areas. CAL FIRE prevents and suppresses wildfires in State Responsibility Area

lands, which are non-federal lands in unincorporated areas with watershed value, are of statewide interest, defined by land ownership, population density, and land use. Wildfire prevention and suppression in Local Responsibility Areas (LRA) are typically provided by city fire departments, fire protection districts, counties, and by CAL FIRE under contract to local government. These lands include incorporated cities, cultivated agriculture lands, and portions of the desert (CAL FIRE 2020).

The PUD site is within a developed and urbanized area, with minimal vegetation. The site is not within a State Responsibility Area (SRA) and is not within an area classified as Very High, High, or Moderate for fire hazard severity. The nearest VHFHSZ occurs approximately five miles south of the site, and the nearest SRA with a hazard severity rating is located more than six miles southwest of the site (CAL FIRE 2007).

a. *If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project substantially impair an adopted emergency response plan or emergency evacuation plan?*

b. *If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project, due to slope, prevailing winds, and other factors, exacerbate wildfire risks and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?*

c. *If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?*

d. *If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project expose people or structures to significant risks, including downslopes or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?*

The PUD site is not located within or near a SRA or VHFHSZ (CAL FIRE 2007), and the site is surrounded by developed land and paved urban areas. All areas immediately adjacent to the site are non-VHFHSZs. As discussed in Section 15, *Public Services,* the Salinas Fire Department provides emergency response and public safety services for the site. In addition, the project would not involve the installation of overhead powerlines or other infrastructure that may exacerbate fire risk. Emergency access to the site would be maintained, and the Salinas Fire Department would review and inspect project plans and development to ensure adequate emergency access. Therefore, the project would not impair adopted emergency response or evacuation plans; exacerbate wildfire risk and expose occupants to wildfire pollutant concentrations or the uncontrolled spread of wildfire; construct utilities that would exacerbate fire risk; or subject occupants to risks related to post-fire slope instability. There would be no impact.

NO IMPACT

21 Mandatory Findings of Significance

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Does the project:				
a. Have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	■	☐	☐
b. Have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	☐	■	☐
c. Have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	■	☐	☐

a. Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

Neither the proposed hotel under Phase 1 of the project nor future development under the remaining project phases would not degrade the quality of the environment or substantially reduce habitat of fish or wildlife species or other special-status species, as the project is located within a developed area of Salinas. There are no sensitive habitats or wetlands located on or near the project site, and no special-status species are known to occupy the site. As discussed in Section 4, *Biological Resources,* construction of the project would require the removal of existing trees and landscaping, which migratory birds could use for nest sites. Mitigation Measure BIO-1 would require that tree

removal occur outside the migratory bird nesting season, if feasible, and if not feasible, that a nesting bird survey be performed prior to construction. With implementation of mitigation, impacts to nesting birds would be less than significant. All other biological resources impacts would be less than significant without mitigation.

The project would not eliminate important examples of the major periods of California prehistory or history. The project would not result in impacts to built historic resources, as none are located the project site. As discussed in Section 5, *Cultural Resources,* the project site was historically a produce packing facility. The project site has not yielded and is unlikely to yield information important in prehistory or history; as such, the project site is not recommended eligible for listing as a contributor to any existing or potential historic district, and is recommended ineligible for listing on the NRHP or CRHR, or for local designation to the City of Salinas Historic Register, and therefore is not considered a historical resource as defined by CEQA. Damage or destruction of archaeological resources and human remains, if present, would be a potentially significant impact. Mitigation Measures CUL-1 and TCR-1 would require archaeological and Native American monitoring, and would require implementation of protective measures should archaeological, paleontological, or Tribal cultural resources be encountered. Implementation of mitigation would ensure that impacts related to cultural and Tribal cultural resources would be less than significant.

With mitigation, the project would not have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory. Impacts would be less than significant with mitigation.

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b. Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?

The cumulative setting includes proposed and approved projects within a one-mile radius of the project site. Cumulative projects were based upon a list of projects available for public review and comment on the City of Salinas website as well as approved projects within the area, including the Downtown Parking Lot and Intermodal Transportation Center Rezone Project, 11 Hill Circle Residential Project, and 1 Preston Street Project.

As described in Sections 2.1 through 2.20, Neither the proposed hotel under Phase 1 of the project nor future development under the remaining project phases would not result in significant and unmitigable impacts to the environment with respect to all environmental issues.

Cumulative impacts could occur if the construction of other projects occurs at the same time as the proposed project and in the same geographic scope, such that the effects of similar impacts of multiple projects combine to create greater levels of impact than would occur at the project-level. For example, if the construction of other projects in the area occurs at the same time as project activities, combined air quality and noise impacts may be greater than at the project-level.

Cumulative impacts associated with some of the resource areas have been addressed in the individual resource sections above: Air Quality, Greenhouse Gas Emissions, and Utilities and Service Systems (CEQA Guidelines Section 15064[h][3]) and would be less than significant. Some of the

other resource areas were determined to have no impact in comparison to existing conditions and therefore would not contribute to cumulative impacts, such as Agriculture and Forestry Resources, Mineral Resources, and Wildfire. As such, cumulative impacts in these issue areas would also be less than significant and the project's contribution would not be cumulatively considerable. Other issues (e.g., aesthetics, hazards and hazardous materials) are site-specific, and impacts at one location do not add to impacts at other locations or create additive impacts. The project would incrementally increase traffic compared to existing conditions. However, due to the mixed-use nature of development facilitated by the project, traffic and VMT impacts would be less than significant. Therefore, the project's impacts would not be cumulatively considerable.

LESS THAN SIGNIFICANT IMPACT

c. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

Implementation of the project would not result in impacts that would cause a substantial adverse effect on human beings, including those related to air quality, hazardous materials, emergency response, proximity to airport activities, noise, or transportation hazards. As discussed in earlier sections of this IS-MND, these impacts would be less than significant with or without mitigation. Therefore, the project would not result in impacts that would cause substantial adverse effects on human beings, either directly or indirectly.

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List of Preparers

Rincon Consultants, Inc. prepared this IS-MND under contract to the City of Salinas. Persons involved in data gathering analysis, project management, and quality control are listed below.

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December 3, 2021
Project Number 21-11684

Bobby Latino, Associate Planner
City of Salinas
Community Development Department
159 Main Street
Salinas, California 93901
Via email: robertl@ci.salinas.ca.us

Subject: Cultural Resource Assessment for the John-Abbott Mixed-Use Project, Salinas, Monterey County, California

Dear Mr. Latino:

This report presents the findings of a cultural resources assessment that was prepared in support of the John-Abbott Mixed-Use Project (project). Totaling approximately 19.7 acres, the project site is currently developed with commercial and warehouse buildings, including a produce wholesaler, packing supply store, parking lots, vehicle storage, and other light industrial uses (Figure 1). The proposed project would entail construction of 20 new buildings, a remodel of the existing Butler building, new parking, new pedestrian plazas and walking paths, and new streets and internal drive accesses. Other site improvements include landscaping with drip irrigation, widening of a portion of Abbott Street, installation of a new signal at the intersection of Abbott Street and Maple Street. The proposed redevelopment of the site would be conducted in phases and require approval of a Conceptual Master Site Plan, a Conditional Use Permit for Phase 1, and lot line adjustments.

The current cultural resource study was conducted to determine whether the project would impact cultural resources and included a records search, a Sacred Lands File search, background and archival research, and a pedestrian survey of the project site. All work was completed in compliance with the California Environmental Quality Act (CEQA) and other applicable state and local guidelines and regulations.

Rincon Architectural Historian JulieAnn Murphy, MHP, provided management oversight for this cultural resources assessment. Ms. Murphy meets the Secretary of the Interior's Professional Qualifications Standards for history and architectural history (National Park Service 1983). Architectural Historian Ashley Losco, MSHP, is the primary author of this report. Archaeologist Elaine Foster, MA, Registered Professional Archaeologist (RPA), conducted the field survey, performed the cultural resource records search, and is a contributing author of this report. Archaeologist Leanna Flaherty, MA, completed the Native American outreach for this project. Geographic Information Systems Analyst Allysen Valencia prepared the figures found in this report. Principal Andrew Pulcheon, MA, RPA, reviewed this assessment for quality control.

Cultural Resources Records Search

On September 28, 2021, Rincon conducted a records search of the California Historical Resources Information System (CHRIS) at the Northwest Information Center (NWIC) located at Sonoma State University. The records search identified previous cultural resources studies and previously recorded cultural resources within the project site and a 0.5-mile radius. The CHRIS records search also included a review of the National Register of Historic Places (NRHP), the California Register of Historical Resources (CRHR), the California Points of Historical Interest list, the California Historical Landmarks list, the Archaeological Determinations of Eligibility list, the Built Environment Resources Directory, and the California State Historic Resources Inventory list. A summary of the results of the CHRIS records search is included in Attachment 2.

The NWIC records search identified seven previous studies within a 0.5-mile radius of the project site (Table 1). Of these, two are located within the project site (S-024139 and S-027128), detailed below. The NWIC records search also identified four previously recorded cultural resources (Table 2), within the 0.5-mile radius but not within the project site.

Table 1 Previously Conducted Cultural Resources Studies within 0.5 mile of Project Site

SCCIC Report No.	Author	Year	Study	Relationship to Project Site
S-007317	R. Paul Hampson, Gary Breschini, Trudy Haversat, and Micki Ryan	1985	Preliminary Cultural Resources Reconnaissance of Assessor's Parcel Numbers 002-214-31 and 33, Salinas, Monterey County, California	Outside
S-007317a	R. Paul Hampson and Gary Breschini	1985	Secondary Archaeological Testing of Assessor's Parcel Numbers 002-214-31 and 33 in Salinas, Monterey County, California	Outside
S-020573	Barry Price	1998	Cultural Resources Assessment, Pacific Bell Mobile Services Facility SF-724-07, Salinas, Monterrey County, California (letter report)	Outside
S-022657	Izaak Sawer, Laurie Pfeiffer, Karen Rasmussen, and Judy Berryman	2000	Phase 1 Archaeological Survey Along Onshore Portions of the Global West Fiber Optic Cable Project	Outside
S-024139	Robert Cartier	2000	Cultural Resource Evaluation of Lands for the Regional Solid Waste Facilities Project in the County of Monterey	**Within**
S-027128	Terry Joslin	2003	Negative Historic Property Survey Report for the Salinas Highway 68 Rehabilitation Project, Monterey County, 05-MON-68, PM 16.8/21.9 (KP 27.0/35.2), 05-169-491500	**Within**
S-027128a	Terry Joslin	2001	Negative Archaeological Survey Report for the Salinas Highway 68 Rehabilitation Project, Monterey County, 05-MON-68, PM 16.8/21.9 (KP 27.0/35.2), 05-169-491500	Outside
S-029275	None	2004	Archaeological and Historical Investigations for the Tynan Mixed Use Development Project in the City of Salinas, Monterey County	Outside

SCCIC Report No.	Author	Year	Study	Relationship to Project Site
S-033061	Nancy Sikes, Cindy Arrington, Bryon Bass, Chris Corey, Kevin Hunt, Steve O'Neil, Catherine Pruett, Tony Sawyer, Michael Tuma, Leslie Wagner, and Alex Wesson	2006	Cultural Resources Final Report of Monitoring and Findings for the Qwest Network Construction Project, State of California	Outside
S-033061a	None	2006	Cultural Resources Final Report on Monitoring and Findings for the Qwest Network Construction Project, State of California	Outside
S-033061b	Nancy Sikes	2007	Final Report of Monitoring and Findings for the Qwest Network Construction Project (letter report)	Outside
S-039600	Cher Paterson and Kathleen Crawford	2012	Cultural Resources Records Search and Site Visit Results for T-Mobile West, LLC Candidate SFO5724A (SF724 Salinas), 340 Pajaro Street, Salinas, Monterey Count, California	Outside
S-039600a	Kathleen Crawford	2012	Direct APE Historic Architectural Assessment for T-Mobile West, LLC Candidate SF05724A (SF724 Salinas), 340 Pajaro Street, Salinas, Monterey County, California. (letter report)	Outside
S-041437	Mary Doane and Gary Breschini	2013	Preliminary Archaeological Reconnaissance for the Sanborn Road/US 101 Interchange and Elvee Drive Project in Salinas, Monterey County, California	Outside
S-046966	Wendy Nelson, Mike Darcangelo, Ed Mike, and Amanda Cannon	2003	Historic Property Survey Report: Airport Boulevard Interchange, U.S. Route 101, Monterey County	Outside
S-046966a	Wendy Nelson	2002	Negative Archaeological Survey Report	Outside
S-046966b	Wendy Nelson	2003	Negative Archaeological Survey Report (Supplemental)	Outside
S-046966c	Kelli Brasket	2003	Second Supplemental Negative Archaeological Survey Report for the Airport Interchange Project in Monterey County, California	Outside
S-046966d	Stephen Wee	2003	Historic Architectural Survey Report: With attached Historic Resources Evaluation Report and Bridge Evaluation: Airport Boulevard Interchange, City of Salinas, Monterey County, California	Outside
S-046966e	Stephen Wee and Jessica Herrick	2003	Historic Resources Evaluation Report, Reclamation Ditch No. 1665: Airport Boulevard Interchange Project, City of Salinas, Monterey County, California	Outside

SCCIC Report No.	Author	Year	Study	Relationship to Project Site
S-046966f	Christopher McMorris and Theresa Saputo Rogers	2003	Bridge Evaluation: Bride 44-120, Highway 101, at Sanborn Road, Bridge 44-121, State Route 68 (John Street), at Highway 101, Bridge 44-124, Highway 101 at Airport Boulevard, Airport Boulevard Interchange, City of Salinas, Monterey County, California	Outside
S-046966g	Knox Mellon and Gary Hamby	2003	FHWA030618A; HAD-CA, File No. 05-MON-101 KP 136.79/1.9.36, Airport Boulevard Interchange Project, 05-349500, Document No. P 45213 [Section 106 Consultation on the Reconstruction of the Airport Boulevard Interchange, City of Salinas, Monterey County]	Outside

Source: NWIC 2021

Table 2 Previously Recorded Cultural Resources within 0. 5 mile of Project Site

Primary Number	Resource Type	Description	Recorder(s) and Year(s)	Eligibility Status	Relationship to Project Site
P-27-002322	Historic Structure	El Camino Real (Highway 101)	1999 (John Berg, Steven Mikesell, Far Western & JRP Historical Consulting Services); 2002 (Theresa Rogers, JRP Historical Consulting Services)	Recommended ineligible for CRHR	Outside
P-27-002780	Historic Structure	Tynan Lumber Yard	2004 (Kurt Lambert, Pacific Municipal Consultants)	Recommended ineligible for NRHP and CRHR	Outside
P-27-003192	Historic Building	Pacific Bell	2012 (K.A. Crawford, Crawford Historic Services)	Recommended ineligible for NRHP	Outside
P-27-003551	Historic Structure	John Street Overcrossing	2003 (Theresa Rogers, JRP Historical Consulting Services)	Recommended eligible for NRHP	Outside

Sources: NWIC 2021

Native American Heritage Commission Outreach

As part of the process of identifying cultural resources for this project, Rincon contacted the NAHC on September 13, 2021, and requested an SLF search. On October 20, 2021, Rincon received a response from the NAHC stating the SLF search results were negative for site-specific information; the response also included a list of 14 Native American contacts who may have knowledge of cultural resources in the project site and vicinity.

Archival and Background Research

Archival research was completed between September and October 2021 and focused on the review of a variety of primary and secondary source materials relating to the history and development of the project site and its surroundings. Sources included, but were not limited to, historic-period maps and photographs, contemporary newspaper articles, and written histories of the area. The following is a list of sources consulted in order to conduct research pertaining to the project site.

- Historic-period aerial photographs accessed digitally via Nationwide Environmental Title Research Online, Inc. and the University of California, Santa Barbara Map & Imagery Lab
- Historic-period topographic maps accessed digitally via United States Geologic Survey
- Historic-period newspaper articles accessed digitally via ancestry.com, newspapers.com, and genealogybank.com
- City of Salinas local register criteria for designation the city's Municipal Code, "Article 2. Historic Resources Board"
- Other sources as identified in the References section

Field Survey

Rincon Cultural Resource Specialist Elaine Foster, MA, Register of Professional Archaeologists (RPA), conducted a cultural resources field survey of the project site on October 12, 2021. Ms. Foster visually inspected all accessible portions of the project site. Ms. Foster examined exposed ground surface for artifacts (e.g., flaked stone tools, tool-making debris, stone milling tools, ceramics, fire-affected rock) and ecofacts (marine shell and bone). Ms. Foster also looked for soil discoloration that may indicate the presence of a cultural midden, soil depressions, and features indicative of the former presence of structures or buildings (e.g., standing exterior walls, postholes, foundations) or historic debris (e.g., metal, glass, ceramics). Ground disturbances, such as burrows and drainages, were also inspected visually. Under the direction of Architectural Historian JulieAnn Murphy, MHP, the survey also consisted of a visual inspection of all built environment features on the property to assess their overall condition and integrity, and to identify and document any potential character-defining features. Observations were recorded using detailed notes and digital photographs. Resources were recorded and evaluated on California Department Parks and Recreation (DPR) 523 series forms, which are included as an attachment.

The project site is entirely developed with few areas of exposed ground surface in landscape islands and on the edges of the property. The southeast corner of the project site was inaccessible to survey. No archaeological resources were identified during the survey. Three extant buildings and four building foundations were identified during the survey, further discussed below.

Findings

Archaeological Resources

The following section summarizes the results of all background research and fieldwork as they pertain to archaeological resources that may qualify as historical resources and/or unique archaeological resources.

The field survey did not identify any archaeological resources in the project site. Ground visibility was poor (approximately 0 percent) due to previous development and non-native ornamental vegetation, with less than 5 percent exposure. More than 95 percent of the project site has been paved and is partially overlain by existing buildings related to the former Monterey County Ice and Development Company (see Figures 1-7). Additionally, parts of the project site were inaccessible, as they were fenced off and covered in storage containers, making survey impossible. The areas of exposed ground located along the sides of and in front of the buildings appear to be disturbed from signage, road development, and landscaping. The soils within these areas generally consist of compacted gray loam with gravel inclusions. Vegetation consisted of ornamental trees or non-landscaped dry grasses. Figure 2 and Figure 3 are representative of the exposed ground surface observed within the project site.

The entire project site has been heavily disturbed from construction of the buildings, the paving around the buildings, and the landscaping. Moreover, the project site is situated within an area designated as a "Low Archaeological Sensitivity Zone" on the Archeological Sensitivity Map maintained by the Monterey County, Resource Management Agency, Planning Division (Monterey County 2021). Given the previous disturbance and its location within a low archaeological sensitivity zone, the project site is not considered sensitive for archaeological resources.

Historical Resources

As a result of the survey, one property containing built environment features 45 or more years of age (the Monterey County Ice and Development Company (MCIDC)) was identified, recorded, and evaluated for historical resources eligibility pursuant to Section 15064.5(a) of the CEQA Guidelines. A summary of the property's existing conditions, developmental history, and significance evaluation is presented below and in the attached DPR 523 series forms.

Physical Description

The former MCIDC property is located within the boundaries of the proposed project site. The property sits south of John Street in a north-south orientation and is bound by Abbott Street to the west, John Street to the north, the Union Pacific Railroad to the east, and Spicer Street to the south. The approximately 19-acre property is in fair condition and appears to not be in use. As detailed below it contains three industrial buildings, four foundations of former buildings, and expansive surface parking lots and paved areas in between.

Building 1

Building 1 is an industrial building sited at the western property line adjacent to Abbott Street (Figure 4). The approximately 21,182-square-foot precast concrete tilt-up rectangular building sits diagonally,

northwest to southeast, and was constructed in 1954 (*The Californian*, May 13, 1954). The exterior is painted beige, and the front-gable roofline is clad in rolled-composition sheets with no eave overhang.

The front (west) elevation faces Abbott Street and has a flat roof office extension which extends out from the front-gable warehouse portion. The building's primary public entrance, which consists of a single white wood door with a window covered by security bars, is centered along the facade. On each side of the entrance are wood frame vertical sliding sash windows all covered with metal security bars. An overhang extends out from the front elevation with square can lights, and lining the front office are terra cotta block flowerboxes.

The north elevation is dominated by equipment for interior packing equipment or cooling devices. Towards the western end within the front office are two wood frame vertical sliding sash windows, similar to those on the facade. Only one of the windows has metal bars. Adjacent to the windows is an entrance with a flush metal door painted beige. Towards the center of the elevation is a large loading opening with a garage style metal roll-up door, and another entrance with a flush metal door sits directly adjacent. A fenced off area with HVAC equipment sits at the eastern end near the east elevation which features electrical equipment and no fenestration.

The west end of the south elevation of Building 1 is punctuated with four wood vertical sliding sash windows, similar to those on the north and west elevations (Figure 5). The south elevation has a rectangular, flat roof addition constructed of metal siding and a poured concrete foundation featuring a large loading opening with an orange metal roll-up door and an industrial fan above. The east elevation of the addition sits above grade as a ramp goes below grade for unloading supplies from large semi-trucks. At the east elevation, a large loading opening has a metal roll-up door with padding along the edges for unloading trucks. Towards the east end of the south elevation is a former loading opening now enclosed with corrugated metal sheets adjacent to an entrance with a slightly recessed flush metal door.

Building 2

Building 2 is sited east of Building 1 also in a northwest to southeast angle and was added to the property by 1941 (UC Santa Barbara FrameFinder, 1941). The approximately 21,300-square-foot warehouse building is constructed of steel framing and corrugated metal, sitting on a poured concrete foundation. The gable roofline is clad in corrugated metal sheets and has five turbine vents along the ridge. The west elevation is open, but the interior is closed off by a chain link fence (Figure 6).

The east elevation from left (south) to right (north) has a metal piece of equipment two stories tall which is connected to the warehouse by a downward shoot or conveyor belt. The machine was possibly used as a silo for unloading produce which was then transferred inside for cleaning and packing. Next to the piece of equipment is a flush metal door and a large opening with a metal roll-up door both accessible by a concrete ramp. At the far north end of the elevation is a fan built into the wall, and a louvered vent is located along the roofline within the gable. The south elevation has no fenestration.

The north elevation of Building 2 faces Building 3 and has a large loading opening with a metal roll-up door and a smaller entrance with a flush metal door (Figure 7). Above the doors at the roofline are remnants of a piece of packing equipment. At the center of the north elevation is a small wood frame addition with clapboard siding and a separate shed roof. The addition has an entrance on its east elevation with a wood paneled door and a single pane window. Adjacent to the door is an aluminum-framed vertical sliding sash unit. The north elevation of the addition has two fixed pane windows and a recessed section, possibly a former entrance, now enclosed with clapboard siding, fixed pane windows,

and a louvered window. The west elevation has plywood siding, a fixed pane window, and a vertical sliding sash window. West of the addition along the north elevation is a flush metal door entrance with one concrete step and a metal roll-up door loading entrance.

Building 3

The last building on the property is Building 3, an approximately 19,151-square-foot industrial building sited northeast of Building 2 adjacent to the eastern property line and the neighboring Union Pacific Railroad (Figure 8). Added to the property between 1962 and 1968, the rectilinear building is slightly elevated off the ground on a poured concrete foundation and completely sheathed in corrugated metal (NETRonline, 1968). The building is capped with a corrugated metal side-gable roofline; however, the southern portion has a higher roofline with a lower pitch than the northern portion.

The south and east elevations are lined with electrical and plumbing equipment; however, the east elevation was not fully accessible during field survey. The south elevation has an entrance with a flush metal door. The west elevation of Building 3 has three large loading openings all with metal roll-up doors; two of the openings are elevated off the ground for unloading large semi-trucks. Three entrances are also located on the west elevation each with a flush metal door. the northern end is open at the first floor with steel posts on poured concrete footings supporting the second floor.

The north elevation has a second-floor addition supported by steel posts on concrete footings at the first floor which is completely open (Figure 9). A set of metal stairs lead up to the second floor to an entrance with a flush metal door. at the second floor left (east) of the entrance is a large opening with a metal roll-up door. This addition has an asymmetrical roofline.

Site Development

The property at the corner of Abbot and John Streets was used for agricultural purposes prior to its development. Historic newspaper articles and deed reports indicate that the property was used as an orchard. In 1918 it was purchased by Danish immigrant and farmer Antone Gottfriedsen who made improvements to the property and continued to operate it as an orchard (*Salinas Morning Post,* 12 February 1942). In 1927, Gottfriedsen sold the subject property at the corner of Abbott and John Streets to MCIDC, one of the largest producers and sellers of ice and packaged produce for long distance shipments in Monterey County (*Santa Cruz News*, 14 October 1927). Farmers brought their produce to the property where it was packaged for shipment with MCIDC ice, a more efficient way of packaging and shipping produce for long distance travel. The company used a no longer extant railroad spur from the neighboring Union Pacific Railroad (formally the Southern Pacific Railroad) to ship and move supplies.

The MCIDC was part of the larger lettuce and ice packing development in Monterey County and Salinas in the late 1910s into the 1940s. In the 1910s, lettuce was becoming a popular agricultural product; however, it did not survive the long shipments outside of California. Farmers had to create innovative ways to refrigerate lettuce and ship it to further markets, including the first refrigerated shipment of lettuce by Moses S. Hutchings in north Monterey County (Past Consultants, LLC, 62). Hutchings packed a wagon of wooden crates of lettuce using ice as the refrigerant. However, the use of ice had its limitations, and a number of companies began exploring new methods of cooling and transportation.

The MCIDC was one of these companies, forming in 1928 with the construction of four lettuce packing sheds on the property (*Burbank Daily Evening Review*, 12 March 1928). Before this point, the concept of packaging and shipping produce in one warehouse was not widely utilized. Before, farmers would

package the produce in the fields as the picked the crops. The MCIDC was one of the first companies in the area to combine the process in one facility with ice packaging. Throughout the site's history, the MCIDC expanded the property with construction of new buildings and warehouses. By 1941, an aerial photograph of the surrounding area showed the property with eight warehouses (four of which were constructed diagonally), five smaller buildings, and a railroad spur running north diagonally through the property from the Southern Pacific Railroad (UC Santa Barbara FrameFinder, 1941). During World War II, the company also supplied produce to local army battalions and men serving overseas (*The Californian*, 12 April 1941). By the 1950s, the MCIDC was one of the first companies using vacuum sealed technology to cool and ship produce so it stays fresher over longer trips (*The Californian*, March 29, 1952)

In 1956, a smaller warehouse at the center of the parcel adjacent to John Street was demolished and replaced by a one-story office building. Also, by 1956, two of the four diagonal buildings were demolished and replaced by two diagonal buildings more south on the property and four smaller buildings were constructed at the southern end of the property (NETRonline, 1956).

By 1962, the site had further developed along its northern portion with demolition of one of the warehouses (1962 Sanborn Fire Insurance Map) (Figure 10). In a 1968 aerial photograph of the property, a lettuce packing building at the northeast corner was removed and replaced with one large warehouse, which is still extant, and small dwelling was constructed, which is no longer extant (NETRonline, 1968).

The MCIDC operated out of the subject property until 1969 when it was purchased by United Fruit Company, which subsequently merged with Inter-Harvest in 1970 and occupied the property until 1979 (*The San Francisco Examiner*, 20 February 1969). From 1979 to 1983, the Sun Harvest Inc. occupied the site. During their occupancy, the L-shaped building at the southeast corner of the property was constructed by 1981. The railroad spur was removed between 1982 and 1998, and in the 1990s and 2000s several businesses were renting space in the warehouses and offices on the property.

In recent years, the warehouse at the northwest corner was demolished by 2005, and by 2009 a small building on the western property line south of the diagonal warehouses and a building northwest of the L-shaped building were demolished and replaced with a parking lot. Between 2016 and 2018, one of the southern diagonal buildings was demolished, between 2017 and 2018 a small dwelling at northeast corner of the property was demolished, between 2018 and 2019 one of the middle diagonal buildings was demolished, and between 2018 and 2019 a one-story office building along John Street was demolished.

Historical Resources Evaluation

The MCIDC property at the corner of Abbott and John Streets in Salinas, California does not appear to be eligible for listing under Criterion A/1/1of the National Register of Historic Places (NRHP), the California Register of Historical Resources (CRHR), and the City of Salinas Local Historic Register. The subject property is noted for its association with the produce and ice packaging development in Salinas and Monterey County in the late 1920s into the 1940s. The property was historically a produce packing facility owned by the Monterey County Ice and Development Company (MCIDC) starting in 1928 with the construction of four lettuce packing facilities, which are no longer extant. The MCIDC was part of the larger lettuce and ice packing development in Monterey County and Salinas in the late 1910s into the 1940s, as one of the first companies to utilize one site for packaging and shipping refrigerated produce. The MCIDC played a role in agricultural and packing history as one of the largest facilities in the area and one of the largest producers of ice for shipment.

Despite these associations, in order for a property to be eligible for listing it must not only be significant, but also must retain sufficient integrity to convey that significance. The subject property has undergone several changes since its period of significance beginning in 1928 and continuing through the 1940s. Most of the buildings from that period have been removed. Only three buildings remain on that site, of those two date to later periods in the site's history, after MCIDC's period of significance as an important company in produce and ice packing development in Salinas and Monterey County. Because of the loss of the buildings, the subject property no longer retains integrity of design, materials, or workmanship. As a result, the subject property also no longer retains integrity of feeling or association with MCIDC's historic importance as a produce and packing facility in Salinas and no longer conveys the property's historic use for packing and shipping refrigerated produce. The property is, therefore, recommended ineligible for listing under NRHP/CRHR/Local Criterion A/1/1.

The individual most closely associated with the subject property was Peter A. Stolich, founder and president of the MCIDC which owned the property until 1969. Archival research failed to uncover that Neither Mr. Stolich nor any other individual associated with the MCIDC made singular historical contributions to local, regional, state or national history. The property is therefore recommended ineligible for listing under NRHP/CRHR/Local Criterion B/2/2.

The subject property was originally constructed in 1928 with the addition of four lettuce packing facilities by the MCIDC. Over time, more buildings were constructed on the property including the three remaining buildings by 1941, 1954, and 1968; however, in recent years several of the original buildings have been demolished. The three remaining buildings are of simple industrial design and do not reflect a distinctive architectural style, method of construction, and do not represent the work of a master or possess high artistic value. Building 1, constructed in 1954, is an example of poured concrete tilt-up construction; however, it is a simple example of the construction technique and is not noteworthy enough for designation. Buildings 2 and 3 are steel frame buildings sheathed in corrugated metal siding constructed by 1941 and 1968, respectively. The two buildings retain a common design seen in most industrial buildings. Alongside lack of architectural significance, the property has been heavily altered with the demolition of several original buildings, diminishing the integrity of the site and its original feeling as a 1920s produce and ice packing facility. Therefore, the property is recommended ineligible for listing in the NRHP/CRHR/Local under Criterion C/3/3.

A review of available evidence and records search request through the Northwest Information Center did not identify any historic resources or archaeological sites within or directly adjacent to the project area. The subject property at the corner of Abbott and John Streets in Salinas, California has not yielded and is unlikely to yield information important in prehistory or history. The property was found ineligible for listing in the NRHP/CRHR/Local under Criterion D/4/4.

Additionally, the property is not recommended eligible for listing as a contributor to any known existing or potential historic district. Based on the analysis above, there is also no information to suggest the property would be eligible for local designation pursuant to Section 3-02 of the Salinas Municipal Code.

Conclusions

As detailed above, the John-Abbott Mixed-Use Project property is recommended ineligible for listing in the NRHP, CRHR, or for local designation; it therefore is not considered a historical resource pursuant to Section 15064.5(a) of the CEQA Guidelines. Based on these findings, Rincon recommends a finding of ***no impact to historical resources***. Further, the CHRIS records search and a review of City of Salinas Historic

Register failed to identify any other cultural resources, including historic districts, within close proximity to the project site. No archaeological resources are known to exist in the vicinity of the project site and Rincon did not identify any information to suggest that the project area may be sensitive for archaeological resources. Additionally, the project site has been heavily disturbed due to the construction of the existing buildings, paving around the buildings, and landscaping. The lack of surface evidence of archaeological materials does not preclude their subsurface existence. However, the absence of substantial prehistoric or historic-period archaeological remains within the immediate vicinity, along with the existing level of disturbance in the project site and its location with a Monterey County "Low Archaeological Sensitivity Zone", suggests there is a low potential for encountering intact subsurface archaeological deposits. Rincon recommends the standard unanticipated discoveries mitigation measure in the event cultural resources are found during project construction. With adherence to the mitigation measure provided below, Rincon recommends a finding of ***less than significant impact to archaeological resources with mitigation***. The project is also required to adhere to regulations regarding the unanticipated discovery of human remains, detailed below.

Unanticipated Discovery of Archaeological Resources

If archaeological resources are encountered during ground-disturbing activities, work in the immediate area should be halted and an archaeologist meeting the Secretary of the Interior's Professional Qualification Standards for archaeology (National Park Service 1983) should be contacted immediately to evaluate the find. If necessary, the evaluation may require preparation of a treatment plan and archaeological testing for CRHR eligibility. If the discovery proves to be significant under CEQA and cannot be avoided by the project, additional work, such as data recovery excavation, may be warranted to mitigate any significant impacts to historical resources.

Unanticipated Discovery of Human Remains

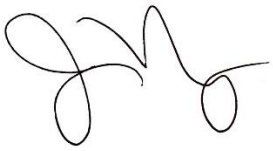
The discovery of human remains is always a possibility during ground-disturbing activities. If human remains are found, the State of California Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. In the event of an unanticipated discovery of human remains, the Alameda County Coroner must be notified immediately. If the human remains are determined to be prehistoric, the Coroner will notify the Native American Heritage Commission, which will determine and notify a Most Likely Descendant (MLD). The MLD shall complete the inspection of the site and provide recommendations for treatment to the landowner within 48 hours of being granted access.

Should you have any questions concerning this study, please do not hesitate to contact any of the undersigned.

Sincerely,
Rincon Consultants, Inc.



Elaine Foster, MA, RPA
Archaeologist



JulieAnn Murphy, MHP
Architectural Historian

Attachments

Attachment 1 Figures
Attachment 2 CHRIS Records Search Summary
Attachment 3 SLF Search Summary and Native American Outreach
Attachment 4 California DPR 523 Series Forms

References

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1941 "Farm Crop Outlet is Undertaken," 12 April. Page 1. Accessed October 1, 2021, through newspapers.com.

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1954 "A Building Designed and Constructed for a Definite Purpose," May 13. Page 14. Accessed October 1, 2021, through newspapers.com.

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1983 Archaeology and Historic Preservation: Secretary of the Interior's Standards and Guidelines. Electronic document accessed December 27, 2019. Online at http://www.nps.gov/history/local-law/Arch_Standards.htm.

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Var. "Historic Aerials." [digital photograph database]. Aerial images and topographical maps of the 1206 W. Grand Avenue property and vicinity viewed online. https://www.historicaerials.com/viewer. Accessed September 17, 2021.

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2021 *Code of Ordinances*, "Chapter 3 Article 2. Historic Resources Board." Accessed October 20, 2021 through https://library.municode.com/ca/salinas/codes/code_of_ordinances?nodeId=PTIITHCO_CH3COCOBO_ART2HIREBO.

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1962 *Sanborn Fire Insurance Map, Salinas, California*. Sheet 34. Accessed through ProQuest Digital Sanborn Maps, 1867-1970, https://digitalsanbornmaps-proquest-com.ezproxy.lapl.org/about?accountid=6749.

The San Francisco Examiner

1969 "You're for Inflation, If…," 20 February. Page 68. Accessed October 1, 2021, through newspapers.com.

Santa Cruz News

1927 "Articles of Incorporation," 14 October. Page 2. Accessed October 1, 2021, through newspapers.com.

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University of California, Santa Barbara (UCSB)

1941 *FrameFinder.* Flight C_7254, Frame 153. 5 22 November. Accessed October 7, 2021 through https://mil.library.ucsb.edu/ap_indexes/FrameFinder/.

Rincon Consultants, Inc.

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831 333 0310 OFFICE

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Attachment 1

Figures

Figure 1 Project Location Map



Imagery provided by Microsoft Bing and its licensors © 2021.

Figure 2 Representative exposed ground surface with dry grass



Figure 3 Representative exposed ground surface with landscaping



Figure 4 View southeast of the west and north elevations of Building 1



Figure 5 View northeast of the south and east elevations of Building 1



Figure 6 View southeast of the west and south elevations of Building 2



Figure 7 View northwest of the north elevation of Building 2



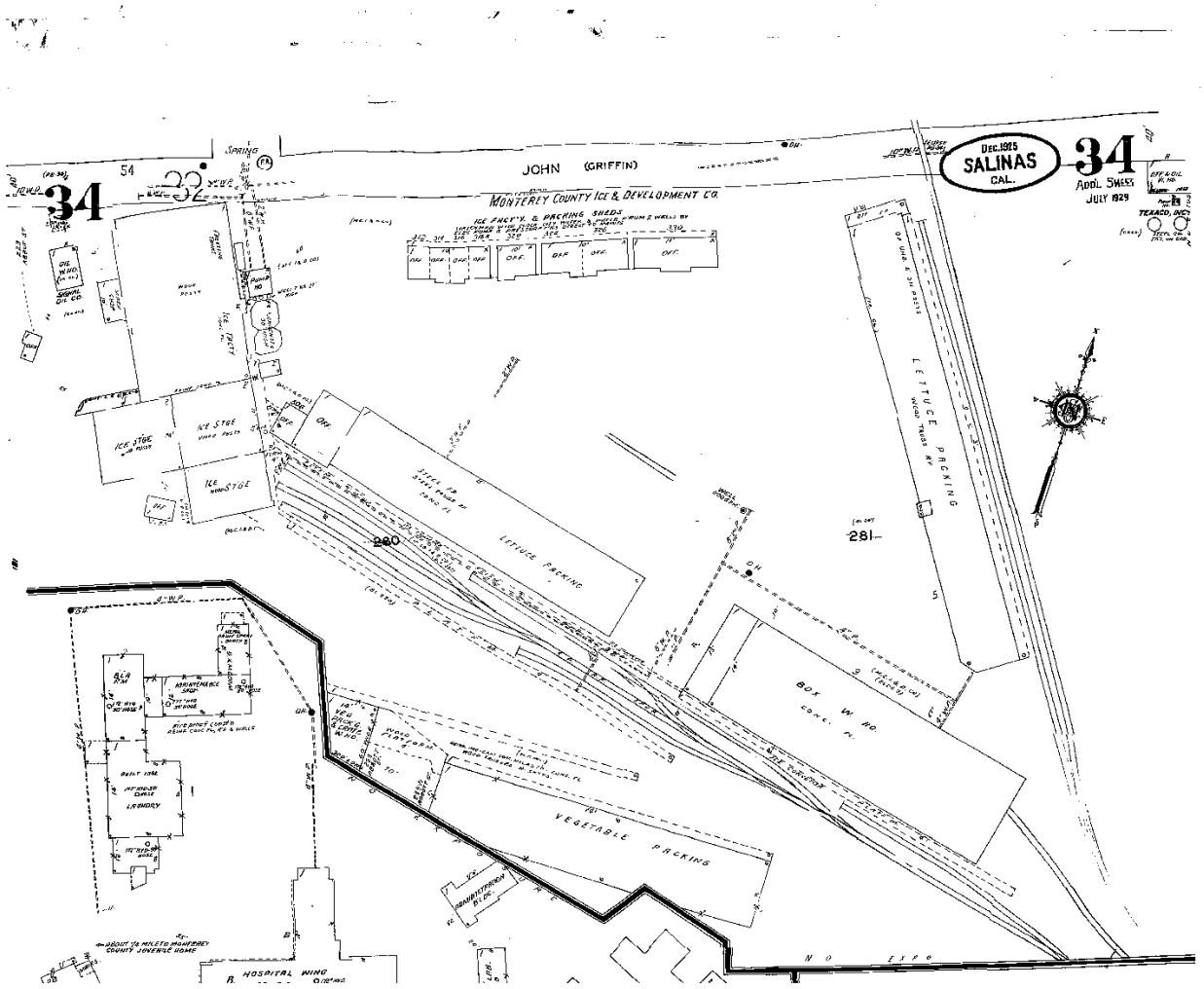
Figure 8 View north of the south elevation of Building 3



Figure 9 View southeast of the north and west elevations of Building 3



Figure 10 Sanborn Fire Insurance Map 1925 (1962 addition)



Attachment 2

CHRIS Records Search Summary

Report List

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
S-007317	Submitter - AC Project 668; Submitter - AC Project 668B; Voided - S-7699	1985	R. Paul Hampson, Gary S. Breschini, Trudy Haversat, and Micki Ryan	Preliminary Cultural Resources Reconnaissance of Assessor's Parcel Numbers 002-214-31 and 33, Salinas, Monterey County, California.	Archaeological Consulting	
S-007317a		1985	R. Paul Hampson and Gary S. Breschini	Secondary Archaeological Testing of Assessors Parcel Numbers 0021-214-31 and 33 in Salinas, Monterey County, California	Archaeological Consulting	
S-020573		1998	Barry A. Price	Cultural Resources Assessment, Pacific Bell Mobile Services Facility SF-724-07, Salinas, Monterey County, California (letter report)	Applied EarthWorks	27-003192
S-022657		2000	Izaak Sawyer, Laurie Pfeiffer, Karen Rasmussen, and Judy Berryman	Phase 1 Archaeological Survey Along Onshore Portions of the Global West Fiber Optic Cable Project	Science Applications International Corporation	27-000334, 27-000335, 27-000349, 27-000706, 27-000806, 27-000888, 27-001207, 27-001227, 27-001228, 27-001393, 27-001408, 27-001482, 41-000410, 43-000449, 44-000047, 44-000155, 44-000156, 44-000157, 44-000174, 44-000270
S-024139		2000	Robert Cartier	Cultural Resource Evaluation of Lands for the Regional Solid Waste Facilties Project in the County of Monterey	Archaeological Resource Management	
S-027128	Caltrans - 05-169-491500; Voided - S-24837	2003	Terry L. Joslin	Negative Historic Property Survey Report for the Salinas Highway 68 Rehabilitation Project, Monterey County, 05-MON-68, PM 16.8/21.9 (KP 27.0/35.2), 05-169-491500	California Department of Transportation, District 5	
S-027128a		2001	Terry L. Joslin	Negative Archaeological Survey Report for the Salinas Highway 68 Rehabilitation Project, Monterey County, 05-MON-68, PM 16.8/21.9 (KP 27.0/35.2) EA 05-169-491500	Caltrans	
S-029275		2004		Archaeological and Historical Investigations for the Tynan Mixed Use Development Project in the City of Salinas, Monterey County	Pacific Municipal Consultants	27-002780

Report List

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
S-033061	Submitter - SWCA Cultural Resources Report Database No. 06-507; Submitter - SWCA Report No. 10715-	2006	Nancy Sikes, Cindy Arrington, Bryon Bass, Chris Corey, Kevin Hunt, Steve O'Neil, Catherine Pruett, Tony Sawyer, Michael Tuma, Leslie Wagner, and Alex Wesson	Cultural Resources Final Report of Monitoring and Findings for the Qwest Network Construction Project, State of California	SWCA Environmental Consultants	01-000027, 01-000040, 01-000087, 01-000088, 01-000089, 01-000090, 07-000138, 27-000802, 27-001191, 27-001207, 28-000467, 43-000106, 43-000141, 43-000449, 43-000573, 43-000575, 43-000754, 43-000928, 43-001071, 48-000208, 48-000211, 48-000214, 48-000441, 48-000549, 49-001583, 57-000194, 57-000198, 57-000297, 57-000301, 57-000307
S-033061a		2006		Cultural Resources Final Report of Monitoring and Findings for the Qwest Network Construction Project, State of California	SWCA Environmental Consultants	
S-033061b		2007	Nancy E. Sikes	Final Report of Monitoring and Findings for the Qwest Network Construction Project (letter report)	SWCA Environmental Consultants	
S-039600	Voided - S-39707	2012	Cher L. Paterson and Kathleen A. Crawford	Cultural Resources Records Search and Site Visit Results for T-Mobile West, LLC Candidate SFO5724A (SF724 Salinas), 340 Pajaro Street, Salinas, Monterey County, California	Michael Brandman Associates	27-003192
S-039600A		2012	Kathleen A. Crawford	Direct APE Historic Architectural Assessment for T-Mobile West, LLC Candidate SF05724A (SF724 Salinas), 340 Pajaro Street, Salinas, Monterey County, California. (letter report)	Michael Brandman Associates	
S-041437	Submitter - Project 4768	2013	Mary Doane and Gary S. Breschini	Preliminary Archaeological Reconnaissance for the Sanborn Road/US 101 Interchange and Elvee Drive Project in Salinas, Monterey County, California	Archaeological Consulting	
S-046966	Caltrans - EA 05-349500; OHP PRN - FHWA030618A	2003	Wendy Nelson, Mike Darcangelo, Ed Mike, and Amanda Cannon	Historic Property Survey Report: Airport Boulevard Interchange, U.S. Route 101, Monterey County	Far Western Anthropological Research Group, Inc.	27-003517, 27-003518, 27-003519, 27-003520, 27-003521, 27-003522, 27-003523, 27-003524, 27-003525, 27-003526, 27-003527, 27-003528, 27-003529, 27-003530, 27-003531, 27-003532, 27-003533, 27-003534, 27-003535, 27-003536, 27-003537, 27-003538, 27-003539, 27-003540, 27-003541, 27-003542, 27-003543, 27-003549, 27-003550, 27-003551, 27-003552

Report List

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
S-046966a		2002	Wendy J. Nelson	Negative Archaeological Survey Report	Far Western Anthropological Research Group, Inc.	
S-046966b		2003	Wendy J. Nelson	Negative Archaeological Survey Report (Supplemental Report)	Far Western Anthropological Research Group	
S-046966c		2003	Kelli Brasket	Second Suplemental Negative Archaeological Survey Report for the Airport Interchange Project in Monterey County, California	California Department of Transportation	
S-046966d		2003	Stephen R. Wee	Historic Architectural Survey Report: With Attached Historic Resources Evaluation Report and Bridge Evaluation: Airport Boulevard Interchange, City of Salinas, Monterey County, California	JRP Historical Consulting Services; Far Western Anthropological Research Group, Inc.	
S-046966e		2003	Stephen R. Wee and Jessica Herrick	Historic Resources Evaluation Report, Reclamation Ditch No. 1665: Airport Boulevard Interchange Project, City of Salinas, Monterey County, California	JRP Historical Consulting Services	
S-046966f		2003	Christopher McMorris and Theresa Saputo Rogers	Bridge Evaluation: Bridge 44-120, Highway 101, at Sanborn Road, Bridge 44-121, State Route 68 (John Street), at Highway 101, Bridge 44-124, Highway 101 at Airport Boulevard, Airport Boulevard Interchange, City of Salinas, Monterey County, California	JRP Historical Consulting Services	
S-046966g		2003	Knox Mellon, Gary N. Hamby	FHWA030618A; HAD-CA, File No. 05-MON-101 KP 136.79/1.9.36, Airport Boulevard Interchange Project, 05-349500, Document No. P 45213 [Section 106 Consultation on the Reconstruction of the Airport Boulevard Interchange, City of Salinas, Monterey County]	Office of Historic Preservation; Federal Highway Administration	

Attachment 3

SLF Search Summary and Native American Outreach

E

CHAIRPERSON
Laura Miranda
Luiseño

VICE CHAIRPERSON
Reginald Pagaling
Chumash

SECRETARY
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NATIVE AMERICAN HERITAGE COMMISSION

October 20, 2021

Leanna Flaherty
Rincon Consultants, Inc.

Via Email: lflaherty@rinconconsultants.com

Re: Salinas Mixed Use Master Plan Project, Monterey County

Dear Ms. Flaherty:

A record search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed for the information you have submitted for the above referenced project. The results were negative. However, the absence of specific site information in the SLF does not indicate the absence of cultural resources in any project area. Other sources of cultural resources should also be contacted for information regarding known and recorded sites.

Attached is a list of Native American tribes who may also have knowledge of cultural resources in the project area. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. I suggest you contact all of those indicated; if they cannot supply information, they might recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call or email to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from tribes, please notify me. With your assistance, we can assure that our lists contain current information.

If you have any questions, please contact me at my email address: Katy.Sanchez@nahc.ca.gov.

Sincerely,

Katy Sanchez

Katy Sanchez
Associate Environmental Planner

Attachment

Native American Heritage Commission
Native American Contacts List
October 19, 2021

Amah Mutsun Tribal Band
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vlopez@amahmutsun.org
(916) 743-5833

Amah Mutsun Tribal Band of Mission San Juan Bautista
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(650) 332-1526 Fax

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(909) 629-6081
(909) 524-8041 Fax

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Esselen Tribe of Monterey County
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Kanyon Sayers-Roods
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San Jose ,CA 95122
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Indian Canyon Mutsun Band of Costanoan
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ams@indiancanyons.org
(831) 637-4238

KaKoon Ta Ruk Band of Ohlone-Costanoan Indians of the Big Sur Rancheria
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(530) 723-2380

Ohlone/Costanoan-Esselen Nation
Louise Miranda-Ramirez, Chairperson
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408-661-2486 Cell

Rumsen Am:a Tur:ataj Ohlone
Dee Dee Manzanares Ybarra, Chairperson
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Native American Heritage Commission
Native American Contacts List
October 19, 2021

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Patti Dutton, Tribal Administrator
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Atascadero ,CA 93422
info@salinantribe.com
805-464-2650

Salinan

Santa Rosa Rancheria Tachi Yokut Tribe
Leo Sisco, Chairperson
P.O. Box 8
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(559) 924-1278
(559) 924-3583 Fax

Tache
Tachi
Yokut

Wuksache Indian Tribe/Eshom Valley Band
Kenneth Woodrow, Chairperson
1179 Rock Haven Ct.
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kwood8934@aol.com
(831) 443-9702

Foothill Yokuts
Mono
Wuksache

Xolon-Salinan Tribe
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Salinan

Xolon-Salinan Tribe
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Salinan

Attachment 4

California DPR 523 Series Forms

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 6Z

Other Listings
Review Code | Reviewer | Date

 *__Resource Name or #:__ John-Abbott Mixed Use Project Site

P1. Other Identifier: N/A

***P2. Location:** ☐ **Not for Publication** ■ **Unrestricted** ***a. County:** Monterey

and (P2b and P2c or P2d. Attach a Location Map as necessary.)

***b. USGS 7.5' Quad:** Salinas **Date:** 1993 **T** 14S; **R** 03E; **¼ of ¼ of Sec** 33 **; B.M.**

c. Address: City: Salinas Zip: 93901

d. UTM: Zone: ; mE/ mN (G.P.S.)

e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate)

Assessor's Parcel Number 002481022, 002481025, 002481026, 002481027, 002481028, 002481029, 002481030, 002481031, 002481032, 002481033, 002481034, 002481035, 002371039, and 002371044.

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)

The former Monterey County Ice and Development Company (MCIDC) property is located within the boundaries of the proposed project site. The property sits south of John Street in a north-south orientation and is bound by Abbott Street to the west, John Street to the north, the Union Pacific Railroad to the east, and Spicer Street to the south. The approximately 23-acre property is in fair condition and appears to not be in use. As detailed below it contains three industrial buildings, four foundations of former buildings, and expansive surface parking lots and paved areas in-between. Description continued on page 4 of the Continuation Sheet.

***P3b. Resource Attributes:** HP8. Industrial building

***P4. Resources Present:** ■Building ☐Structure ☐Object ☐Site ☐District ☐Element of District ☐Other (Isolates, etc.)

P5a. Photo or Drawing (Photo required for buildings, structures, and objects.)



P5b. Description of Photo: (View, date, accession #)
View southeast of the west and north elevations of Building 1.

***P6. Date Constructed/Age and Sources:** ■Historic ☐Prehistoric ☐Both
1928-1968 (Monterey County Assessor)

***P7. Owner and Address:**

***P8. Recorded by:** (Name, affiliation, and address)
Ashley Losco, MSHP
Rincon Consultants, Inc.
180 N. Ashwood
Ventura, CA 93003

***P9. Date Recorded:** 11/23/2021

***P10. Survey Type:** (Describe)
Pedestrian

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.")
Cultural Resources Assessment for the John-Abbott Mixed-Use Master Plan Project, Salinas, Monterey County, California. Rincon Consultants, Inc., 2021, Project No. 21-11684.

***Attachments:** ☐NONE ■Location Map ■Sketch Map ■Continuation Sheet ■Building, Structure, and Object Record ☐Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record ☐Artifact Record ☐Photograph Record ☐ Other (List):

BUILDING, STRUCTURE, AND OBJECT RECORD

***NRHP Status Code** 6Z

***Resource Name or #** (Assigned by recorder) John-Abbott Mixed Use Project Site

B1. Historic Name: Monterey County Ice and Development Company

B2. Common Name: N/A

B3. Original Use: Industrial

B4. Present Use: Industrial

***B5. Architectural Style:** N/A

***B6. Construction History:** (Construction date, alterations, and date of alterations)

In 1928 the Monterey County Ice and Development Co. filed for a permit to construct four lettuce packing sheds on the property (*Burbank Daily Evening Review*, 12 March 1928). By 1941 the property had 8 warehouses, four of which were constructed diagonally, 5 smaller buildings, and a railroad spur running north diagonally through the property from the Southern Pacific Railroad (UC Santa Barbara FrameFinder, 1941). In 1956, a smaller warehouse at the center of the parcel adjacent to John Street was torn down and replaced by a one-story office building. Also, by 1956, two of the four diagonal buildings were torn down and replaced by two diagonal buildings more south on the property and four smaller buildings were constructed at the southern end of the property (NETRonline, 1956). The northern section of the site appears in the 1962 edition of the 1925 Sanborn Fire Insurance Map of Salinas, California. The buildings were labeled "Monterey County Ice and Development Co. Ice Factory and Packing Sheds" (1962 Sanborn Fire Insurance Map). In 1968, the Lettuce Packing building at the northeast corner was removed and replaced with one large warehouse, which is still extant (NETRonline, 1968). The L-shaped building at the southeast corner of the property was constructed by 1981. The railroad spur was removed between 1982 and 1998. In recent years, the warehouse at the northwest corner was demolished by 2005, and by 2009 a small building on the western property line south of the diagonal warehouses and a building northwest of the L-shaped building were demolished and replaced with a parking lot. Between 2016 and 2018, one of the southern diagonal buildings was torn down, between 2017 and 2018 a small dwelling at northeast corner of the property was torn down, between 2018 and 2019 one of the middle diagonal buildings was demolished, and between 2018 and 2019 a one-story office building along John Street was torn down.

***B7. Moved?** ■No ☐Yes ☐Unknown **Date:** **Original Location:**

***B8. Related Features:**

B9a. Architect: Not Identified b. Builder: Not Identified

***B10. Significance: Theme:** N/A **Area:** N/A

Period of Significance: N/A **Property Type:** N/A **Applicable Criteria:** N/A

(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity.)

From 1927 to 1969, the subject property was owned by the Monterey County Ice and Development Company which utilized the site for produce and ice packing. The site was part of the larger development of produce packing facilities in Salinas and Monterey County, California; however, the John Abbott Mixed-Use property at the corner of Abbott and John Streets is recommended ineligible for listing on the NRHP or CRHR, or for local designation to the City of Salinas Historic Register. See Continuation Sheet pages 5 to 6 for a detailed historical evaluation and stie development history.

B11. Additional Resource Attributes: (List attributes and codes)

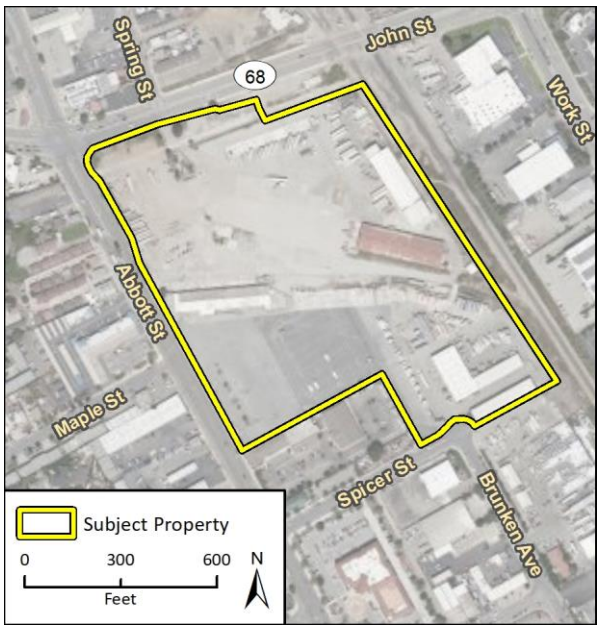
***B12. References:**

See Continuation Sheet page 4.

B13. Remarks:

***B14. Evaluator:** Ashley Losco, Rincon Consultants, Inc.

***Date of Evaluation:** November 23, 2021



(This space reserved for official comments.)

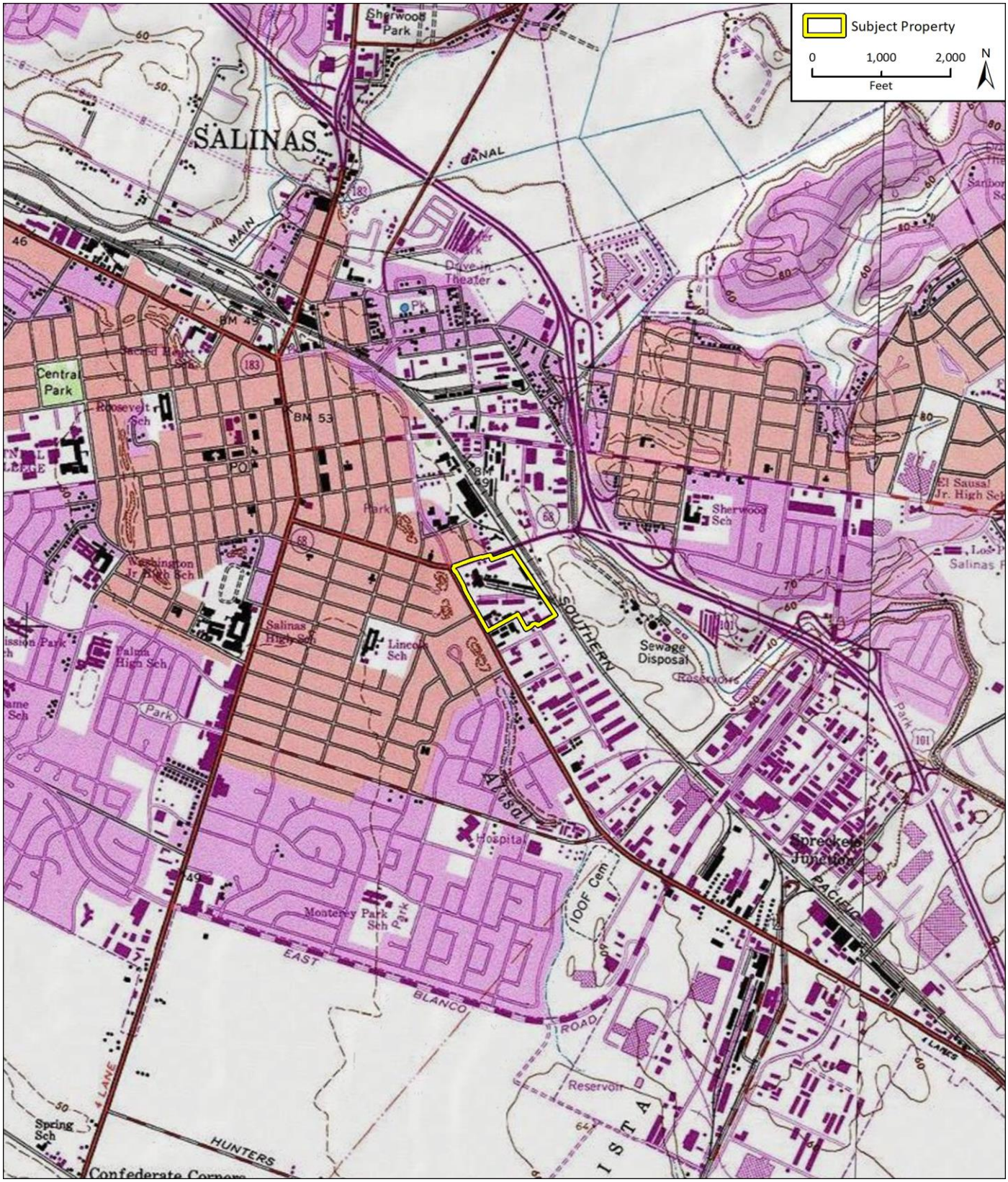
State of California — The Resources Agency **Primary #**
DEPARTMENT OF PARKS AND RECREATION **HRI#**

LOCATION MAP

Trinomial

Page 3 **of** 7 ***Resource Name or #:** John-Abbott Mixed Use Project Site

***Map Name:** USGS Salinas Quadrangle ***Scale:** 1:24,000 ***Date of Map:** 1993



***P3a. Description (Continued from Page 1):**

Building 1

Building 1 is an industrial building sited at the western property line adjacent to Abbott Street. The approximately 21,182 square foot precast concrete tilt-up rectangular building sits diagonally, northwest to southeast, and was constructed in 1954 (*The Californian*, May 13, 1954). The exterior is painted beige, and the front-gable roofline is clad in rolled-composition sheets with no eave overhang.

The front (west) elevation faces Abbott Street and has a flat roof office extension which extends out from the front-gable warehouse portion. The building's primary public entrance, which consists of a single white wood door with a window covered by security bars, is centered along the facade. On each side of the entrance are wood frame vertical sliding sash windows all covered with metal security bars. An overhang extends out from the front elevation with square can lights, and lining the front office are terra cotta block flowerboxes.

The north elevation is dominated by equipment for interior packing equipment or cooling devices. Towards the western end within the front office are two wood frame vertical sliding sash windows, similar to those on the facade. Only one of the windows has metal bars. Adjacent to the windows is an entrance with a flush metal door painted beige. Towards the center of the elevation is a large loading opening with a garage style metal roll-up door, and another entrance with a flush metal door sits directly adjacent. A fenced off area with HVAC equipment sits at the eastern end near the east elevation which features electrical equipment and no fenestration.

The west end of the south elevation of Building 1 is punctuated with four wood vertical sliding sash windows, similar to those on the north and west elevations. The south elevation has a rectangular, flat roof addition constructed of metal siding and a poured concrete foundation featuring a large loading opening with an orange metal roll-up door and an industrial fan above. The east elevation of the addition sits above grade as a ramp goes below grade for unloading supplies from large semi-trucks. At the east elevation, a large loading opening has a metal roll-up door with padding along the edges for unloading trucks. Towards the east end of the south elevation is a former loading opening now enclosed with corrugated metal sheets adjacent to an entrance with a slightly recessed flush metal door.

Building 2

Building 2 is sited east of Building 1 also in a northwest to southeast angle and was added to the property by 1941 (UC Santa Barbara FrameFinder, 1941). The approximately 21,300 square foot warehouse building is constructed of steel framing and corrugated metal, sitting on a poured concrete foundation. The gable roofline is clad in corrugated metal sheets and has five turbine vents along the ridge. The west elevation is open, but the interior is closed off by a chain link fence.

The east elevation from left (south) to right (north) has a metal piece of equipment two stories tall which is connected to the warehouse by a downward shoot or conveyor belt. The machine was possibly used as a silo for unloading produce which was then transferred inside for cleaning and packing. Next to the piece of equipment is a flush metal door and a large opening with a metal roll-up door both accessible by a concrete ramp. At the far north end of the elevation is a fan built into the wall, and a louvered vent is located along the roofline within the gable. The south elevation has no fenestration.

The north elevation of Building 2 faces Building 3 and has a large loading opening with a metal roll-up door and a smaller entrance with a flush metal door. Above the doors at the roofline are remnants of a piece of packing equipment. At the center of the north elevation is a small wood frame addition with clapboard siding and a separate shed roof. The addition has an entrance on its east elevation with a wood paneled door and a single pane window. Adjacent to the door is an aluminum-framed vertical sliding sash unit. The north elevation of the addition has two fixed pane windows and a recessed section, possibly a former entrance, now enclosed with clapboard siding, fixed pane windows, and a louvered window. The west elevation has plywood siding, a fixed pane window, and a vertical sliding sash window. West of the addition along the north elevation is a flush metal door entrance with one concrete step and a metal roll-up door loading entrance.

Building 3

The last building on the property is Building 3, an approximately 19,151 square foot industrial building sited northeast of Building 2 adjacent to the eastern property line and the neighboring Union Pacific Railroad. Added to the property between 1962 and 1968, the rectilinear building is slightly elevated off the ground on a poured concrete foundation and completely sheathed in corrugated metal (NETRonline, 1968). The building is capped with a corrugated metal side-gable roofline; however, the southern portion has a higher roofline with a lower pitch than the northern portion.

The south and east elevations are lined with electrical and plumbing equipment; however, the east elevation was not fully accessible during field survey. The south elevation has an entrance with a flush metal door. The west elevation of Building 3 has three large loading openings all with metal roll-up doors; two of the openings are elevated off the ground for unloading large semi-trucks. Three entrances are also located on the west elevation each with a flush metal door. the northern end is open at the first floor with steel posts on poured concrete footings supporting the second floor.

The north elevation has a second-floor addition supported by steel posts on concrete footings at the first floor which is completely open. A set of metal stairs lead up to the second floor to an entrance with a flush metal door. at the second floor left (east) of the entrance is a large opening with a metal roll-up door. This addition has an asymmetrical roofline.

***B10. Significance (Continued from Page 2):**

Site Development

In 1927, the subject property at the corner of Abbott and John Streets was purchased by MCIDC, one of the largest producers and sellers of ice and packaged produce for long distance shipments in Monterey County (*Santa Cruz News*, 14 October 1927). Farmers brought their produce to the property where it was packaged for shipment with the MCIDC's ice, a more efficient way of packaging and shipping produce for long distance travel. The company used a no longer extant railroad spur from the neighboring Union Pacific Railroad (formally the Southern Pacific Railroad) to ship and move supplies.

The MCIDC was part of the larger lettuce and ice packing development in Monterey County and Salinas in the late 1910s into the 1940s. In the 1910s, lettuce was becoming a popular agricultural product; however, it did not survive the long shipments outside of California. Farmers had to create innovative ways to refrigerate lettuce and ship it to further markets, including the first refrigerated shipment of lettuce by Moses S. Hutchings in North Monterey County (Past Consultants, LLC, 62). Hutchings packed a wagon of wooden crates of lettuce using ice as the refrigerant. However, the use of ice had its limitations and a number of companies began exploring new methods of cooling and transportation.

The MCIDC was one of these companies, forming in 1928 with the construction of four lettuce packing sheds on the property (*Burbank Daily Evening Review*, 12 March 1928). Before this point, the concept of packaging and shipping produce in one warehouse was not widely utilized. Before, farmers would package the produce in the fields as they picked the crops. The MCIDC was one of the first companies in the area to combine the process in one facility with ice packaging. Throughout the site's history, the MCIDC expanded the property with construction of new buildings and warehouses. By 1941 an aerial of the surrounding area showed the property with eight warehouses, four of which were constructed diagonally, five smaller buildings, and a railroad spur running north diagonally through the property from the Southern Pacific Railroad (UC Santa Barbara FrameFinder, 1941). During World War II the company also supplied produce to local army battalions and men serving overseas (*The Californian*, 12 April 1941). By the 1950s, the MCIDC was one of the first companies using vacuum sealed technology to cool and ship produce so it stays fresher over longer trips (*The Californian*, March 29, 1952)

In 1956, a smaller warehouse at the center of the parcel adjacent to John Street was demolished and replaced by a one-story office building. Also, by 1956, two of the four diagonal buildings were demolished and replaced by two diagonal buildings more south on the property and four smaller buildings were constructed at the southern end of the property (NETRonline, 1956).

By 1962, the site had further developed along its northern portion with demolition of one of the warehouses (1962 Sanborn Fire Insurance Map). In a 1968 aerial of the property, a lettuce packing building at the northeast corner was removed and replaced with one large warehouse, which is still extant, and small dwelling was constructed, which is no longer extant (NETRonline, 1968).

The MCIDC operated out of the subject property until 1969 when it was purchased by United Fruit Company, which subsequently merged with Inter-Harvest in 1970 and occupied the property until 1979 (*The San Francisco Examiner*, 20 February 1969). From 1979 to 1983 the Sun Harvest Inc. occupied the site. During their occupancy, the L-shaped building at the southeast corner of the property was constructed by 1981. The railroad spur was removed between 1982 and 1998, and in the 1990s and 2000s several businesses were renting space in the warehouses and offices on the property.

In recent years, the warehouse at the northwest corner was demolished by 2005, and by 2009 a small building on the western property line south of the diagonal warehouses and a building northwest of the L-shaped building were demolished and replaced with a parking lot. Between 2016 and 2018, one of the southern diagonal buildings was demolished, between 2017 and 2018 a small dwelling at northeast corner of the property was demolished, between 2018 and 2019 one of the middle diagonal buildings was demolished, and between 2018 and 2019 a one-story office building along John Street was demolished.

Evaluation

The MCIDC property at the corner of Abbott and John Streets in Salinas, California does not appear to be eligible for listing under Criterion A/1/1of the National Register of Historic Places (NRHP), the California Register of Historical Resources (CRHR), and the City of Salinas Local Historic Register. The subject property is noted for its association with the produce and ice packaging development in Salinas and Monterey County in the late 1920s into the 1940s. The property was historically a produce packing facility owned by the Monterey County Ice and Development Company (MCIDC) starting in 1928 with the construction of four lettuce packing facilities, which are no longer extant. The MCIDC was part of the larger lettuce and ice packing development in Monterey County and Salinas in the late 1910s into the 1940s, as one of the first companies to utilize one site for packaging and shipping refrigerated produce. The MCIDC played a role in agricultural and packing history as one of the largest facilities in the area and one of the largest producers of ice for shipment.

Despite these associations, in order for a property to be eligible for listing it must not only be significant, but also must retain sufficient integrity to convey that significance. The subject property has undergone several changes since its period of significance beginning in 1928 and continuing through the 1940s. Most of the buildings from that period have been removed. Only three buildings remain on that site, of those two date to later periods in the site's history, after MCIDC's period of significance as an important company in produce and ice packing development in Salinas and Monterey County. Because of the loss of the buildings, the subject property no longer retains integrity of design, materials, or workmanship. As a result, the subject property also no longer retains integrity of feeling or association with MCIDC's historic importance as a produce and packing facility in Salinas and no longer conveys the property's historic use for packing and shipping refrigerated produce. The property is, therefore, recommended ineligible for listing under NRHP/CRHR/Local Criterion A/1/1.

The individual most closely associated with the subject property was Peter A. Stolich, founder and president of the MCIDC which owned the property until 1969. Archival research failed to uncover that Neither Mr. Stolich nor any other individual associated with the MCIDC made singular historical contributions to local, regional, state or national history. The property is therefore recommended ineligible for listing under NRHP/CRHR/Local Criterion B/2/2.

The subject property was originally constructed in 1928 with the addition of four lettuce packing facilities by the MCIDC. Over time, more buildings were constructed on the property including the three remaining buildings by 1941, 1954, and 1968; however, in recent years several of the original buildings have been demolished. The three remaining buildings are of simple industrial design and do not reflect a distinctive architectural style, method of construction, and do not represent the work of a master or possess high artistic value. Building 1, constructed in 1954, is an example of poured concrete tilt-up construction; however, it is a simple example of the construction technique and is not noteworthy enough for designation. Buildings 2 and 3 are steel frame buildings sheathed in corrugated metal siding constructed by 1941 and 1968, respectively. The two buildings retain a common design seen in most industrial buildings. Alongside lack of architectural significance, the property has been heavily altered with the demolition of several original buildings, diminishing the integrity of the site and its original feeling as a 1920s produce and ice packing facility. Therefore, the property is recommended ineligible for listing in the NRHP/CRHR/Local under Criterion C/3/3.

A review of available evidence and records search request through the Northwest Information Center did not identify any historic resources or archaeological sites within or directly adjacent to the project area. The subject property at the corner of Abbott and John Streets in Salinas, California has not yielded and is unlikely to yield information important in prehistory or history. The property was found ineligible for listing in the NRHP/CRHR/Local under Criterion D/4/4.

Additionally, the property is not recommended eligible for listing as a contributor to any known existing or potential historic district. Based on the analysis above, there is also no information to suggest the property would be eligible for local designation pursuant to Section 3-02 of the Salinas Municipal Code

***B12. References (Continued from Page 2):**

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John Abbott Mixed Use Project - Phase 1 Construction and Operation - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

John Abbott Mixed Use Project - Phase 1 Construction and Operation

Monterey Bay Unified APCD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	131.00	Space	2.10	52,400.00	0
Hotel	111.00	Room	0.00	70,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.8	**Precipitation Freq (Days)**	53
Climate Zone	4			**Operational Year**	2024
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Project is located in Salinas, CA under MBARD jurisdiction. PG&E is the main provider

Land Use - Phase 1: 111 guest room hotel at 70,000 sf with 146 parking lot spaces on 2.1 acres

Construction Phase - Scaled the default construction schedule to match the proposed applicant schedule. Assuming demolition would occur all in Phase 1

Off-road Equipment - Default equipment

Trips and VMT - Assuming 8,228 cy of pavement would be demolished and hauled offsite for entire site (271+1029 trips). Based on Phase 1 parcel size, assuming 847 cy of pavement to be added to site (105 trips)

Demolition - Square footage estimated using Google Earth

Grading - Earthwork import based on total net fill and allocated based on phase parcel area (844.12 cy of import)

Architectural Coating - MBARD Rule 426 arch coatings 50 g/l for arch coating and 100 g/l for traffic markings. https://www.mbard.org/files/b17e2b4e2/Final+Rule+426+%28Clean+Version%29.pdf

Water And Wastewater - Industrial waste facility uses lagoons: https://www.cityofsalinas.org/our-city-services/public-works/water-waste-energy/environmental-maintenance-services/industrial-waste-facility

Fleet Mix - no vehicles generated by the parking lot

John Abbott Mixed Use Project - Phase 1 Construction and Operation - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Area Coating - no re-paving of the parking lot

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	150.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	150.00	50.00
tblArchitecturalCoating	EF_Parking	150.00	100.00
tblAreaCoating	Area_Parking	3144	0
tblConstructionPhase	NumDays	20.00	35.00
tblConstructionPhase	NumDays	6.00	11.00
tblConstructionPhase	NumDays	220.00	394.00
tblConstructionPhase	NumDays	10.00	17.00
tblConstructionPhase	NumDays	10.00	17.00
tblFleetMix	HHD	9.4150e-003	0.00
tblFleetMix	LDA	0.51	1.00
tblFleetMix	LDT1	0.05	0.00
tblFleetMix	LDT2	0.19	0.00
tblFleetMix	LHD1	0.03	0.00
tblFleetMix	LHD2	7.0040e-003	0.00
tblFleetMix	MCY	0.03	0.00
tblFleetMix	MDV	0.15	0.00
tblFleetMix	MH	3.7460e-003	0.00
tblFleetMix	MHD	0.01	0.00
tblFleetMix	OBUS	1.2030e-003	0.00
tblFleetMix	SBUS	1.3030e-003	0.00
tblFleetMix	UBUS	5.8600e-004	0.00
tblGrading	AcresOfGrading	11.00	10.00
tblGrading	MaterialImported	0.00	844.12
tblLandUse	LandUseSquareFeet	161,172.00	70,000.00

John Abbott Mixed Use Project - Phase 1 Construction and Operation - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblLandUse	LotAcreage	1.18	2.10
tblLandUse	LotAcreage	3.70	0.00
tblTripsAndVMT	HaulingTripNumber	271.00	1,300.00
tblTripsAndVMT	HaulingTripNumber	0.00	105.00
tblWater	AerobicPercent	87.46	0.00
tblWater	AerobicPercent	87.46	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	100.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.0959	0.9203	0.7653	1.8700e-003	0.0955	0.0389	0.1343	0.0307	0.0366	0.0673	0.0000	166.6973	166.6973	0.0260	8.7700e-003	169.9619
2023	0.2481	1.9200	2.0756	4.2700e-003	0.0699	0.0810	0.1509	0.0190	0.0776	0.0966	0.0000	366.0788	366.0788	0.0531	8.9900e-003	370.0836
2024	0.2541	0.6589	0.7491	1.5500e-003	0.0257	0.0260	0.0516	6.9700e-003	0.0249	0.0318	0.0000	133.0141	133.0141	0.0188	3.1500e-003	134.4230
Maximum	**0.2541**	**1.9200**	**2.0756**	**4.2700e-003**	**0.0955**	**0.0810**	**0.1509**	**0.0307**	**0.0776**	**0.0966**	**0.0000**	**366.0788**	**366.0788**	**0.0531**	**8.9900e-003**	**370.0836**

John Abbott Mixed Use Project - Phase 1 Construction and Operation - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.0959	0.9203	0.7653	1.8700e-003	0.0579	0.0389	0.0967	0.0179	0.0366	0.0545	0.0000	166.6971	166.6971	0.0260	8.7700e-003	169.9618
2023	0.2481	1.9200	2.0756	4.2700e-003	0.0699	0.0810	0.1509	0.0190	0.0776	0.0966	0.0000	366.0785	366.0785	0.0531	8.9900e-003	370.0833
2024	0.2541	0.6589	0.7491	1.5500e-003	0.0257	0.0260	0.0516	6.9700e-003	0.0249	0.0318	0.0000	133.0140	133.0140	0.0188	3.1500e-003	134.4229
Maximum	**0.2541**	**1.9200**	**2.0756**	**4.2700e-003**	**0.0699**	**0.0810**	**0.1509**	**0.0190**	**0.0776**	**0.0966**	**0.0000**	**366.0785**	**366.0785**	**0.0531**	**8.9900e-003**	**370.0833**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**19.67**	**0.00**	**11.16**	**22.63**	**0.00**	**6.55**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	9-1-2022	11-30-2022	0.8216	0.8216
2	12-1-2022	2-28-2023	0.5527	0.5527
3	3-1-2023	5-31-2023	0.5474	0.5474
4	6-1-2023	8-31-2023	0.5463	0.5463
5	9-1-2023	11-30-2023	0.5425	0.5425
6	12-1-2023	2-29-2024	0.5230	0.5230
7	3-1-2024	5-31-2024	0.5630	0.5630
		Highest	0.8216	0.8216

2.2 Overall Operational

John Abbott Mixed Use Project - Phase 1 Construction and Operation - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.3257	3.0000e-005	3.0800e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	6.0100e-003	6.0100e-003	2.0000e-005	0.0000	6.4000e-003
Energy	0.0166	0.1507	0.1266	9.0000e-004		0.0115	0.0115		0.0115	0.0115	0.0000	213.6485	213.6485	0.0112	3.9800e-003	215.1140
Mobile	0.4284	0.5214	3.5673	6.5000e-003	0.6270	6.0800e-003	0.6331	0.1676	5.6800e-003	0.1733	0.0000	610.1333	610.1333	0.0495	0.0337	621.4242
Waste						0.0000	0.0000		0.0000	0.0000	12.3358	0.0000	12.3358	0.7290	0.0000	30.5613
Water						0.0000	0.0000		0.0000	0.0000	0.9962	1.5110	2.5072	1.0269	2.2000e-003	28.8341
Total	**0.7707**	**0.6721**	**3.6970**	**7.4000e-003**	**0.6270**	**0.0175**	**0.6445**	**0.1676**	**0.0171**	**0.1848**	**13.3320**	**825.2989**	**838.6308**	**1.8166**	**0.0399**	**895.9400**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.3257	3.0000e-005	3.0800e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	6.0100e-003	6.0100e-003	2.0000e-005	0.0000	6.4000e-003
Energy	0.0166	0.1507	0.1266	9.0000e-004		0.0115	0.0115		0.0115	0.0115	0.0000	213.6485	213.6485	0.0112	3.9800e-003	215.1140
Mobile	0.4284	0.5214	3.5673	6.5000e-003	0.6270	6.0800e-003	0.6331	0.1676	5.6800e-003	0.1733	0.0000	610.1333	610.1333	0.0495	0.0337	621.4242
Waste						0.0000	0.0000		0.0000	0.0000	12.3358	0.0000	12.3358	0.7290	0.0000	30.5613

John Abbott Mixed Use Project - Phase 1 Construction and Operation - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Water						0.0000	0.0000		0.0000	0.0000	0.9962	1.5110	2.5072	1.0269	2.2000e-003	28.8341
Total	**0.7707**	**0.6721**	**3.6970**	**7.4000e-003**	**0.6270**	**0.0175**	**0.6445**	**0.1676**	**0.0171**	**0.1848**	**13.3320**	**825.2989**	**838.6308**	**1.8166**	**0.0399**	**895.9400**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**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**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	9/1/2022	10/19/2022	5	35	
2	Grading	Grading	10/20/2022	11/3/2022	5	11	
3	Building Construction	Building Construction	11/4/2022	5/8/2024	5	394	
4	Paving	Paving	11/4/2022	11/28/2022	5	17	
5	Architectural Coating	Architectural Coating	4/16/2024	5/8/2024	5	17	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 10

Acres of Paving: 2.1

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 105,000; Non-Residential Outdoor: 35,000; Striped Parking Area: 3,144 (Architectural

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	8.00	247	0.40

John Abbott Mixed Use Project - Phase 1 Construction and Operation - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Forklifts	2	7.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	0.00	1,300.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	106.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	51.00	20.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	105.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

John Abbott Mixed Use Project - Phase 1 Construction and Operation - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0298	0.0000	0.0298	4.5200e-003	0.0000	4.5200e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0296	0.2909	0.2443	4.2000e-004		0.0147	0.0147		0.0137	0.0137	0.0000	36.8860	36.8860	9.4000e-003	0.0000	37.1209
Total	**0.0296**	**0.2909**	**0.2443**	**4.2000e-004**	**0.0298**	**0.0147**	**0.0445**	**4.5200e-003**	**0.0137**	**0.0182**	**0.0000**	**36.8860**	**36.8860**	**9.4000e-003**	**0.0000**	**37.1209**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.5400e-003	0.1104	0.0211	4.1000e-004	0.0111	1.0500e-003	0.0121	3.0400e-003	1.0100e-003	4.0500e-003	0.0000	39.3070	39.3070	4.6000e-004	6.2000e-003	41.1647
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.0000e-004	6.5000e-004	6.9600e-003	2.0000e-005	1.8100e-003	1.0000e-005	1.8200e-003	4.8000e-004	1.0000e-005	4.9000e-004	0.0000	1.5604	1.5604	6.0000e-005	5.0000e-005	1.5773
Total	**3.3400e-003**	**0.1111**	**0.0281**	**4.3000e-004**	**0.0129**	**1.0600e-003**	**0.0139**	**3.5200e-003**	**1.0200e-003**	**4.5400e-003**	**0.0000**	**40.8674**	**40.8674**	**5.2000e-004**	**6.2500e-003**	**42.7420**

John Abbott Mixed Use Project - Phase 1 Construction and Operation - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0134	0.0000	0.0134	2.0300e-003	0.0000	2.0300e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0296	0.2909	0.2443	4.2000e-004		0.0147	0.0147		0.0137	0.0137	0.0000	36.8859	36.8859	9.4000e-003	0.0000	37.1209
Total	**0.0296**	**0.2909**	**0.2443**	**4.2000e-004**	**0.0134**	**0.0147**	**0.0281**	**2.0300e-003**	**0.0137**	**0.0157**	**0.0000**	**36.8859**	**36.8859**	**9.4000e-003**	**0.0000**	**37.1209**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.5400e-003	0.1104	0.0211	4.1000e-004	0.0111	1.0500e-003	0.0121	3.0400e-003	1.0100e-003	4.0500e-003	0.0000	39.3070	39.3070	4.6000e-004	6.2000e-003	41.1647
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.0000e-004	6.5000e-004	6.9600e-003	2.0000e-005	1.8100e-003	1.0000e-005	1.8200e-003	4.8000e-004	1.0000e-005	4.9000e-004	0.0000	1.5604	1.5604	6.0000e-005	5.0000e-005	1.5773
Total	**3.3400e-003**	**0.1111**	**0.0281**	**4.3000e-004**	**0.0129**	**1.0600e-003**	**0.0139**	**3.5200e-003**	**1.0200e-003**	**4.5400e-003**	**0.0000**	**40.8674**	**40.8674**	**5.2000e-004**	**6.2500e-003**	**42.7420**

John Abbott Mixed Use Project - Phase 1 Construction and Operation - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0385	0.0000	0.0385	0.0188	0.0000	0.0188	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.4700e-003	0.0934	0.0507	1.1000e-004		4.0800e-003	4.0800e-003		3.7600e-003	3.7600e-003	0.0000	9.9565	9.9565	3.2200e-003	0.0000	10.0370
Total	**8.4700e-003**	**0.0934**	**0.0507**	**1.1000e-004**	**0.0385**	**4.0800e-003**	**0.0426**	**0.0188**	**3.7600e-003**	**0.0226**	**0.0000**	**9.9565**	**9.9565**	**3.2200e-003**	**0.0000**	**10.0370**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.1000e-004	9.0000e-003	1.7200e-003	3.0000e-005	9.0000e-004	9.0000e-005	9.9000e-004	2.5000e-004	8.0000e-005	3.3000e-004	0.0000	3.2050	3.2050	4.0000e-005	5.1000e-004	3.3565
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.9000e-004	1.6000e-004	1.6800e-003	0.0000	4.4000e-004	0.0000	4.4000e-004	1.2000e-004	0.0000	1.2000e-004	0.0000	0.3772	0.3772	1.0000e-005	1.0000e-005	0.3813
Total	**4.0000e-004**	**9.1600e-003**	**3.4000e-003**	**3.0000e-005**	**1.3400e-003**	**9.0000e-005**	**1.4300e-003**	**3.7000e-004**	**8.0000e-005**	**4.5000e-004**	**0.0000**	**3.5823**	**3.5823**	**5.0000e-005**	**5.2000e-004**	**3.7378**

John Abbott Mixed Use Project - Phase 1 Construction and Operation - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0173	0.0000	0.0173	8.4500e-003	0.0000	8.4500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.4700e-003	0.0934	0.0507	1.1000e-004		4.0800e-003	4.0800e-003		3.7600e-003	3.7600e-003	0.0000	9.9565	9.9565	3.2200e-003	0.0000	10.0370
Total	**8.4700e-003**	**0.0934**	**0.0507**	**1.1000e-004**	**0.0173**	**4.0800e-003**	**0.0214**	**8.4500e-003**	**3.7600e-003**	**0.0122**	**0.0000**	**9.9565**	**9.9565**	**3.2200e-003**	**0.0000**	**10.0370**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.1000e-004	9.0000e-003	1.7200e-003	3.0000e-005	9.0000e-004	9.0000e-005	9.9000e-004	2.5000e-004	8.0000e-005	3.3000e-004	0.0000	3.2050	3.2050	4.0000e-005	5.1000e-004	3.3565
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.9000e-004	1.6000e-004	1.6800e-003	0.0000	4.4000e-004	0.0000	4.4000e-004	1.2000e-004	0.0000	1.2000e-004	0.0000	0.3772	0.3772	1.0000e-005	1.0000e-005	0.3813
Total	**4.0000e-004**	**9.1600e-003**	**3.4000e-003**	**3.0000e-005**	**1.3400e-003**	**9.0000e-005**	**1.4300e-003**	**3.7000e-004**	**8.0000e-005**	**4.5000e-004**	**0.0000**	**3.5823**	**3.5823**	**5.0000e-005**	**5.2000e-004**	**3.7378**

John Abbott Mixed Use Project - Phase 1 Construction and Operation - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0380	0.2994	0.2942	5.1000e-004		0.0144	0.0144		0.0138	0.0138	0.0000	42.5744	42.5744	8.2100e-003	0.0000	42.7798
Total	**0.0380**	**0.2994**	**0.2942**	**5.1000e-004**		**0.0144**	**0.0144**		**0.0138**	**0.0138**	**0.0000**	**42.5744**	**42.5744**	**8.2100e-003**	**0.0000**	**42.7798**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	9.6000e-004	0.0249	7.5500e-003	9.0000e-005	2.7100e-003	2.6000e-004	2.9700e-003	7.8000e-004	2.5000e-004	1.0300e-003	0.0000	8.4271	8.4271	9.0000e-005	1.2400e-003	8.7988
Worker	3.6800e-003	2.9700e-003	0.0320	8.0000e-005	8.3200e-003	6.0000e-005	8.3800e-003	2.2100e-003	5.0000e-005	2.2600e-003	0.0000	7.1708	7.1708	2.7000e-004	2.4000e-004	7.2487
Total	**4.6400e-003**	**0.0279**	**0.0396**	**1.7000e-004**	**0.0110**	**3.2000e-004**	**0.0114**	**2.9900e-003**	**3.0000e-004**	**3.2900e-003**	**0.0000**	**15.5979**	**15.5979**	**3.6000e-004**	**1.4800e-003**	**16.0475**

Mitigated Construction On-Site

John Abbott Mixed Use Project - Phase 1 Construction and Operation - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0380	0.2994	0.2942	5.1000e-004		0.0144	0.0144		0.0138	0.0138	0.0000	42.5744	42.5744	8.2100e-003	0.0000	42.7797
Total	**0.0380**	**0.2994**	**0.2942**	**5.1000e-004**		**0.0144**	**0.0144**		**0.0138**	**0.0138**	**0.0000**	**42.5744**	**42.5744**	**8.2100e-003**	**0.0000**	**42.7797**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	9.6000e-004	0.0249	7.5500e-003	9.0000e-005	2.7100e-003	2.6000e-004	2.9700e-003	7.8000e-004	2.5000e-004	1.0300e-003	0.0000	8.4271	8.4271	9.0000e-005	1.2400e-003	8.7988
Worker	3.6800e-003	2.9700e-003	0.0320	8.0000e-005	8.3200e-003	6.0000e-005	8.3800e-003	2.2100e-003	5.0000e-005	2.2600e-003	0.0000	7.1708	7.1708	2.7000e-004	2.4000e-004	7.2487
Total	**4.6400e-003**	**0.0279**	**0.0396**	**1.7000e-004**	**0.0110**	**3.2000e-004**	**0.0114**	**2.9900e-003**	**3.0000e-004**	**3.2900e-003**	**0.0000**	**15.5979**	**15.5979**	**3.6000e-004**	**1.4800e-003**	**16.0475**

3.4 Building Construction - 2023

Unmitigated Construction On-Site

John Abbott Mixed Use Project - Phase 1 Construction and Operation - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2228	1.7711	1.8479	3.2500e-003		0.0798	0.0798		0.0764	0.0764	0.0000	270.0127	270.0127	0.0511	0.0000	271.2893
Total	**0.2228**	**1.7711**	**1.8479**	**3.2500e-003**		**0.0798**	**0.0798**		**0.0764**	**0.0764**	**0.0000**	**270.0127**	**270.0127**	**0.0511**	**0.0000**	**271.2893**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.6900e-003	0.1323	0.0417	5.4000e-004	0.0172	8.5000e-004	0.0180	4.9600e-003	8.1000e-004	5.7700e-003	0.0000	51.7063	51.7063	4.5000e-004	7.6000e-003	53.9810
Worker	0.0216	0.0166	0.1860	4.8000e-004	0.0528	3.4000e-004	0.0531	0.0140	3.2000e-004	0.0143	0.0000	44.3599	44.3599	1.5600e-003	1.3900e-003	44.8133
Total	**0.0253**	**0.1489**	**0.2277**	**1.0200e-003**	**0.0699**	**1.1900e-003**	**0.0711**	**0.0190**	**1.1300e-003**	**0.0201**	**0.0000**	**96.0662**	**96.0662**	**2.0100e-003**	**8.9900e-003**	**98.7943**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

John Abbott Mixed Use Project - Phase 1 Construction and Operation - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Category	tons/yr										MT/yr					
Off-Road	0.2228	1.7711	1.8479	3.2500e-003		0.0798	0.0798		0.0764	0.0764	0.0000	270.0124	270.0124	0.0511	0.0000	271.2889
Total	**0.2228**	**1.7711**	**1.8479**	**3.2500e-003**		**0.0798**	**0.0798**		**0.0764**	**0.0764**	**0.0000**	**270.0124**	**270.0124**	**0.0511**	**0.0000**	**271.2889**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.6900e-003	0.1323	0.0417	5.4000e-004	0.0172	8.5000e-004	0.0180	4.9600e-003	8.1000e-004	5.7700e-003	0.0000	51.7063	51.7063	4.5000e-004	7.6000e-003	53.9810
Worker	0.0216	0.0166	0.1860	4.8000e-004	0.0528	3.4000e-004	0.0531	0.0140	3.2000e-004	0.0143	0.0000	44.3599	44.3599	1.5600e-003	1.3900e-003	44.8133
Total	**0.0253**	**0.1489**	**0.2277**	**1.0200e-003**	**0.0699**	**1.1900e-003**	**0.0711**	**0.0190**	**1.1300e-003**	**0.0201**	**0.0000**	**96.0662**	**96.0662**	**2.0100e-003**	**8.9900e-003**	**98.7943**

3.4 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

John Abbott Mixed Use Project - Phase 1 Construction and Operation - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Off-Road	0.0743	0.5963	0.6557	1.1600e-003		0.0250	0.0250		0.0240	0.0240	0.0000	96.5870	96.5870	0.0180	0.0000	97.0367
Total	**0.0743**	**0.5963**	**0.6557**	**1.1600e-003**		**0.0250**	**0.0250**		**0.0240**	**0.0240**	**0.0000**	**96.5870**	**96.5870**	**0.0180**	**0.0000**	**97.0367**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.2600e-003	0.0468	0.0144	1.9000e-004	6.1400e-003	3.0000e-004	6.4400e-003	1.7700e-003	2.9000e-004	2.0600e-003	0.0000	18.2084	18.2084	1.6000e-004	2.6800e-003	19.0096
Worker	7.2200e-003	5.2600e-003	0.0615	1.7000e-004	0.0189	1.2000e-004	0.0190	5.0200e-003	1.1000e-004	5.1200e-003	0.0000	15.4932	15.4932	5.0000e-004	4.6000e-004	15.6427
Total	**8.4800e-003**	**0.0520**	**0.0758**	**3.6000e-004**	**0.0250**	**4.2000e-004**	**0.0254**	**6.7900e-003**	**4.0000e-004**	**7.1800e-003**	**0.0000**	**33.7015**	**33.7015**	**6.6000e-004**	**3.1400e-003**	**34.6523**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0743	0.5963	0.6557	1.1600e-003		0.0250	0.0250		0.0240	0.0240	0.0000	96.5869	96.5869	0.0180	0.0000	97.0366

John Abbott Mixed Use Project - Phase 1 Construction and Operation - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Total	**0.0743**	**0.5963**	**0.6557**	**1.1600e-003**		**0.0250**	**0.0250**		**0.0240**	**0.0240**	**0.0000**	**96.5869**	**96.5869**	**0.0180**	**0.0000**	**97.0366**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.2600e-003	0.0468	0.0144	1.9000e-004	6.1400e-003	3.0000e-004	6.4400e-003	1.7700e-003	2.9000e-004	2.0600e-003	0.0000	18.2084	18.2084	1.6000e-004	2.6800e-003	19.0096
Worker	7.2200e-003	5.2600e-003	0.0615	1.7000e-004	0.0189	1.2000e-004	0.0190	5.0200e-003	1.1000e-004	5.1200e-003	0.0000	15.4932	15.4932	5.0000e-004	4.6000e-004	15.6427
Total	**8.4800e-003**	**0.0520**	**0.0758**	**3.6000e-004**	**0.0250**	**4.2000e-004**	**0.0254**	**6.7900e-003**	**4.0000e-004**	**7.1800e-003**	**0.0000**	**33.7015**	**33.7015**	**6.6000e-004**	**3.1400e-003**	**34.6523**

3.5 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	8.0000e-003	0.0793	0.0994	1.5000e-004		4.1500e-003	4.1500e-003		3.8200e-003	3.8200e-003	0.0000	13.1835	13.1835	4.1800e-003	0.0000	13.2880
Paving	2.7500e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

John Abbott Mixed Use Project - Phase 1 Construction and Operation - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Total	**0.0108**	**0.0793**	**0.0994**	**1.5000e-004**		**4.1500e-003**	**4.1500e-003**		**3.8200e-003**	**3.8200e-003**	**0.0000**	**13.1835**	**13.1835**	**4.1800e-003**	**0.0000**	**13.2880**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.1000e-004	8.9200e-003	1.7000e-003	3.0000e-005	8.9000e-004	9.0000e-005	9.8000e-004	2.5000e-004	8.0000e-005	3.3000e-004	0.0000	3.1748	3.1748	4.0000e-005	5.0000e-004	3.3248
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.5000e-004	3.6000e-004	3.9000e-003	1.0000e-005	1.0100e-003	1.0000e-005	1.0200e-003	2.7000e-004	1.0000e-005	2.8000e-004	0.0000	0.8745	0.8745	3.0000e-005	3.0000e-005	0.8840
Total	**6.6000e-004**	**9.2800e-003**	**5.6000e-003**	**4.0000e-005**	**1.9000e-003**	**1.0000e-004**	**2.0000e-003**	**5.2000e-004**	**9.0000e-005**	**6.1000e-004**	**0.0000**	**4.0493**	**4.0493**	**7.0000e-005**	**5.3000e-004**	**4.2088**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	8.0000e-003	0.0793	0.0994	1.5000e-004		4.1500e-003	4.1500e-003		3.8200e-003	3.8200e-003	0.0000	13.1835	13.1835	4.1800e-003	0.0000	13.2880
Paving	2.7500e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

John Abbott Mixed Use Project - Phase 1 Construction and Operation - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Total	**0.0108**	**0.0793**	**0.0994**	**1.5000e-004**		**4.1500e-003**	**4.1500e-003**		**3.8200e-003**	**3.8200e-003**	**0.0000**	**13.1835**	**13.1835**	**4.1800e-003**	**0.0000**	**13.2880**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.1000e-004	8.9200e-003	1.7000e-003	3.0000e-005	8.9000e-004	9.0000e-005	9.8000e-004	2.5000e-004	8.0000e-005	3.3000e-004	0.0000	3.1748	3.1748	4.0000e-005	5.0000e-004	3.3248
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.5000e-004	3.6000e-004	3.9000e-003	1.0000e-005	1.0100e-003	1.0000e-005	1.0200e-003	2.7000e-004	1.0000e-005	2.8000e-004	0.0000	0.8745	0.8745	3.0000e-005	3.0000e-005	0.8840
Total	**6.6000e-004**	**9.2800e-003**	**5.6000e-003**	**4.0000e-005**	**1.9000e-003**	**1.0000e-004**	**2.0000e-003**	**5.2000e-004**	**9.0000e-005**	**6.1000e-004**	**0.0000**	**4.0493**	**4.0493**	**7.0000e-005**	**5.3000e-004**	**4.2088**

3.6 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.1695					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.5400e-003	0.0104	0.0154	3.0000e-005		5.2000e-004	5.2000e-004		5.2000e-004	5.2000e-004	0.0000	2.1703	2.1703	1.2000e-004	0.0000	2.1733

John Abbott Mixed Use Project - Phase 1 Construction and Operation - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Total	**0.1711**	**0.0104**	**0.0154**	**3.0000e-005**		**5.2000e-004**	**5.2000e-004**		**5.2000e-004**	**5.2000e-004**	**0.0000**	**2.1703**	**2.1703**	**1.2000e-004**	**0.0000**	**2.1733**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.6000e-004	1.9000e-004	2.2000e-003	1.0000e-005	6.8000e-004	0.0000	6.8000e-004	1.8000e-004	0.0000	1.8000e-004	0.0000	0.5553	0.5553	2.0000e-005	2.0000e-005	0.5607
Total	**2.6000e-004**	**1.9000e-004**	**2.2000e-003**	**1.0000e-005**	**6.8000e-004**	**0.0000**	**6.8000e-004**	**1.8000e-004**	**0.0000**	**1.8000e-004**	**0.0000**	**0.5553**	**0.5553**	**2.0000e-005**	**2.0000e-005**	**0.5607**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.1695					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.5400e-003	0.0104	0.0154	3.0000e-005		5.2000e-004	5.2000e-004		5.2000e-004	5.2000e-004	0.0000	2.1703	2.1703	1.2000e-004	0.0000	2.1733

John Abbott Mixed Use Project - Phase 1 Construction and Operation - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Total	**0.1711**	**0.0104**	**0.0154**	**3.0000e-005**		**5.2000e-004**	**5.2000e-004**		**5.2000e-004**	**5.2000e-004**	**0.0000**	**2.1703**	**2.1703**	**1.2000e-004**	**0.0000**	**2.1733**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.6000e-004	1.9000e-004	2.2000e-003	1.0000e-005	6.8000e-004	0.0000	6.8000e-004	1.8000e-004	0.0000	1.8000e-004	0.0000	0.5553	0.5553	2.0000e-005	2.0000e-005	0.5607
Total	**2.6000e-004**	**1.9000e-004**	**2.2000e-003**	**1.0000e-005**	**6.8000e-004**	**0.0000**	**6.8000e-004**	**1.8000e-004**	**0.0000**	**1.8000e-004**	**0.0000**	**0.5553**	**0.5553**	**2.0000e-005**	**2.0000e-005**	**0.5607**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

John Abbott Mixed Use Project - Phase 1 Construction and Operation - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Category	tons/yr										MT/yr					
Mitigated	0.4284	0.5214	3.5673	6.5000e-003	0.6270	6.0800e-003	0.6331	0.1676	5.6800e-003	0.1733	0.0000	610.1333	610.1333	0.0495	0.0337	621.4242
Unmitigated	0.4284	0.5214	3.5673	6.5000e-003	0.6270	6.0800e-003	0.6331	0.1676	5.6800e-003	0.1733	0.0000	610.1333	610.1333	0.0495	0.0337	621.4242

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Hotel	927.96	909.09	660.45	1,685,331	1,685,331
Parking Lot	0.00	0.00	0.00		
Total	927.96	909.09	660.45	1,685,331	1,685,331

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Hotel	9.50	7.30	7.30	19.40	61.60	19.00	58	38	4
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Hotel	0.512341	0.052370	0.194493	0.150484	0.029151	0.007004	0.010494	0.009415	0.001203	0.000586	0.027411	0.001303	0.003
Parking Lot	1.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

John Abbott Mixed Use Project - Phase 1 Construction and Operation - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	49.6242	49.6242	8.0300e-003	9.7000e-004	50.1149
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	49.6242	49.6242	8.0300e-003	9.7000e-004	50.1149
NaturalGas Mitigated	0.0166	0.1507	0.1266	9.0000e-004		0.0115	0.0115		0.0115	0.0115	0.0000	164.0243	164.0243	3.1400e-003	3.0100e-003	164.9991
NaturalGas Unmitigated	0.0166	0.1507	0.1266	9.0000e-004		0.0115	0.0115		0.0115	0.0115	0.0000	164.0243	164.0243	3.1400e-003	3.0100e-003	164.9991

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Hotel	3.0737e+006	0.0166	0.1507	0.1266	9.0000e-004		0.0115	0.0115		0.0115	0.0115	0.0000	164.0243	164.0243	3.1400e-003	3.0100e-003	164.9991
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0166**	**0.1507**	**0.1266**	**9.0000e-004**		**0.0115**	**0.0115**		**0.0115**	**0.0115**	**0.0000**	**164.0243**	**164.0243**	**3.1400e-003**	**3.0100e-003**	**164.9991**

John Abbott Mixed Use Project - Phase 1 Construction and Operation - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Hotel	3.0737e+006	0.0166	0.1507	0.1266	9.0000e-004		0.0115	0.0115		0.0115	0.0115	0.0000	164.0243	164.0243	3.1400e-003	3.0100e-003	164.9991
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0166**	**0.1507**	**0.1266**	**9.0000e-004**		**0.0115**	**0.0115**		**0.0115**	**0.0115**	**0.0000**	**164.0243**	**164.0243**	**3.1400e-003**	**3.0100e-003**	**164.9991**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Hotel	518000	47.9273	7.7500e-003	9.4000e-004	48.4012
Parking Lot	18340	1.6969	2.7000e-004	3.0000e-005	1.7137
Total		**49.6242**	**8.0200e-003**	**9.7000e-004**	**50.1149**

John Abbott Mixed Use Project - Phase 1 Construction and Operation - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Hotel	518000	47.9273	7.7500e-003	9.4000e-004	48.4012
Parking Lot	18340	1.6969	2.7000e-004	3.0000e-005	1.7137
Total		**49.6242**	**8.0200e-003**	**9.7000e-004**	**50.1149**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.3257	3.0000e-005	3.0800e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	6.0100e-003	6.0100e-003	2.0000e-005	0.0000	6.4000e-003
Unmitigated	0.3257	3.0000e-005	3.0800e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	6.0100e-003	6.0100e-003	2.0000e-005	0.0000	6.4000e-003

6.2 Area by SubCategory

John Abbott Mixed Use Project - Phase 1 Construction and Operation - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0487					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2768					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.8000e-004	3.0000e-005	3.0800e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	6.0100e-003	6.0100e-003	2.0000e-005	0.0000	6.4000e-003
Total	**0.3257**	**3.0000e-005**	**3.0800e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**6.0100e-003**	**6.0100e-003**	**2.0000e-005**	**0.0000**	**6.4000e-003**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0487					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2768					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.8000e-004	3.0000e-005	3.0800e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	6.0100e-003	6.0100e-003	2.0000e-005	0.0000	6.4000e-003
Total	**0.3257**	**3.0000e-005**	**3.0800e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**6.0100e-003**	**6.0100e-003**	**2.0000e-005**	**0.0000**	**6.4000e-003**

John Abbott Mixed Use Project - Phase 1 Construction and Operation - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	2.5072	1.0269	2.2000e-003	28.8341
Unmitigated	2.5072	1.0269	2.2000e-003	28.8341

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Hotel	2.81571 / 0.312857	2.5072	1.0269	2.2000e-003	28.8341
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**2.5072**	**1.0269**	**2.2000e-003**	**28.8341**

John Abbott Mixed Use Project - Phase 1 Construction and Operation - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Hotel	2.81571 / 0.312857	2.5072	1.0269	2.2000e-003	28.8341
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**2.5072**	**1.0269**	**2.2000e-003**	**28.8341**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	12.3358	0.7290	0.0000	30.5613
Unmitigated	12.3358	0.7290	0.0000	30.5613

John Abbott Mixed Use Project - Phase 1 Construction and Operation - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Hotel	60.77	12.3358	0.7290	0.0000	30.5613
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**12.3358**	**0.7290**	**0.0000**	**30.5613**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Hotel	60.77	12.3358	0.7290	0.0000	30.5613
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**12.3358**	**0.7290**	**0.0000**	**30.5613**

9.0 Operational Offroad

John Abbott Mixed Use Project - Phase 1 Construction and Operation - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

-

-

-

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John Abbott Mixed Use Project - Phase 2 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

John Abbott Mixed Use Project - Phase 2 Construction

Monterey Bay Unified APCD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	78.00	Space	0.00	31,200.00	0
Apartments Low Rise	28.00	Dwelling Unit	3.30	28,800.00	80
Strip Mall	21.40	1000sqft	0.00	21,400.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.8	**Precipitation Freq (Days)**	53
Climate Zone	4			**Operational Year**	2027
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Phase 2: 28 low rise apartment units (two stories or less of residential) and 21,400 sf of retail. Also 78 parking spaces on a 3.3 acre site

Construction Phase - Scaled the default construction schedule to match the proposed applicant schedule. Assuming all demolition would occur in Phase 1

Off-road Equipment - Default equipment

Trips and VMT - Based on Phase 2 parcel size, assuming 1,331 cy of pavement to be added to site. Approx 166 trips

Demolition -

Grading - Earthwork import based on total net fill and allocated based on phase parcel area (1,326.47 cy of import)

Architectural Coating - MBARD Rule 426 arch coatings 50 g/l for arch coating and 100 g/l for traffic markings.

Table Name	Column Name	Default Value	New Value

John Abbott Mixed Use Project - Phase 2 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblArchitecturalCoating	EF_Nonresidential_Exterior	150.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	150.00	50.00
tblArchitecturalCoating	EF_Parking	150.00	100.00
tblArchitecturalCoating	EF_Residential_Exterior	100.00	50.00
tblArchitecturalCoating	EF_Residential_Interior	100.00	50.00
tblAreaCoating	Area_Parking	1872	0
tblConstructionPhase	NumDays	230.00	425.00
tblConstructionPhase	NumDays	8.00	15.00
tblFleetMix	HHD	9.4850e-003	0.00
tblFleetMix	LDA	0.53	0.00
tblFleetMix	LDT1	0.05	0.00
tblFleetMix	LDT2	0.19	0.00
tblFleetMix	LHD1	0.03	0.00
tblFleetMix	LHD2	6.4340e-003	0.00
tblFleetMix	MCY	0.03	0.00
tblFleetMix	MDV	0.14	0.00
tblFleetMix	MH	3.2000e-003	0.00
tblFleetMix	MHD	0.01	0.00
tblFleetMix	OBUS	1.1550e-003	0.00
tblFleetMix	SBUS	1.2210e-003	0.00
tblFleetMix	UBUS	5.6300e-004	0.00
tblGrading	AcresOfGrading	15.00	13.00
tblGrading	MaterialImported	0.00	1,326.47
tblLandUse	LandUseSquareFeet	28,000.00	28,800.00
tblLandUse	LotAcreage	0.70	0.00
tblLandUse	LotAcreage	1.75	3.30
tblLandUse	LotAcreage	0.49	0.00
tblTripsAndVMT	HaulingTripNumber	0.00	166.00

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2024	0.2105	1.3200	1.5803	3.0000e-003	0.0882	0.0572	0.1453	0.0353	0.0536	0.0890	0.0000	263.7057	263.7057	0.0542	4.8200e-003	266.4978
2025	0.2764	1.7211	2.2583	4.2000e-003	0.0522	0.0698	0.1220	0.0141	0.0657	0.0798	0.0000	367.6423	367.6423	0.0725	5.3700e-003	371.0557
2026	7.4500e-003	0.0656	0.0858	1.6000e-004	1.9900e-003	2.6700e-003	4.6500e-003	5.4000e-004	2.5100e-003	3.0400e-003	0.0000	13.9739	13.9739	2.7700e-003	2.0000e-004	14.1026
Maximum	**0.2764**	**1.7211**	**2.2583**	**4.2000e-003**	**0.0882**	**0.0698**	**0.1453**	**0.0353**	**0.0657**	**0.0890**	**0.0000**	**367.6423**	**367.6423**	**0.0725**	**5.3700e-003**	**371.0557**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2024	0.2105	1.3200	1.5803	3.0000e-003	0.0882	0.0572	0.1453	0.0353	0.0536	0.0890	0.0000	263.7055	263.7055	0.0542	4.8200e-003	266.4975
2025	0.2764	1.7210	2.2583	4.2000e-003	0.0522	0.0698	0.1220	0.0141	0.0657	0.0798	0.0000	367.6419	367.6419	0.0725	5.3700e-003	371.0553
2026	7.4500e-003	0.0656	0.0858	1.6000e-004	1.9900e-003	2.6700e-003	4.6500e-003	5.4000e-004	2.5100e-003	3.0400e-003	0.0000	13.9739	13.9739	2.7700e-003	2.0000e-004	14.1026

John Abbott Mixed Use Project - Phase 2 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Maximum	**0.2764**	**1.7210**	**2.2583**	**4.2000e-003**	**0.0882**	**0.0698**	**0.1453**	**0.0353**	**0.0657**	**0.0890**	**0.0000**	**367.6419**	**367.6419**	**0.0725**	**5.3700e-003**	**371.0553**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**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**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**5-2-2024**	**8-1-2024**	0.6096	0.6096
2	**8-2-2024**	**11-1-2024**	0.5170	0.5170
3	**11-2-2024**	**2-1-2025**	0.6673	0.6673
4	**2-2-2025**	**5-1-2025**	0.4656	0.4656
5	**5-2-2025**	**8-1-2025**	0.4801	0.4801
6	**8-2-2025**	**11-1-2025**	0.4808	0.4808
7	**11-2-2025**	**2-1-2026**	0.3876	0.3876
		Highest	0.6673	0.6673

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.2398	3.3300e-003	0.2898	2.0000e-005		1.6100e-003	1.6100e-003		1.6100e-003	1.6100e-003	0.0000	0.4741	0.4741	4.6000e-004	0.0000	0.4856
Energy	1.7600e-003	0.0152	7.4800e-003	1.0000e-004		1.2200e-003	1.2200e-003		1.2200e-003	1.2200e-003	0.0000	49.5199	49.5199	5.5300e-003	9.5000e-004	49.9409
Mobile	0.4334	0.4929	3.5783	6.7400e-003	0.7158	5.9800e-003	0.7218	0.1913	5.5800e-003	0.1969	0.0000	645.7393	645.7393	0.0493	0.0341	657.1358

John Abbott Mixed Use Project - Phase 2 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Waste						0.0000	0.0000		0.0000	0.0000	7.1757	0.0000	7.1757	0.4241	0.0000	17.7776
Water						0.0000	0.0000		0.0000	0.0000	1.0817	2.3940	3.4757	0.1115	2.6700e-003	7.0585
Total	**0.6749**	**0.5114**	**3.8756**	**6.8600e-003**	**0.7158**	**8.8100e-003**	**0.7246**	**0.1913**	**8.4100e-003**	**0.1997**	**8.2574**	**698.1273**	**706.3847**	**0.5908**	**0.0377**	**732.3984**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.2398	3.3300e-003	0.2898	2.0000e-005		1.6100e-003	1.6100e-003		1.6100e-003	1.6100e-003	0.0000	0.4741	0.4741	4.6000e-004	0.0000	0.4856
Energy	1.7600e-003	0.0152	7.4800e-003	1.0000e-004		1.2200e-003	1.2200e-003		1.2200e-003	1.2200e-003	0.0000	49.5199	49.5199	5.5300e-003	9.5000e-004	49.9409
Mobile	0.4334	0.4929	3.5783	6.7400e-003	0.7158	5.9800e-003	0.7218	0.1913	5.5800e-003	0.1969	0.0000	645.7393	645.7393	0.0493	0.0341	657.1358
Waste						0.0000	0.0000		0.0000	0.0000	7.1757	0.0000	7.1757	0.4241	0.0000	17.7776
Water						0.0000	0.0000		0.0000	0.0000	1.0817	2.3940	3.4757	0.1115	2.6700e-003	7.0585
Total	**0.6749**	**0.5114**	**3.8756**	**6.8600e-003**	**0.7158**	**8.8100e-003**	**0.7246**	**0.1913**	**8.4100e-003**	**0.1997**	**8.2574**	**698.1273**	**706.3847**	**0.5908**	**0.0377**	**732.3984**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**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**	**0.00**	**0.00**

3.0 Construction Detail

John Abbott Mixed Use Project - Phase 2 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	5/9/2024	5/29/2024	5	15	
2	Building Construction	Building Construction	5/30/2024	1/14/2026	5	425	
3	Paving	Paving	5/30/2024	6/24/2024	5	18	
4	Architectural Coating	Architectural Coating	12/20/2024	1/14/2025	5	18	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 13

Acres of Paving: 0

Residential Indoor: 58,320; Residential Outdoor: 19,440; Non-Residential Indoor: 32,100; Non-Residential Outdoor: 10,700; Striped Parking Area: 1,872

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	2	6.00	132	0.36
Paving	Rollers	2	6.00	80	0.38

John Abbott Mixed Use Project - Phase 2 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	6	15.00	0.00	166.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	40.00	12.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	166.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Grading - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0522	0.0000	0.0522	0.0256	0.0000	0.0256	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0125	0.1277	0.1107	2.2000e-004		5.4300e-003	5.4300e-003		5.0000e-003	5.0000e-003	0.0000	19.5479	19.5479	6.3200e-003	0.0000	19.7060
Total	**0.0125**	**0.1277**	**0.1107**	**2.2000e-004**	**0.0522**	**5.4300e-003**	**0.0576**	**0.0256**	**5.0000e-003**	**0.0306**	**0.0000**	**19.5479**	**19.5479**	**6.3200e-003**	**0.0000**	**19.7060**

Unmitigated Construction Off-Site

John Abbott Mixed Use Project - Phase 2 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.0000e-004	0.0119	2.5100e-003	5.0000e-005	1.4100e-003	1.0000e-004	1.5200e-003	3.9000e-004	1.0000e-004	4.9000e-004	0.0000	4.7689	4.7689	5.0000e-005	7.5000e-004	4.9942
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.4000e-004	2.5000e-004	2.9200e-003	1.0000e-005	9.0000e-004	1.0000e-005	9.0000e-004	2.4000e-004	1.0000e-005	2.4000e-004	0.0000	0.7350	0.7350	2.0000e-005	2.0000e-005	0.7421
Total	**5.4000e-004**	**0.0121**	**5.4300e-003**	**6.0000e-005**	**2.3100e-003**	**1.1000e-004**	**2.4200e-003**	**6.3000e-004**	**1.1000e-004**	**7.3000e-004**	**0.0000**	**5.5038**	**5.5038**	**7.0000e-005**	**7.7000e-004**	**5.7362**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0522	0.0000	0.0522	0.0256	0.0000	0.0256	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0125	0.1277	0.1107	2.2000e-004		5.4300e-003	5.4300e-003		5.0000e-003	5.0000e-003	0.0000	19.5479	19.5479	6.3200e-003	0.0000	19.7060
Total	**0.0125**	**0.1277**	**0.1107**	**2.2000e-004**	**0.0522**	**5.4300e-003**	**0.0576**	**0.0256**	**5.0000e-003**	**0.0306**	**0.0000**	**19.5479**	**19.5479**	**6.3200e-003**	**0.0000**	**19.7060**

Mitigated Construction Off-Site

John Abbott Mixed Use Project - Phase 2 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.0000e-004	0.0119	2.5100e-003	5.0000e-005	1.4100e-003	1.0000e-004	1.5200e-003	3.9000e-004	1.0000e-004	4.9000e-004	0.0000	4.7689	4.7689	5.0000e-005	7.5000e-004	4.9942
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.4000e-004	2.5000e-004	2.9200e-003	1.0000e-005	9.0000e-004	1.0000e-005	9.0000e-004	2.4000e-004	1.0000e-005	2.4000e-004	0.0000	0.7350	0.7350	2.0000e-005	2.0000e-005	0.7421
Total	**5.4000e-004**	**0.0121**	**5.4300e-003**	**6.0000e-005**	**2.3100e-003**	**1.1000e-004**	**2.4200e-003**	**6.3000e-004**	**1.1000e-004**	**7.3000e-004**	**0.0000**	**5.5038**	**5.5038**	**7.0000e-005**	**7.7000e-004**	**5.7362**

3.3 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1133	1.0352	1.2448	2.0800e-003		0.0472	0.0472		0.0444	0.0444	0.0000	178.5238	178.5238	0.0422	0.0000	179.5792
Total	**0.1133**	**1.0352**	**1.2448**	**2.0800e-003**		**0.0472**	**0.0472**		**0.0444**	**0.0444**	**0.0000**	**178.5238**	**178.5238**	**0.0422**	**0.0000**	**179.5792**

Unmitigated Construction Off-Site

John Abbott Mixed Use Project - Phase 2 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.2500e-003	0.0465	0.0143	1.9000e-004	6.1000e-003	3.0000e-004	6.3900e-003	1.7600e-003	2.8000e-004	2.0500e-003	0.0000	18.0909	18.0909	1.6000e-004	2.6600e-003	18.8869
Worker	9.3700e-003	6.8400e-003	0.0798	2.2000e-004	0.0245	1.5000e-004	0.0247	6.5200e-003	1.4000e-004	6.6500e-003	0.0000	20.1219	20.1219	6.5000e-004	6.0000e-004	20.3161
Total	**0.0106**	**0.0533**	**0.0941**	**4.1000e-004**	**0.0306**	**4.5000e-004**	**0.0310**	**8.2800e-003**	**4.2000e-004**	**8.7000e-003**	**0.0000**	**38.2127**	**38.2127**	**8.1000e-004**	**3.2600e-003**	**39.2030**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1133	1.0352	1.2448	2.0800e-003		0.0472	0.0472		0.0444	0.0444	0.0000	178.5236	178.5236	0.0422	0.0000	179.5790
Total	**0.1133**	**1.0352**	**1.2448**	**2.0800e-003**		**0.0472**	**0.0472**		**0.0444**	**0.0444**	**0.0000**	**178.5236**	**178.5236**	**0.0422**	**0.0000**	**179.5790**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

John Abbott Mixed Use Project - Phase 2 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.2500e-003	0.0465	0.0143	1.9000e-004	6.1000e-003	3.0000e-004	6.3900e-003	1.7600e-003	2.8000e-004	2.0500e-003	0.0000	18.0909	18.0909	1.6000e-004	2.6600e-003	18.8869
Worker	9.3700e-003	6.8400e-003	0.0798	2.2000e-004	0.0245	1.5000e-004	0.0247	6.5200e-003	1.4000e-004	6.6500e-003	0.0000	20.1219	20.1219	6.5000e-004	6.0000e-004	20.3161
Total	**0.0106**	**0.0533**	**0.0941**	**4.1000e-004**	**0.0306**	**4.5000e-004**	**0.0310**	**8.2800e-003**	**4.2000e-004**	**8.7000e-003**	**0.0000**	**38.2127**	**38.2127**	**8.1000e-004**	**3.2600e-003**	**39.2030**

3.3 Building Construction - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1785	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6549	302.6549	0.0711	0.0000	304.4335
Total	**0.1785**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6549**	**302.6549**	**0.0711**	**0.0000**	**304.4335**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

John Abbott Mixed Use Project - Phase 2 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.0400e-003	0.0776	0.0235	3.1000e-004	0.0103	4.9000e-004	0.0108	2.9900e-003	4.7000e-004	3.4600e-003	0.0000	30.1257	30.1257	2.6000e-004	4.4300e-003	31.4512
Worker	0.0149	0.0104	0.1258	3.5000e-004	0.0415	2.4000e-004	0.0418	0.0110	2.2000e-004	0.0113	0.0000	33.3297	33.3297	1.0000e-003	9.4000e-004	33.6349
Total	**0.0169**	**0.0880**	**0.1492**	**6.6000e-004**	**0.0519**	**7.3000e-004**	**0.0526**	**0.0140**	**6.9000e-004**	**0.0147**	**0.0000**	**63.4554**	**63.4554**	**1.2600e-003**	**5.3700e-003**	**65.0861**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1784	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6545	302.6545	0.0711	0.0000	304.4331
Total	**0.1784**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6545**	**302.6545**	**0.0711**	**0.0000**	**304.4331**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

John Abbott Mixed Use Project - Phase 2 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Vendor	2.0400e-003	0.0776	0.0235	3.1000e-004	0.0103	4.9000e-004	0.0108	2.9900e-003	4.7000e-004	3.4600e-003	0.0000	30.1257	30.1257	2.6000e-004	4.4300e-003	31.4512
Worker	0.0149	0.0104	0.1258	3.5000e-004	0.0415	2.4000e-004	0.0418	0.0110	2.2000e-004	0.0113	0.0000	33.3297	33.3297	1.0000e-003	9.4000e-004	33.6349
Total	**0.0169**	**0.0880**	**0.1492**	**6.6000e-004**	**0.0519**	**7.3000e-004**	**0.0526**	**0.0140**	**6.9000e-004**	**0.0147**	**0.0000**	**63.4554**	**63.4554**	**1.2600e-003**	**5.3700e-003**	**65.0861**

3.3 Building Construction - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	6.8400e-003	0.0624	0.0804	1.3000e-004		2.6400e-003	2.6400e-003		2.4800e-003	2.4800e-003	0.0000	11.5960	11.5960	2.7300e-003	0.0000	11.6641
Total	**6.8400e-003**	**0.0624**	**0.0804**	**1.3000e-004**		**2.6400e-003**	**2.6400e-003**		**2.4800e-003**	**2.4800e-003**	**0.0000**	**11.5960**	**11.5960**	**2.7300e-003**	**0.0000**	**11.6641**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	8.0000e-005	2.9200e-003	8.8000e-004	1.0000e-005	4.0000e-004	2.0000e-005	4.1000e-004	1.1000e-004	2.0000e-005	1.3000e-004	0.0000	1.1313	1.1313	1.0000e-005	1.7000e-004	1.1810

John Abbott Mixed Use Project - Phase 2 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Worker	5.4000e-004	3.6000e-004	4.4900e-003	1.0000e-005	1.5900e-003	1.0000e-005	1.6000e-003	4.2000e-004	1.0000e-005	4.3000e-004	0.0000	1.2466	1.2466	3.0000e-005	3.0000e-005	1.2575
Total	**6.2000e-004**	**3.2800e-003**	**5.3700e-003**	**2.0000e-005**	**1.9900e-003**	**3.0000e-005**	**2.0100e-003**	**5.3000e-004**	**3.0000e-005**	**5.6000e-004**	**0.0000**	**2.3779**	**2.3779**	**4.0000e-005**	**2.0000e-004**	**2.4385**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	6.8400e-003	0.0624	0.0804	1.3000e-004		2.6400e-003	2.6400e-003		2.4800e-003	2.4800e-003	0.0000	11.5960	11.5960	2.7300e-003	0.0000	11.6641
Total	**6.8400e-003**	**0.0624**	**0.0804**	**1.3000e-004**		**2.6400e-003**	**2.6400e-003**		**2.4800e-003**	**2.4800e-003**	**0.0000**	**11.5960**	**11.5960**	**2.7300e-003**	**0.0000**	**11.6641**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	8.0000e-005	2.9200e-003	8.8000e-004	1.0000e-005	4.0000e-004	2.0000e-005	4.1000e-004	1.1000e-004	2.0000e-005	1.3000e-004	0.0000	1.1313	1.1313	1.0000e-005	1.7000e-004	1.1810
Worker	5.4000e-004	3.6000e-004	4.4900e-003	1.0000e-005	1.5900e-003	1.0000e-005	1.6000e-003	4.2000e-004	1.0000e-005	4.3000e-004	0.0000	1.2466	1.2466	3.0000e-005	3.0000e-005	1.2575

John Abbott Mixed Use Project - Phase 2 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Total	**6.2000e-004**	**3.2800e-003**	**5.3700e-003**	**2.0000e-005**	**1.9900e-003**	**3.0000e-005**	**2.0100e-003**	**5.3000e-004**	**3.0000e-005**	**5.6000e-004**	**0.0000**	**2.3779**	**2.3779**	**4.0000e-005**	**2.0000e-004**	**2.4385**

3.4 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	7.9300e-003	0.0745	0.1100	1.7000e-004		3.5900e-003	3.5900e-003		3.3200e-003	3.3200e-003	0.0000	14.7423	14.7423	4.6300e-003	0.0000	14.8581
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**7.9300e-003**	**0.0745**	**0.1100**	**1.7000e-004**		**3.5900e-003**	**3.5900e-003**		**3.3200e-003**	**3.3200e-003**	**0.0000**	**14.7423**	**14.7423**	**4.6300e-003**	**0.0000**	**14.8581**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.0000e-004	0.0119	2.5100e-003	5.0000e-005	1.4100e-003	1.0000e-004	1.5200e-003	3.9000e-004	1.0000e-004	4.9000e-004	0.0000	4.7689	4.7689	5.0000e-005	7.5000e-004	4.9942
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.5000e-004	4.0000e-004	4.6700e-003	1.0000e-005	1.4300e-003	1.0000e-005	1.4400e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.1760	1.1760	4.0000e-005	3.0000e-005	1.1873

John Abbott Mixed Use Project - Phase 2 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Total	**7.5000e-004**	**0.0123**	**7.1800e-003**	**6.0000e-005**	**2.8400e-003**	**1.1000e-004**	**2.9600e-003**	**7.7000e-004**	**1.1000e-004**	**8.8000e-004**	**0.0000**	**5.9448**	**5.9448**	**9.0000e-005**	**7.8000e-004**	**6.1815**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	7.9300e-003	0.0745	0.1100	1.7000e-004		3.5900e-003	3.5900e-003		3.3200e-003	3.3200e-003	0.0000	14.7423	14.7423	4.6300e-003	0.0000	14.8581
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**7.9300e-003**	**0.0745**	**0.1100**	**1.7000e-004**		**3.5900e-003**	**3.5900e-003**		**3.3200e-003**	**3.3200e-003**	**0.0000**	**14.7423**	**14.7423**	**4.6300e-003**	**0.0000**	**14.8581**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.0000e-004	0.0119	2.5100e-003	5.0000e-005	1.4100e-003	1.0000e-004	1.5200e-003	3.9000e-004	1.0000e-004	4.9000e-004	0.0000	4.7689	4.7689	5.0000e-005	7.5000e-004	4.9942
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.5000e-004	4.0000e-004	4.6700e-003	1.0000e-005	1.4300e-003	1.0000e-005	1.4400e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.1760	1.1760	4.0000e-005	3.0000e-005	1.1873

John Abbott Mixed Use Project - Phase 2 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Total	**7.5000e-004**	**0.0123**	**7.1800e-003**	**6.0000e-005**	**2.8400e-003**	**1.1000e-004**	**2.9600e-003**	**7.7000e-004**	**1.1000e-004**	**8.8000e-004**	**0.0000**	**5.9448**	**5.9448**	**9.0000e-005**	**7.8000e-004**	**6.1815**

3.5 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0640					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.2000e-004	4.8800e-003	7.2400e-003	1.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004	0.0000	1.0213	1.0213	6.0000e-005	0.0000	1.0227
Total	**0.0647**	**4.8800e-003**	**7.2400e-003**	**1.0000e-005**		**2.4000e-004**	**2.4000e-004**		**2.4000e-004**	**2.4000e-004**	**0.0000**	**1.0213**	**1.0213**	**6.0000e-005**	**0.0000**	**1.0227**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-004	7.0000e-005	8.3000e-004	0.0000	2.5000e-004	0.0000	2.6000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.2091	0.2091	1.0000e-005	1.0000e-005	0.2111

John Abbott Mixed Use Project - Phase 2 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Total	**1.0000e-004**	**7.0000e-005**	**8.3000e-004**	**0.0000**	**2.5000e-004**	**0.0000**	**2.6000e-004**	**7.0000e-005**	**0.0000**	**7.0000e-005**	**0.0000**	**0.2091**	**0.2091**	**1.0000e-005**	**1.0000e-005**	**0.2111**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0640					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.2000e-004	4.8800e-003	7.2400e-003	1.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004	0.0000	1.0213	1.0213	6.0000e-005	0.0000	1.0227
Total	**0.0647**	**4.8800e-003**	**7.2400e-003**	**1.0000e-005**		**2.4000e-004**	**2.4000e-004**		**2.4000e-004**	**2.4000e-004**	**0.0000**	**1.0213**	**1.0213**	**6.0000e-005**	**0.0000**	**1.0227**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-004	7.0000e-005	8.3000e-004	0.0000	2.5000e-004	0.0000	2.6000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.2091	0.2091	1.0000e-005	1.0000e-005	0.2111

John Abbott Mixed Use Project - Phase 2 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Total	**1.0000e-004**	**7.0000e-005**	**8.3000e-004**	**0.0000**	**2.5000e-004**	**0.0000**	**2.6000e-004**	**7.0000e-005**	**0.0000**	**7.0000e-005**	**0.0000**	**0.2091**	**0.2091**	**1.0000e-005**	**1.0000e-005**	**0.2111**

3.5 Architectural Coating - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0800					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.5000e-004	5.7300e-003	9.0500e-003	1.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004	0.0000	1.2766	1.2766	7.0000e-005	0.0000	1.2784
Total	**0.0809**	**5.7300e-003**	**9.0500e-003**	**1.0000e-005**		**2.6000e-004**	**2.6000e-004**		**2.6000e-004**	**2.6000e-004**	**0.0000**	**1.2766**	**1.2766**	**7.0000e-005**	**0.0000**	**1.2784**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1000e-004	8.0000e-005	9.6000e-004	0.0000	3.2000e-004	0.0000	3.2000e-004	8.0000e-005	0.0000	9.0000e-005	0.0000	0.2554	0.2554	1.0000e-005	1.0000e-005	0.2577

John Abbott Mixed Use Project - Phase 2 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Total	**1.1000e-004**	**8.0000e-005**	**9.6000e-004**	**0.0000**	**3.2000e-004**	**0.0000**	**3.2000e-004**	**8.0000e-005**	**0.0000**	**9.0000e-005**	**0.0000**	**0.2554**	**0.2554**	**1.0000e-005**	**1.0000e-005**	**0.2577**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0800					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.5000e-004	5.7300e-003	9.0500e-003	1.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004	0.0000	1.2766	1.2766	7.0000e-005	0.0000	1.2784
Total	**0.0809**	**5.7300e-003**	**9.0500e-003**	**1.0000e-005**		**2.6000e-004**	**2.6000e-004**		**2.6000e-004**	**2.6000e-004**	**0.0000**	**1.2766**	**1.2766**	**7.0000e-005**	**0.0000**	**1.2784**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1000e-004	8.0000e-005	9.6000e-004	0.0000	3.2000e-004	0.0000	3.2000e-004	8.0000e-005	0.0000	9.0000e-005	0.0000	0.2554	0.2554	1.0000e-005	1.0000e-005	0.2577

John Abbott Mixed Use Project - Phase 2 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Total	**1.1000e-004**	**8.0000e-005**	**9.6000e-004**	**0.0000**	**3.2000e-004**	**0.0000**	**3.2000e-004**	**8.0000e-005**	**0.0000**	**9.0000e-005**	**0.0000**	**0.2554**	**0.2554**	**1.0000e-005**	**1.0000e-005**	**0.2577**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.4334	0.4929	3.5783	6.7400e-003	0.7158	5.9800e-003	0.7218	0.1913	5.5800e-003	0.1969	0.0000	645.7393	645.7393	0.0493	0.0341	657.1358
Unmitigated	0.4334	0.4929	3.5783	6.7400e-003	0.7158	5.9800e-003	0.7218	0.1913	5.5800e-003	0.1969	0.0000	645.7393	645.7393	0.0493	0.0341	657.1358

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	204.96	227.92	175.84	587,932	587,932
Parking Lot	0.00	0.00	0.00		
Strip Mall	948.45	899.66	437.20	1,337,430	1,337,430
Total	1,153.41	1,127.58	613.04	1,925,362	1,925,362

4.3 Trip Type Information

	Miles	Trip %	Trip Purpose %

John Abbott Mixed Use Project - Phase 2 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	10.80	7.30	7.50	44.00	18.80	37.20	86	11	3
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Strip Mall	9.50	7.30	7.30	16.60	64.40	19.00	45	40	15

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.528356	0.053553	0.192311	0.140981	0.025845	0.006434	0.010672	0.009485	0.001155	0.000563	0.026223	0.001221	0.003
Parking Lot	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000
Strip Mall	0.528356	0.053553	0.192311	0.140981	0.025845	0.006434	0.010672	0.009485	0.001155	0.000563	0.026223	0.001221	0.003

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	32.1034	32.1034	5.1900e-003	6.3000e-004	32.4208
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	32.1034	32.1034	5.1900e-003	6.3000e-004	32.4208
NaturalGas Mitigated	1.7600e-003	0.0152	7.4800e-003	1.0000e-004		1.2200e-003	1.2200e-003		1.2200e-003	1.2200e-003	0.0000	17.4166	17.4166	3.3000e-004	3.2000e-004	17.5201
NaturalGas Unmitigated	1.7600e-003	0.0152	7.4800e-003	1.0000e-004		1.2200e-003	1.2200e-003		1.2200e-003	1.2200e-003	0.0000	17.4166	17.4166	3.3000e-004	3.2000e-004	17.5201

John Abbott Mixed Use Project - Phase 2 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Low Rise	276298	1.4900e-003	0.0127	5.4200e-003	8.0000e-005		1.0300e-003	1.0300e-003		1.0300e-003	1.0300e-003	0.0000	14.7443	14.7443	2.8000e-004	2.7000e-004	14.8319
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	50076	2.7000e-004	2.4500e-003	2.0600e-003	1.0000e-005		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004	0.0000	2.6723	2.6723	5.0000e-005	5.0000e-005	2.6881
Total		**1.7600e-003**	**0.0152**	**7.4800e-003**	**9.0000e-005**		**1.2200e-003**	**1.2200e-003**		**1.2200e-003**	**1.2200e-003**	**0.0000**	**17.4166**	**17.4166**	**3.3000e-004**	**3.2000e-004**	**17.5201**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Low Rise	276298	1.4900e-003	0.0127	5.4200e-003	8.0000e-005		1.0300e-003	1.0300e-003		1.0300e-003	1.0300e-003	0.0000	14.7443	14.7443	2.8000e-004	2.7000e-004	14.8319
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	50076	2.7000e-004	2.4500e-003	2.0600e-003	1.0000e-005		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004	0.0000	2.6723	2.6723	5.0000e-005	5.0000e-005	2.6881
Total		**1.7600e-003**	**0.0152**	**7.4800e-003**	**9.0000e-005**		**1.2200e-003**	**1.2200e-003**		**1.2200e-003**	**1.2200e-003**	**0.0000**	**17.4166**	**17.4166**	**3.3000e-004**	**3.2000e-004**	**17.5201**

John Abbott Mixed Use Project - Phase 2 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	113708	10.5207	1.7000e-003	2.1000e-004	10.6248
Parking Lot	10920	1.0104	1.6000e-004	2.0000e-005	1.0204
Strip Mall	222346	20.5723	3.3300e-003	4.0000e-004	20.7757
Total		**32.1034**	**5.1900e-003**	**6.3000e-004**	**32.4208**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	113708	10.5207	1.7000e-003	2.1000e-004	10.6248
Parking Lot	10920	1.0104	1.6000e-004	2.0000e-005	1.0204
Strip Mall	222346	20.5723	3.3300e-003	4.0000e-004	20.7757

John Abbott Mixed Use Project - Phase 2 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Total		**32.1034**	**5.1900e-003**	**6.3000e-004**	**32.4208**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.2398	3.3300e-003	0.2898	2.0000e-005		1.6100e-003	1.6100e-003		1.6100e-003	1.6100e-003	0.0000	0.4741	0.4741	4.6000e-004	0.0000	0.4856
Unmitigated	0.2398	3.3300e-003	0.2898	2.0000e-005		1.6100e-003	1.6100e-003		1.6100e-003	1.6100e-003	0.0000	0.4741	0.4741	4.6000e-004	0.0000	0.4856

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0329					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1981					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

John Abbott Mixed Use Project - Phase 2 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	8.7800e-003	3.3300e-003	0.2898	2.0000e-005		1.6100e-003	1.6100e-003		1.6100e-003	1.6100e-003	0.0000	0.4741	0.4741	4.6000e-004	0.0000	0.4856
Total	**0.2398**	**3.3300e-003**	**0.2898**	**2.0000e-005**		**1.6100e-003**	**1.6100e-003**		**1.6100e-003**	**1.6100e-003**	**0.0000**	**0.4741**	**0.4741**	**4.6000e-004**	**0.0000**	**0.4856**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0329					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1981					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	8.7800e-003	3.3300e-003	0.2898	2.0000e-005		1.6100e-003	1.6100e-003		1.6100e-003	1.6100e-003	0.0000	0.4741	0.4741	4.6000e-004	0.0000	0.4856
Total	**0.2398**	**3.3300e-003**	**0.2898**	**2.0000e-005**		**1.6100e-003**	**1.6100e-003**		**1.6100e-003**	**1.6100e-003**	**0.0000**	**0.4741**	**0.4741**	**4.6000e-004**	**0.0000**	**0.4856**

7.0 Water Detail

7.1 Mitigation Measures Water

John Abbott Mixed Use Project - Phase 2 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	3.4757	0.1115	2.6700e-003	7.0585
Unmitigated	3.4757	0.1115	2.6700e-003	7.0585

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	1.82431 / 1.15011	1.8646	0.0597	1.4300e-003	3.7817
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Strip Mall	1.58515 / 0.971545	1.6111	0.0518	1.2400e-003	3.2768
Total		**3.4757**	**0.1115**	**2.6700e-003**	**7.0585**

Mitigated

John Abbott Mixed Use Project - Phase 2 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	1.82431 / 1.15011	1.8646	0.0597	1.4300e-003	3.7817
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Strip Mall	1.58515 / 0.971545	1.6111	0.0518	1.2400e-003	3.2768
Total		**3.4757**	**0.1115**	**2.6700e-003**	**7.0585**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	7.1757	0.4241	0.0000	17.7776
Unmitigated	7.1757	0.4241	0.0000	17.7776

John Abbott Mixed Use Project - Phase 2 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	12.88	2.6145	0.1545	0.0000	6.4774
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	22.47	4.5612	0.2696	0.0000	11.3002
Total		**7.1757**	**0.4241**	**0.0000**	**17.7776**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	12.88	2.6145	0.1545	0.0000	6.4774
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	22.47	4.5612	0.2696	0.0000	11.3002
Total		**7.1757**	**0.4241**	**0.0000**	**17.7776**

John Abbott Mixed Use Project - Phase 2 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

-

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200

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200

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John Abbott Mixed Use Project - Phase 3 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

John Abbott Mixed Use Project - Phase 3 Construction

Monterey Bay Unified APCD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	8.96	1000sqft	0.00	8,960.00	0
Medical Office Building	3.84	1000sqft	0.00	3,840.00	0
Parking Lot	24.00	Space	0.00	9,600.00	0
Fast Food Restaurant w/o Drive Thru	3.20	1000sqft	0.00	3,200.00	0
Quality Restaurant	3.20	1000sqft	0.00	3,200.00	0
Strip Mall	6.40	1000sqft	3.30	6,400.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.8	**Precipitation Freq (Days)**	53
Climate Zone	4			**Operational Year**	2027
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Phase 3: 25,600 square feet of retail/office. 6,400 sf of strip mall; 3,200 fast food w/o drive-thru; 8,960 sf of general office; 3,840 sf of medical office; 3,200 of quality restaurant, 24 parking spaces on 3.3 acres

Construction Phase - Scaled the default construction schedule to match the proposed applicant schedule.

Off-road Equipment - Default equipment

Trips and VMT - Based on Phase 2 parcel size, assuming 1,331 cy of pavement to be added to site (166 trips)

Demolition -

John Abbott Mixed Use Project - Phase 3 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Grading - Earthwork import based on total net fill and allocated based on phase parcel area (1326.47 cy of import)

Architectural Coating - MBARD Rule 426 arch coatings 50 g/l for arch coating and 100 g/l for traffic markings.

https://www.mbard.org/files/b17c2b4e2/Final+Rule+426+%28Clean+Version%29.pdf

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	150.00	100.00
tblArchitecturalCoating	EF_Nonresidential_Interior	150.00	100.00
tblAreaCoating	Area_Parking	576	0
tblConstructionPhase	NumDays	230.00	295.00
tblConstructionPhase	NumDays	8.00	10.00
tblConstructionPhase	PhaseEndDate	2/18/2027	3/17/2027
tblConstructionPhase	PhaseEndDate	12/30/2026	3/17/2027
tblConstructionPhase	PhaseEndDate	2/11/2026	1/28/2026
tblConstructionPhase	PhaseEndDate	1/25/2027	2/23/2026
tblConstructionPhase	PhaseStartDate	1/26/2027	2/22/2027
tblConstructionPhase	PhaseStartDate	2/12/2026	1/29/2026
tblConstructionPhase	PhaseStartDate	2/2/2026	1/15/2026
tblConstructionPhase	PhaseStartDate	12/31/2026	1/29/2026
tblFleetMix	HHD	9.4850e-003	0.00
tblFleetMix	LDA	0.53	0.00
tblFleetMix	LDT1	0.05	0.00
tblFleetMix	LDT2	0.19	0.00
tblFleetMix	LHD1	0.03	0.00
tblFleetMix	LHD2	6.4340e-003	0.00
tblFleetMix	MCY	0.03	0.00
tblFleetMix	MDV	0.14	0.00
tblFleetMix	MH	3.2000e-003	0.00
tblFleetMix	MHD	0.01	0.00
tblFleetMix	OBUS	1.1550e-003	0.00
tblFleetMix	SBUS	1.2210e-003	0.00

John Abbott Mixed Use Project - Phase 3 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblFleetMix	UBUS	5.6300e-004	0.00
tblGrading	AcresOfGrading	10.00	11.00
tblGrading	MaterialImported	0.00	1,326.47
tblLandUse	LotAcreage	0.21	0.00
tblLandUse	LotAcreage	0.09	0.00
tblLandUse	LotAcreage	0.22	0.00
tblLandUse	LotAcreage	0.07	0.00
tblLandUse	LotAcreage	0.07	0.00
tblLandUse	LotAcreage	0.15	3.30
tblTripsAndVMT	HaulingTripNumber	0.00	166.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2026	0.1860	1.7082	2.1770	3.9200e-003	0.0581	0.0704	0.1285	0.0232	0.0661	0.0893	0.0000	341.3507	341.3507	0.0751	3.7500e-003	344.3438
2027	0.1603	0.3553	0.4609	8.1000e-004	4.0800e-003	0.0148	0.0189	1.1100e-003	0.0139	0.0150	0.0000	70.2107	70.2107	0.0149	5.0000e-004	70.7323
Maximum	**0.1860**	**1.7082**	**2.1770**	**3.9200e-003**	**0.0581**	**0.0704**	**0.1285**	**0.0232**	**0.0661**	**0.0893**	**0.0000**	**341.3507**	**341.3507**	**0.0751**	**3.7500e-003**	**344.3438**

Mitigated Construction

John Abbott Mixed Use Project - Phase 3 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2026	0.1860	1.7082	2.1770	3.9200e-003	0.0581	0.0704	0.1285	0.0232	0.0661	0.0893	0.0000	341.3503	341.3503	0.0751	3.7500e-003	344.3434
2027	0.1603	0.3553	0.4609	8.1000e-004	4.0800e-003	0.0148	0.0189	1.1100e-003	0.0139	0.0150	0.0000	70.2106	70.2106	0.0149	5.0000e-004	70.7323
Maximum	**0.1860**	**1.7082**	**2.1770**	**3.9200e-003**	**0.0581**	**0.0704**	**0.1285**	**0.0232**	**0.0661**	**0.0893**	**0.0000**	**341.3503**	**341.3503**	**0.0751**	**3.7500e-003**	**344.3434**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**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**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	2-2-2026	5-1-2026	0.5279	0.5279
2	5-2-2026	8-1-2026	0.4660	0.4660
3	8-2-2026	11-1-2026	0.4662	0.4662
4	11-2-2026	2-1-2027	0.4666	0.4666
5	2-2-2027	5-1-2027	0.3494	0.3494
		Highest	0.5279	0.5279

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

John Abbott Mixed Use Project - Phase 3 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Category	tons/yr										MT/yr					
Area	0.1185	1.0000e-005	6.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.2300e-003	1.2300e-003	0.0000	0.0000	1.3100e-003
Energy	8.3500e-003	0.0759	0.0638	4.6000e-004		5.7700e-003	5.7700e-003		5.7700e-003	5.7700e-003	0.0000	128.5007	128.5007	9.0000e-003	2.4100e-003	129.4452
Mobile	0.7826	0.8567	6.2356	0.0114	1.2002	0.0102	1.2104	0.3208	9.5100e-003	0.3303	0.0000	1,088.5440	1,088.5440	0.0872	0.0594	1,108.4327
Waste						0.0000	0.0000		0.0000	0.0000	19.5480	0.0000	19.5480	1.1553	0.0000	48.4294
Water						0.0000	0.0000		0.0000	0.0000	1.4248	2.7285	4.1533	0.1468	3.5100e-003	8.8684
Total	**0.9094**	**0.9326**	**6.3000**	**0.0118**	**1.2002**	**0.0160**	**1.2161**	**0.3208**	**0.0153**	**0.3361**	**20.9728**	**1,219.7743**	**1,240.7472**	**1.3983**	**0.0653**	**1,295.1771**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.1185	1.0000e-005	6.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.2300e-003	1.2300e-003	0.0000	0.0000	1.3100e-003
Energy	8.3500e-003	0.0759	0.0638	4.6000e-004		5.7700e-003	5.7700e-003		5.7700e-003	5.7700e-003	0.0000	128.5007	128.5007	9.0000e-003	2.4100e-003	129.4452
Mobile	0.7826	0.8567	6.2356	0.0114	1.2002	0.0102	1.2104	0.3208	9.5100e-003	0.3303	0.0000	1,088.5440	1,088.5440	0.0872	0.0594	1,108.4327
Waste						0.0000	0.0000		0.0000	0.0000	19.5480	0.0000	19.5480	1.1553	0.0000	48.4294
Water						0.0000	0.0000		0.0000	0.0000	1.4248	2.7285	4.1533	0.1468	3.5100e-003	8.8684
Total	**0.9094**	**0.9326**	**6.3000**	**0.0118**	**1.2002**	**0.0160**	**1.2161**	**0.3208**	**0.0153**	**0.3361**	**20.9728**	**1,219.7743**	**1,240.7472**	**1.3983**	**0.0653**	**1,295.1771**

John Abbott Mixed Use Project - Phase 3 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	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	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	1/15/2026	1/28/2026	5	10	
2	Building Construction	Building Construction	1/29/2026	3/17/2027	5	295	
3	Paving	Paving	1/29/2026	2/23/2026	5	18	
4	Architectural Coating	Architectural Coating	2/22/2027	3/17/2027	5	18	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 11

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 38,400; Non-Residential Outdoor: 12,800; Striped Parking Area: 576 (Architectural

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37

John Abbott Mixed Use Project - Phase 3 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Building Construction	Welders	1	8.00	46	0.45
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	2	6.00	132	0.36
Paving	Rollers	2	6.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	6	15.00	0.00	166.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	13.00	6.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	166.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	3.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Grading - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0361	0.0000	0.0361	0.0172	0.0000	0.0172	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.6100e-003	0.0766	0.0727	1.5000e-004		3.1200e-003	3.1200e-003		2.8700e-003	2.8700e-003	0.0000	13.0349	13.0349	4.2200e-003	0.0000	13.1403

John Abbott Mixed Use Project - Phase 3 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Total	**7.6100e-003**	**0.0766**	**0.0727**	**1.5000e-004**	**0.0361**	**3.1200e-003**	**0.0392**	**0.0172**	**2.8700e-003**	**0.0201**	**0.0000**	**13.0349**	**13.0349**	**4.2200e-003**	**0.0000**	**13.1403**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.0000e-004	0.0114	2.5100e-003	5.0000e-005	1.4100e-003	1.0000e-004	1.5100e-003	3.9000e-004	1.0000e-004	4.9000e-004	0.0000	4.5634	4.5634	5.0000e-005	7.2000e-004	4.7791
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-004	1.3000e-004	1.6800e-003	0.0000	6.0000e-004	0.0000	6.0000e-004	1.6000e-004	0.0000	1.6000e-004	0.0000	0.4675	0.4675	1.0000e-005	1.0000e-005	0.4716
Total	**4.0000e-004**	**0.0115**	**4.1900e-003**	**5.0000e-005**	**2.0100e-003**	**1.0000e-004**	**2.1100e-003**	**5.5000e-004**	**1.0000e-004**	**6.5000e-004**	**0.0000**	**5.0309**	**5.0309**	**6.0000e-005**	**7.3000e-004**	**5.2506**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0361	0.0000	0.0361	0.0172	0.0000	0.0172	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.6100e-003	0.0766	0.0727	1.5000e-004		3.1200e-003	3.1200e-003		2.8700e-003	2.8700e-003	0.0000	13.0349	13.0349	4.2200e-003	0.0000	13.1403

John Abbott Mixed Use Project - Phase 3 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Total	**7.6100e-003**	**0.0766**	**0.0727**	**1.5000e-004**	**0.0361**	**3.1200e-003**	**0.0392**	**0.0172**	**2.8700e-003**	**0.0201**	**0.0000**	**13.0349**	**13.0349**	**4.2200e-003**	**0.0000**	**13.1403**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.0000e-004	0.0114	2.5100e-003	5.0000e-005	1.4100e-003	1.0000e-004	1.5100e-003	3.9000e-004	1.0000e-004	4.9000e-004	0.0000	4.5634	4.5634	5.0000e-005	7.2000e-004	4.7791
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-004	1.3000e-004	1.6800e-003	0.0000	6.0000e-004	0.0000	6.0000e-004	1.6000e-004	0.0000	1.6000e-004	0.0000	0.4675	0.4675	1.0000e-005	1.0000e-005	0.4716
Total	**4.0000e-004**	**0.0115**	**4.1900e-003**	**5.0000e-005**	**2.0100e-003**	**1.0000e-004**	**2.1100e-003**	**5.5000e-004**	**1.0000e-004**	**6.5000e-004**	**0.0000**	**5.0309**	**5.0309**	**6.0000e-005**	**7.3000e-004**	**5.2506**

3.3 Building Construction - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1648	1.5026	1.9382	3.2500e-003		0.0636	0.0636		0.0598	0.0598	0.0000	279.4629	279.4629	0.0657	0.0000	281.1053
Total	**0.1648**	**1.5026**	**1.9382**	**3.2500e-003**		**0.0636**	**0.0636**		**0.0598**	**0.0598**	**0.0000**	**279.4629**	**279.4629**	**0.0657**	**0.0000**	**281.1053**

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John Abbott Mixed Use Project - Phase 3 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	9.1000e-004	0.0352	0.0106	1.4000e-004	4.7700e-003	2.2000e-004	4.9900e-003	1.3800e-003	2.1000e-004	1.5900e-003	0.0000	13.6325	13.6325	1.2000e-004	2.0000e-003	14.2314
Worker	4.2100e-003	2.7900e-003	0.0352	1.0000e-004	0.0125	7.0000e-005	0.0125	3.3100e-003	6.0000e-005	3.3800e-003	0.0000	9.7637	9.7637	2.7000e-004	2.6000e-004	9.8492
Total	**5.1200e-003**	**0.0380**	**0.0458**	**2.4000e-004**	**0.0172**	**2.9000e-004**	**0.0175**	**4.6900e-003**	**2.7000e-004**	**4.9700e-003**	**0.0000**	**23.3963**	**23.3963**	**3.9000e-004**	**2.2600e-003**	**24.0806**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1648	1.5026	1.9382	3.2500e-003		0.0636	0.0636		0.0598	0.0598	0.0000	279.4626	279.4626	0.0657	0.0000	281.1049
Total	**0.1648**	**1.5026**	**1.9382**	**3.2500e-003**		**0.0636**	**0.0636**		**0.0598**	**0.0598**	**0.0000**	**279.4626**	**279.4626**	**0.0657**	**0.0000**	**281.1049**

John Abbott Mixed Use Project - Phase 3 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	9.1000e-004	0.0352	0.0106	1.4000e-004	4.7700e-003	2.2000e-004	4.9900e-003	1.3800e-003	2.1000e-004	1.5900e-003	0.0000	13.6325	13.6325	1.2000e-004	2.0000e-003	14.2314
Worker	4.2100e-003	2.7900e-003	0.0352	1.0000e-004	0.0125	7.0000e-005	0.0125	3.3100e-003	6.0000e-005	3.3800e-003	0.0000	9.7637	9.7637	2.7000e-004	2.6000e-004	9.8492
Total	**5.1200e-003**	**0.0380**	**0.0458**	**2.4000e-004**	**0.0172**	**2.9000e-004**	**0.0175**	**4.6900e-003**	**2.7000e-004**	**4.9700e-003**	**0.0000**	**23.3963**	**23.3963**	**3.9000e-004**	**2.2600e-003**	**24.0806**

3.3 Building Construction - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0369	0.3367	0.4343	7.3000e-004		0.0142	0.0142		0.0134	0.0134	0.0000	62.6183	62.6183	0.0147	0.0000	62.9862
Total	**0.0369**	**0.3367**	**0.4343**	**7.3000e-004**		**0.0142**	**0.0142**		**0.0134**	**0.0134**	**0.0000**	**62.6183**	**62.6183**	**0.0147**	**0.0000**	**62.9862**

Unmitigated Construction Off-Site

John Abbott Mixed Use Project - Phase 3 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.0000e-004	7.7400e-003	2.3200e-003	3.0000e-005	1.0700e-003	5.0000e-005	1.1200e-003	3.1000e-004	5.0000e-005	3.6000e-004	0.0000	2.9887	2.9887	3.0000e-005	4.4000e-004	3.1198
Worker	8.9000e-004	5.7000e-004	7.4200e-003	2.0000e-005	2.7900e-003	1.0000e-005	2.8100e-003	7.4000e-004	1.0000e-005	7.6000e-004	0.0000	2.1411	2.1411	6.0000e-005	6.0000e-005	2.1592
Total	**1.0900e-003**	**8.3100e-003**	**9.7400e-003**	**5.0000e-005**	**3.8600e-003**	**6.0000e-005**	**3.9300e-003**	**1.0500e-003**	**6.0000e-005**	**1.1200e-003**	**0.0000**	**5.1298**	**5.1298**	**9.0000e-005**	**5.0000e-004**	**5.2789**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0369	0.3367	0.4343	7.3000e-004		0.0142	0.0142		0.0134	0.0134	0.0000	62.6182	62.6182	0.0147	0.0000	62.9862
Total	**0.0369**	**0.3367**	**0.4343**	**7.3000e-004**		**0.0142**	**0.0142**		**0.0134**	**0.0134**	**0.0000**	**62.6182**	**62.6182**	**0.0147**	**0.0000**	**62.9862**

Mitigated Construction Off-Site

John Abbott Mixed Use Project - Phase 3 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.0000e-004	7.7400e-003	2.3200e-003	3.0000e-005	1.0700e-003	5.0000e-005	1.1200e-003	3.1000e-004	5.0000e-005	3.6000e-004	0.0000	2.9887	2.9887	3.0000e-005	4.4000e-004	3.1198
Worker	8.9000e-004	5.7000e-004	7.4200e-003	2.0000e-005	2.7900e-003	1.0000e-005	2.8100e-003	7.4000e-004	1.0000e-005	7.6000e-004	0.0000	2.1411	2.1411	6.0000e-005	6.0000e-005	2.1592
Total	**1.0900e-003**	**8.3100e-003**	**9.7400e-003**	**5.0000e-005**	**3.8600e-003**	**6.0000e-005**	**3.9300e-003**	**1.0500e-003**	**6.0000e-005**	**1.1200e-003**	**0.0000**	**5.1298**	**5.1298**	**9.0000e-005**	**5.0000e-004**	**5.2789**

3.4 Paving - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	7.3800e-003	0.0678	0.1096	1.7000e-004		3.1700e-003	3.1700e-003		2.9300e-003	2.9300e-003	0.0000	14.7404	14.7404	4.6300e-003	0.0000	14.8562
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**7.3800e-003**	**0.0678**	**0.1096**	**1.7000e-004**		**3.1700e-003**	**3.1700e-003**		**2.9300e-003**	**2.9300e-003**	**0.0000**	**14.7404**	**14.7404**	**4.6300e-003**	**0.0000**	**14.8562**

Unmitigated Construction Off-Site

John Abbott Mixed Use Project - Phase 3 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.0000e-004	0.0114	2.5100e-003	5.0000e-005	1.4100e-003	1.0000e-004	1.5100e-003	3.9000e-004	1.0000e-004	4.9000e-004	0.0000	4.5634	4.5634	5.0000e-005	7.2000e-004	4.7791
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.8000e-004	3.2000e-004	4.0400e-003	1.0000e-005	1.4300e-003	1.0000e-005	1.4400e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.1219	1.1219	3.0000e-005	3.0000e-005	1.1317
Total	**6.8000e-004**	**0.0117**	**6.5500e-003**	**6.0000e-005**	**2.8400e-003**	**1.1000e-004**	**2.9500e-003**	**7.7000e-004**	**1.1000e-004**	**8.8000e-004**	**0.0000**	**5.6853**	**5.6853**	**8.0000e-005**	**7.5000e-004**	**5.9108**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	7.3800e-003	0.0678	0.1096	1.7000e-004		3.1700e-003	3.1700e-003		2.9300e-003	2.9300e-003	0.0000	14.7404	14.7404	4.6300e-003	0.0000	14.8562
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**7.3800e-003**	**0.0678**	**0.1096**	**1.7000e-004**		**3.1700e-003**	**3.1700e-003**		**2.9300e-003**	**2.9300e-003**	**0.0000**	**14.7404**	**14.7404**	**4.6300e-003**	**0.0000**	**14.8562**

Mitigated Construction Off-Site

John Abbott Mixed Use Project - Phase 3 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.0000e-004	0.0114	2.5100e-003	5.0000e-005	1.4100e-003	1.0000e-004	1.5100e-003	3.9000e-004	1.0000e-004	4.9000e-004	0.0000	4.5634	4.5634	5.0000e-005	7.2000e-004	4.7791
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.8000e-004	3.2000e-004	4.0400e-003	1.0000e-005	1.4300e-003	1.0000e-005	1.4400e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.1219	1.1219	3.0000e-005	3.0000e-005	1.1317
Total	**6.8000e-004**	**0.0117**	**6.5500e-003**	**6.0000e-005**	**2.8400e-003**	**1.1000e-004**	**2.9500e-003**	**7.7000e-004**	**1.1000e-004**	**8.8000e-004**	**0.0000**	**5.6853**	**5.6853**	**8.0000e-005**	**7.5000e-004**	**5.9108**

3.5 Architectural Coating - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.1207					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.5400e-003	0.0103	0.0163	3.0000e-005		4.6000e-004	4.6000e-004		4.6000e-004	4.6000e-004	0.0000	2.2979	2.2979	1.3000e-004	0.0000	2.3011
Total	**0.1222**	**0.0103**	**0.0163**	**3.0000e-005**		**4.6000e-004**	**4.6000e-004**		**4.6000e-004**	**4.6000e-004**	**0.0000**	**2.2979**	**2.2979**	**1.3000e-004**	**0.0000**	**2.3011**

Unmitigated Construction Off-Site

John Abbott Mixed Use Project - Phase 3 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.0000e-005	4.0000e-005	5.7000e-004	0.0000	2.1000e-004	0.0000	2.2000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.1647	0.1647	0.0000	0.0000	0.1661
Total	**7.0000e-005**	**4.0000e-005**	**5.7000e-004**	**0.0000**	**2.1000e-004**	**0.0000**	**2.2000e-004**	**6.0000e-005**	**0.0000**	**6.0000e-005**	**0.0000**	**0.1647**	**0.1647**	**0.0000**	**0.0000**	**0.1661**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.1207					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.5400e-003	0.0103	0.0163	3.0000e-005		4.6000e-004	4.6000e-004		4.6000e-004	4.6000e-004	0.0000	2.2979	2.2979	1.3000e-004	0.0000	2.3011
Total	**0.1222**	**0.0103**	**0.0163**	**3.0000e-005**		**4.6000e-004**	**4.6000e-004**		**4.6000e-004**	**4.6000e-004**	**0.0000**	**2.2979**	**2.2979**	**1.3000e-004**	**0.0000**	**2.3011**

Mitigated Construction Off-Site

John Abbott Mixed Use Project - Phase 3 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.0000e-005	4.0000e-005	5.7000e-004	0.0000	2.1000e-004	0.0000	2.2000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.1647	0.1647	0.0000	0.0000	0.1661
Total	**7.0000e-005**	**4.0000e-005**	**5.7000e-004**	**0.0000**	**2.1000e-004**	**0.0000**	**2.2000e-004**	**6.0000e-005**	**0.0000**	**6.0000e-005**	**0.0000**	**0.1647**	**0.1647**	**0.0000**	**0.0000**	**0.1661**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.7826	0.8567	6.2356	0.0114	1.2002	0.0102	1.2104	0.3208	9.5100e-003	0.3303	0.0000	1,088.5440	1,088.5440	0.0872	0.0594	1,108.4327
Unmitigated	0.7826	0.8567	6.2356	0.0114	1.2002	0.0102	1.2104	0.3208	9.5100e-003	0.3303	0.0000	1,088.5440	1,088.5440	0.0872	0.0594	1,108.4327

4.2 Trip Summary Information

John Abbott Mixed Use Project - Phase 3 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Fast Food Restaurant w/o Drive Thru	1,107.94	2,227.20	1600.00	2,157,819	2,157,819
General Office Building	87.27	19.80	6.27	157,869	157,869
Medical Office Building	133.63	32.91	5.45	197,548	197,548
Parking Lot	0.00	0.00	0.00		
Quality Restaurant	268.29	288.13	230.30	315,160	315,160
Strip Mall	283.65	269.06	130.75	399,979	399,979
Total	1,880.77	2,837.09	1,972.78	3,228,375	3,228,375

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Fast Food Restaurant w/o Drive Thru	9.50	7.30	7.30	1.50	79.50	19.00	51	37	12
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Medical Office Building	9.50	7.30	7.30	29.60	51.40	19.00	60	30	10
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Quality Restaurant	9.50	7.30	7.30	12.00	69.00	19.00	38	18	44
Strip Mall	9.50	7.30	7.30	16.60	64.40	19.00	45	40	15

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Fast Food Restaurant w/o Drive Thru	0.528356	0.053553	0.192311	0.140981	0.025845	0.006434	0.010672	0.009485	0.001155	0.000563	0.026223	0.001221	0.003
General Office Building	0.528356	0.053553	0.192311	0.140981	0.025845	0.006434	0.010672	0.009485	0.001155	0.000563	0.026223	0.001221	0.003
Medical Office Building	0.528356	0.053553	0.192311	0.140981	0.025845	0.006434	0.010672	0.009485	0.001155	0.000563	0.026223	0.001221	0.003
Parking Lot	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000
Quality Restaurant	0.528356	0.053553	0.192311	0.140981	0.025845	0.006434	0.010672	0.009485	0.001155	0.000563	0.026223	0.001221	0.003
Strip Mall	0.528356	0.053553	0.192311	0.140981	0.025845	0.006434	0.010672	0.009485	0.001155	0.000563	0.026223	0.001221	0.003

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

John Abbott Mixed Use Project - Phase 3 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	45.8474	45.8474	7.4200e-003	9.0000e-004	46.3007
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	45.8474	45.8474	7.4200e-003	9.0000e-004	46.3007
NaturalGas Mitigated	8.3500e-003	0.0759	0.0638	4.6000e-004		5.7700e-003	5.7700e-003		5.7700e-003	5.7700e-003	0.0000	82.6533	82.6533	1.5800e-003	1.5200e-003	83.1445
NaturalGas Unmitigated	8.3500e-003	0.0759	0.0638	4.6000e-004		5.7700e-003	5.7700e-003		5.7700e-003	5.7700e-003	0.0000	82.6533	82.6533	1.5800e-003	1.5200e-003	83.1445

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Fast Food Restaurant w/o Drive Thru	663264	3.5800e-003	0.0325	0.0273	2.0000e-004		2.4700e-003	2.4700e-003		2.4700e-003	2.4700e-003	0.0000	35.3943	35.3943	6.8000e-004	6.5000e-004	35.6046
General Office Building	145152	7.8000e-004	7.1200e-003	5.9800e-003	4.0000e-005		5.4000e-004	5.4000e-004		5.4000e-004	5.4000e-004	0.0000	7.7459	7.7459	1.5000e-004	1.4000e-004	7.7919
Medical Office Building	62208	3.4000e-004	3.0500e-003	2.5600e-003	2.0000e-005		2.3000e-004	2.3000e-004		2.3000e-004	2.3000e-004	0.0000	3.3197	3.3197	6.0000e-005	6.0000e-005	3.3394
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

John Abbott Mixed Use Project - Phase 3 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Quality Restaurant	663264	3.5800e-003	0.0325	0.0273	2.0000e-004		2.4700e-003	2.4700e-003		2.4700e-003	2.4700e-003	0.0000	35.3943	35.3943	6.8000e-004	6.5000e-004	35.6046
Strip Mall	14976	8.0000e-005	7.3000e-004	6.2000e-004	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.7992	0.7992	2.0000e-005	1.0000e-005	0.8039
Total		**8.3600e-003**	**0.0759**	**0.0638**	**4.6000e-004**		**5.7700e-003**	**5.7700e-003**		**5.7700e-003**	**5.7700e-003**	**0.0000**	**82.6533**	**82.6533**	**1.5900e-003**	**1.5100e-003**	**83.1444**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Fast Food Restaurant w/o Drive Thru	663264	3.5800e-003	0.0325	0.0273	2.0000e-004		2.4700e-003	2.4700e-003		2.4700e-003	2.4700e-003	0.0000	35.3943	35.3943	6.8000e-004	6.5000e-004	35.6046
General Office Building	145152	7.8000e-004	7.1200e-003	5.9800e-003	4.0000e-005		5.4000e-004	5.4000e-004		5.4000e-004	5.4000e-004	0.0000	7.7459	7.7459	1.5000e-004	1.4000e-004	7.7919
Medical Office Building	62208	3.4000e-004	3.0500e-003	2.5600e-003	2.0000e-005		2.3000e-004	2.3000e-004		2.3000e-004	2.3000e-004	0.0000	3.3197	3.3197	6.0000e-005	6.0000e-005	3.3394
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Quality Restaurant	663264	3.5800e-003	0.0325	0.0273	2.0000e-004		2.4700e-003	2.4700e-003		2.4700e-003	2.4700e-003	0.0000	35.3943	35.3943	6.8000e-004	6.5000e-004	35.6046
Strip Mall	14976	8.0000e-005	7.3000e-004	6.2000e-004	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.7992	0.7992	2.0000e-005	1.0000e-005	0.8039
Total		**8.3600e-003**	**0.0759**	**0.0638**	**4.6000e-004**		**5.7700e-003**	**5.7700e-003**		**5.7700e-003**	**5.7700e-003**	**0.0000**	**82.6533**	**82.6533**	**1.5900e-003**	**1.5100e-003**	**83.1444**

5.3 Energy by Land Use - Electricity

Unmitigated

John Abbott Mixed Use Project - Phase 3 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Fast Food Restaurant w/o Drive Thru	102944	9.5248	1.5400e-003	1.9000e-004	9.6190
General Office Building	153843	14.2342	2.3000e-003	2.8000e-004	14.3749
Medical Office Building	65932.8	6.1004	9.9000e-004	1.2000e-004	6.1607
Parking Lot	3360	0.3109	5.0000e-005	1.0000e-005	0.3140
Quality Restaurant	102944	9.5248	1.5400e-003	1.9000e-004	9.6190
Strip Mall	66496	6.1525	1.0000e-003	1.2000e-004	6.2133
Total		**45.8474**	**7.4200e-003**	**9.1000e-004**	**46.3007**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Fast Food Restaurant w/o Drive Thru	102944	9.5248	1.5400e-003	1.9000e-004	9.6190
General Office Building	153843	14.2342	2.3000e-003	2.8000e-004	14.3749
Medical Office Building	65932.8	6.1004	9.9000e-004	1.2000e-004	6.1607

John Abbott Mixed Use Project - Phase 3 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Parking Lot	3360	0.3109	5.0000e-005	1.0000e-005	0.3140
Quality Restaurant	102944	9.5248	1.5400e-003	1.9000e-004	9.6190
Strip Mall	66496	6.1525	1.0000e-003	1.2000e-004	6.2133
Total		**45.8474**	**7.4200e-003**	**9.1000e-004**	**46.3007**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.1185	1.0000e-005	6.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.2300e-003	1.2300e-003	0.0000	0.0000	1.3100e-003
Unmitigated	0.1185	1.0000e-005	6.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.2300e-003	1.2300e-003	0.0000	0.0000	1.3100e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

John Abbott Mixed Use Project - Phase 3 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0178					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1006					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	6.0000e-005	1.0000e-005	6.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.2300e-003	1.2300e-003	0.0000	0.0000	1.3100e-003
Total	**0.1185**	**1.0000e-005**	**6.3000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.2300e-003**	**1.2300e-003**	**0.0000**	**0.0000**	**1.3100e-003**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0178					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1006					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	6.0000e-005	1.0000e-005	6.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.2300e-003	1.2300e-003	0.0000	0.0000	1.3100e-003
Total	**0.1185**	**1.0000e-005**	**6.3000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.2300e-003**	**1.2300e-003**	**0.0000**	**0.0000**	**1.3100e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

John Abbott Mixed Use Project - Phase 3 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	4.1533	0.1468	3.5100e-003	8.8684
Unmitigated	4.1533	0.1468	3.5100e-003	8.8684

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Fast Food Restaurant w/o Drive Thru	0.971308 / 0.0619984	0.8145	0.0317	7.6000e-004	1.8335
General Office Building	1.59249 / 0.976045	1.6186	0.0521	1.2500e-003	3.2920
Medical Office Building	0.481845 / 0.0917801	0.4238	0.0157	3.8000e-004	0.9295
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Quality Restaurant	0.971308 / 0.0619984	0.8145	0.0317	7.6000e-004	1.8335
Strip Mall	0.474064 / 0.290555	0.4818	0.0155	3.7000e-004	0.9800
Total		**4.1533**	**0.1468**	**3.5200e-003**	**8.8684**

John Abbott Mixed Use Project - Phase 3 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Fast Food Restaurant w/o Drive Thru	0.971308 / 0.0619984	0.8145	0.0317	7.6000e-004	1.8335
General Office Building	1.59249 / 0.976045	1.6186	0.0521	1.2500e-003	3.2920
Medical Office Building	0.481845 / 0.0917801	0.4238	0.0157	3.8000e-004	0.9295
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Quality Restaurant	0.971308 / 0.0619984	0.8145	0.0317	7.6000e-004	1.8335
Strip Mall	0.474064 / 0.290555	0.4818	0.0155	3.7000e-004	0.9800
Total		**4.1533**	**0.1468**	**3.5200e-003**	**8.8684**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

John Abbott Mixed Use Project - Phase 3 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	19.5480	1.1553	0.0000	48.4294
Unmitigated	19.5480	1.1553	0.0000	48.4294

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Fast Food Restaurant w/o Drive Thru	36.86	7.4823	0.4422	0.0000	18.5370
General Office Building	8.33	1.6909	0.0999	0.0000	4.1892
Medical Office Building	41.47	8.4180	0.4975	0.0000	20.8553
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Quality Restaurant	2.92	0.5927	0.0350	0.0000	1.4685
Strip Mall	6.72	1.3641	0.0806	0.0000	3.3795
Total		**19.5480**	**1.1553**	**0.0000**	**48.4294**

Mitigated

John Abbott Mixed Use Project - Phase 3 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Fast Food Restaurant w/o Drive Thru	36.86	7.4823	0.4422	0.0000	18.5370
General Office Building	8.33	1.6909	0.0999	0.0000	4.1892
Medical Office Building	41.47	8.4180	0.4975	0.0000	20.8553
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Quality Restaurant	2.92	0.5927	0.0350	0.0000	1.4685
Strip Mall	6.72	1.3641	0.0806	0.0000	3.3795
Total		**19.5480**	**1.1553**	**0.0000**	**48.4294**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

John Abbott Mixed Use Project - Phase 3 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Equipment Type	Number

11.0 Vegetation

-

-

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John Abbott Mixed Use Project - Phase 4 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

John Abbott Mixed Use Project - Phase 4 Construction

Monterey Bay Unified APCD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	21.00	Space	1.00	8,400.00	0
Fast Food Restaurant w/o Drive Thru	4.25	1000sqft	0.00	4,250.00	0
Quality Restaurant	2.75	1000sqft	0.00	2,750.00	0
Strip Mall	7.00	1000sqft	0.00	7,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.8	**Precipitation Freq (Days)**	53
Climate Zone	4			**Operational Year**	2028
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Phase 4: 14,000 sf of retail total. 4250 fast food w/o drive thru; 2750 quality resturant; 7000 strip mall retail; 21 parking spaces on 1.0 acre

Construction Phase - Scaled the default construction schedule to match the proposed applicant schedule.

Off-road Equipment - Default equipment

Trips and VMT - Based on Phase 4 parcel size, assuming 403 cy of pavement to be added to site (50 trips).

Demolition -

Grading - Earthwork import based on total net fill and allocated based on phase parcel area (401.96 cy of import)

Architectural Coating - MBARD Rule 426 arch coatings 50 g/l for arch coating and 100 g/l for traffic markings.
https://www.mbard.org/files/b17e2b4e2/Final+Rule+426+%28Clean+Version%29.pdf

John Abbott Mixed Use Project - Phase 4 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	150.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	150.00	50.00
tblArchitecturalCoating	EF_Parking	150.00	100.00
tblConstructionPhase	NumDays	100.00	236.00
tblConstructionPhase	NumDays	2.00	5.00
tblConstructionPhase	PhaseEndDate	12/3/2027	2/17/2028
tblConstructionPhase	PhaseEndDate	11/19/2027	2/17/2028
tblConstructionPhase	PhaseEndDate	7/2/2027	3/24/2027
tblConstructionPhase	PhaseEndDate	11/26/2027	3/31/2027
tblConstructionPhase	PhaseStartDate	11/27/2027	2/11/2028
tblConstructionPhase	PhaseStartDate	7/3/2027	3/25/2027
tblConstructionPhase	PhaseStartDate	7/1/2027	3/18/2027
tblConstructionPhase	PhaseStartDate	11/20/2027	3/25/2027
tblGrading	MaterialImported	0.00	401.96
tblLandUse	LotAcreage	0.19	1.00
tblLandUse	LotAcreage	0.10	0.00
tblLandUse	LotAcreage	0.06	0.00
tblLandUse	LotAcreage	0.16	0.00
tblTripsAndVMT	HaulingTripNumber	0.00	50.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

Date: 6/13/2022 2:26 PM

John Abbott Mixed Use Project - Phase 4 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2027	0.0635	0.6154	0.7688	1.3800e-003	0.0246	0.0260	0.0506	9.4900e-003	0.0239	0.0334	0.0000	122.8177	122.8177	0.0347	1.6700e-003	124.1825
2028	0.0439	0.0995	0.1281	2.2000e-004	1.7100e-003	4.2600e-003	5.9600e-003	4.6000e-004	3.9300e-003	4.3900e-003	0.0000	19.8616	19.8616	5.5800e-003	2.0000e-004	20.0618
Maximum	**0.0635**	**0.6154**	**0.7688**	**1.3800e-003**	**0.0246**	**0.0260**	**0.0506**	**9.4900e-003**	**0.0239**	**0.0334**	**0.0000**	**122.8177**	**122.8177**	**0.0347**	**1.6700e-003**	**124.1825**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2027	0.0635	0.6154	0.7688	1.3800e-003	0.0246	0.0260	0.0506	9.4900e-003	0.0239	0.0334	0.0000	122.8176	122.8176	0.0347	1.6700e-003	124.1824
2028	0.0439	0.0995	0.1281	2.2000e-004	1.7100e-003	4.2600e-003	5.9600e-003	4.6000e-004	3.9300e-003	4.3900e-003	0.0000	19.8615	19.8615	5.5800e-003	2.0000e-004	20.0617
Maximum	**0.0635**	**0.6154**	**0.7688**	**1.3800e-003**	**0.0246**	**0.0260**	**0.0506**	**9.4900e-003**	**0.0239**	**0.0334**	**0.0000**	**122.8176**	**122.8176**	**0.0347**	**1.6700e-003**	**124.1824**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**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**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)

John Abbott Mixed Use Project - Phase 4 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

1	**7-1-2027**	**9-30-2027**	0.2056	0.2056
2	**10-1-2027**	**12-31-2027**	0.2061	0.2061
3	**1-1-2028**	**3-31-2028**	0.1444	0.1444
		Highest	0.2061	0.2061

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0652	0.0000	4.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.7000e-004	8.7000e-004	0.0000	0.0000	9.3000e-004
Energy	7.9100e-003	0.0719	0.0604	4.3000e-004		5.4700e-003	5.4700e-003		5.4700e-003	5.4700e-003	0.0000	106.1358	106.1358	6.0000e-003	1.9800e-003	106.8764
Mobile	0.8372	0.8965	6.6795	0.0122	1.3284	0.0107	1.3391	0.3550	9.9600e-003	0.3650	0.0000	1,177.0443	1,177.0443	0.0930	0.0635	1,198.2936
Waste						0.0000	0.0000		0.0000	0.0000	11.9399	0.0000	11.9399	0.7056	0.0000	29.5807
Water						0.0000	0.0000		0.0000	0.0000	0.8386	1.4702	2.3087	0.0864	2.0600e-003	5.0826
Total	**0.9103**	**0.9685**	**6.7404**	**0.0126**	**1.3284**	**0.0161**	**1.3445**	**0.3550**	**0.0154**	**0.3704**	**12.7785**	**1,284.6512**	**1,297.4297**	**0.8910**	**0.0676**	**1,339.8342**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

John Abbott Mixed Use Project - Phase 4 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Category	tons/yr										MT/yr					
Area	0.0652	0.0000	4.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.7000e-004	8.7000e-004	0.0000	0.0000	9.3000e-004
Energy	7.9100e-003	0.0719	0.0604	4.3000e-004		5.4700e-003	5.4700e-003		5.4700e-003	5.4700e-003	0.0000	106.1358	106.1358	6.0000e-003	1.9800e-003	106.8764
Mobile	0.8372	0.8965	6.6795	0.0122	1.3284	0.0107	1.3391	0.3550	9.9600e-003	0.3650	0.0000	1,177.0443	1,177.0443	0.0930	0.0635	1,198.2936
Waste						0.0000	0.0000		0.0000	0.0000	11.9399	0.0000	11.9399	0.7056	0.0000	29.5807
Water						0.0000	0.0000		0.0000	0.0000	0.8386	1.4702	2.3087	0.0864	2.0600e-003	5.0826
Total	**0.9103**	**0.9685**	**6.7404**	**0.0126**	**1.3284**	**0.0161**	**1.3445**	**0.3550**	**0.0154**	**0.3704**	**12.7785**	**1,284.6512**	**1,297.4297**	**0.8910**	**0.0676**	**1,339.8342**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**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**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	3/18/2027	3/24/2027	5	5	
2	Building Construction	Building Construction	3/25/2027	2/17/2028	5	236	
3	Paving	Paving	3/25/2027	3/31/2027	5	5	
4	Architectural Coating	Architectural Coating	2/11/2028	2/17/2028	5	5	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 3.75

Acres of Paving: 1

John Abbott Mixed Use Project - Phase 4 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 21,000; Non-Residential Outdoor: 7,000; Striped Parking Area: 504 (Architectural

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Graders	1	6.00	187	0.41
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	3	8.00	0.00	50.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	9.00	4.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	50.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	2.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Grading - 2027

Unmitigated Construction On-Site

John Abbott Mixed Use Project - Phase 4 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0133	0.0000	0.0133	6.4300e-003	0.0000	6.4300e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.0900e-003	0.0218	0.0135	4.0000e-005		8.7000e-004	8.7000e-004		8.0000e-004	8.0000e-004	0.0000	3.0951	3.0951	1.0000e-003	0.0000	3.1201
Total	**2.0900e-003**	**0.0218**	**0.0135**	**4.0000e-005**	**0.0133**	**8.7000e-004**	**0.0142**	**6.4300e-003**	**8.0000e-004**	**7.2300e-003**	**0.0000**	**3.0951**	**3.0951**	**1.0000e-003**	**0.0000**	**3.1201**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	6.0000e-005	3.3500e-003	7.5000e-004	1.0000e-005	4.3000e-004	3.0000e-005	4.6000e-004	1.2000e-004	3.0000e-005	1.5000e-004	0.0000	1.3395	1.3395	2.0000e-005	2.1000e-004	1.4028
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.0000e-005	3.0000e-005	4.2000e-004	0.0000	1.6000e-004	0.0000	1.6000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1220	0.1220	0.0000	0.0000	0.1230
Total	**1.1000e-004**	**3.3800e-003**	**1.1700e-003**	**1.0000e-005**	**5.9000e-004**	**3.0000e-005**	**6.2000e-004**	**1.6000e-004**	**3.0000e-005**	**1.9000e-004**	**0.0000**	**1.4615**	**1.4615**	**2.0000e-005**	**2.1000e-004**	**1.5259**

Mitigated Construction On-Site

John Abbott Mixed Use Project - Phase 4 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0133	0.0000	0.0133	6.4300e-003	0.0000	6.4300e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.0900e-003	0.0218	0.0135	4.0000e-005		8.7000e-004	8.7000e-004		8.0000e-004	8.0000e-004	0.0000	3.0951	3.0951	1.0000e-003	0.0000	3.1201
Total	**2.0900e-003**	**0.0218**	**0.0135**	**4.0000e-005**	**0.0133**	**8.7000e-004**	**0.0142**	**6.4300e-003**	**8.0000e-004**	**7.2300e-003**	**0.0000**	**3.0951**	**3.0951**	**1.0000e-003**	**0.0000**	**3.1201**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	6.0000e-005	3.3500e-003	7.5000e-004	1.0000e-005	4.3000e-004	3.0000e-005	4.6000e-004	1.2000e-004	3.0000e-005	1.5000e-004	0.0000	1.3395	1.3395	2.0000e-005	2.1000e-004	1.4028
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.0000e-005	3.0000e-005	4.2000e-004	0.0000	1.6000e-004	0.0000	1.6000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1220	0.1220	0.0000	0.0000	0.1230
Total	**1.1000e-004**	**3.3800e-003**	**1.1700e-003**	**1.0000e-005**	**5.9000e-004**	**3.0000e-005**	**6.2000e-004**	**1.6000e-004**	**3.0000e-005**	**1.9000e-004**	**0.0000**	**1.4615**	**1.4615**	**2.0000e-005**	**2.1000e-004**	**1.5259**

3.3 Building Construction - 2027

Unmitigated Construction On-Site

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John Abbott Mixed Use Project - Phase 4 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0557	0.5537	0.7099	1.1500e-003		0.0244	0.0244		0.0224	0.0224	0.0000	101.2987	101.2987	0.0328	0.0000	102.1177
Total	**0.0557**	**0.5537**	**0.7099**	**1.1500e-003**		**0.0244**	**0.0244**		**0.0224**	**0.0224**	**0.0000**	**101.2987**	**101.2987**	**0.0328**	**0.0000**	**102.1177**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.9000e-004	0.0193	5.7800e-003	8.0000e-005	2.6700e-003	1.2000e-004	2.7900e-003	7.7000e-004	1.2000e-004	8.9000e-004	0.0000	7.4532	7.4532	6.0000e-005	1.0900e-003	7.7802
Worker	2.3000e-003	1.4700e-003	0.0192	6.0000e-005	7.2300e-003	4.0000e-005	7.2700e-003	1.9200e-003	3.0000e-005	1.9600e-003	0.0000	5.5450	5.5450	1.4000e-004	1.4000e-004	5.5917
Total	**2.7900e-003**	**0.0208**	**0.0250**	**1.4000e-004**	**9.9000e-003**	**1.6000e-004**	**0.0101**	**2.6900e-003**	**1.5000e-004**	**2.8500e-003**	**0.0000**	**12.9982**	**12.9982**	**2.0000e-004**	**1.2300e-003**	**13.3719**

Mitigated Construction On-Site

John Abbott Mixed Use Project - Phase 4 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0557	0.5537	0.7099	1.1500e-003		0.0244	0.0244		0.0224	0.0224	0.0000	101.2986	101.2986	0.0328	0.0000	102.1176
Total	**0.0557**	**0.5537**	**0.7099**	**1.1500e-003**		**0.0244**	**0.0244**		**0.0224**	**0.0224**	**0.0000**	**101.2986**	**101.2986**	**0.0328**	**0.0000**	**102.1176**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.9000e-004	0.0193	5.7800e-003	8.0000e-005	2.6700e-003	1.2000e-004	2.7900e-003	7.7000e-004	1.2000e-004	8.9000e-004	0.0000	7.4532	7.4532	6.0000e-005	1.0900e-003	7.7802
Worker	2.3000e-003	1.4700e-003	0.0192	6.0000e-005	7.2300e-003	4.0000e-005	7.2700e-003	1.9200e-003	3.0000e-005	1.9600e-003	0.0000	5.5450	5.5450	1.4000e-004	1.4000e-004	5.5917
Total	**2.7900e-003**	**0.0208**	**0.0250**	**1.4000e-004**	**9.9000e-003**	**1.6000e-004**	**0.0101**	**2.6900e-003**	**1.5000e-004**	**2.8500e-003**	**0.0000**	**12.9982**	**12.9982**	**2.0000e-004**	**1.2300e-003**	**13.3719**

3.3 Building Construction - 2028

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Category	tons/yr										MT/yr					
Off-Road	9.3700e-003	0.0932	0.1195	1.9000e-004		4.1000e-003	4.1000e-003		3.7700e-003	3.7700e-003	0.0000	17.0503	17.0503	5.5100e-003	0.0000	17.1881
Total	**9.3700e-003**	**0.0932**	**0.1195**	**1.9000e-004**		**4.1000e-003**	**4.1000e-003**		**3.7700e-003**	**3.7700e-003**	**0.0000**	**17.0503**	**17.0503**	**5.5100e-003**	**0.0000**	**17.1881**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	8.0000e-005	3.2000e-003	9.6000e-004	1.0000e-005	4.5000e-004	2.0000e-005	4.7000e-004	1.3000e-004	2.0000e-005	1.5000e-004	0.0000	1.2281	1.2281	1.0000e-005	1.8000e-004	1.2819
Worker	3.7000e-004	2.3000e-004	3.0700e-003	1.0000e-005	1.2200e-003	1.0000e-005	1.2200e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	0.9149	0.9149	2.0000e-005	2.0000e-005	0.9224
Total	**4.5000e-004**	**3.4300e-003**	**4.0300e-003**	**2.0000e-005**	**1.6700e-003**	**3.0000e-005**	**1.6900e-003**	**4.5000e-004**	**3.0000e-005**	**4.8000e-004**	**0.0000**	**2.1431**	**2.1431**	**3.0000e-005**	**2.0000e-004**	**2.2043**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

John Abbott Mixed Use Project - Phase 4 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Off-Road	9.3700e-003	0.0932	0.1195	1.9000e-004		4.1000e-003	4.1000e-003		3.7700e-003	3.7700e-003	0.0000	17.0503	17.0503	5.5100e-003	0.0000	17.1881
Total	**9.3700e-003**	**0.0932**	**0.1195**	**1.9000e-004**		**4.1000e-003**	**4.1000e-003**		**3.7700e-003**	**3.7700e-003**	**0.0000**	**17.0503**	**17.0503**	**5.5100e-003**	**0.0000**	**17.1881**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	8.0000e-005	3.2000e-003	9.6000e-004	1.0000e-005	4.5000e-004	2.0000e-005	4.7000e-004	1.3000e-004	2.0000e-005	1.5000e-004	0.0000	1.2281	1.2281	1.0000e-005	1.8000e-004	1.2819
Worker	3.7000e-004	2.3000e-004	3.0700e-003	1.0000e-005	1.2200e-003	1.0000e-005	1.2200e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	0.9149	0.9149	2.0000e-005	2.0000e-005	0.9224
Total	**4.5000e-004**	**3.4300e-003**	**4.0300e-003**	**2.0000e-005**	**1.6700e-003**	**3.0000e-005**	**1.6900e-003**	**4.5000e-004**	**3.0000e-005**	**4.8000e-004**	**0.0000**	**2.1431**	**2.1431**	**3.0000e-005**	**2.0000e-004**	**2.2043**

3.4 Paving - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.4100e-003	0.0123	0.0176	3.0000e-005		5.5000e-004	5.5000e-004		5.1000e-004	5.1000e-004	0.0000	2.3502	2.3502	6.8000e-004	0.0000	2.3673

John Abbott Mixed Use Project - Phase 4 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Paving	1.3100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**2.7200e-003**	**0.0123**	**0.0176**	**3.0000e-005**		**5.5000e-004**	**5.5000e-004**		**5.1000e-004**	**5.1000e-004**	**0.0000**	**2.3502**	**2.3502**	**6.8000e-004**	**0.0000**	**2.3673**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	6.0000e-005	3.3500e-003	7.5000e-004	1.0000e-005	4.3000e-004	3.0000e-005	4.6000e-004	1.2000e-004	3.0000e-005	1.5000e-004	0.0000	1.3395	1.3395	2.0000e-005	2.1000e-004	1.4028
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1000e-004	7.0000e-005	9.5000e-004	0.0000	3.6000e-004	0.0000	3.6000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.2745	0.2745	1.0000e-005	1.0000e-005	0.2768
Total	**1.7000e-004**	**3.4200e-003**	**1.7000e-003**	**1.0000e-005**	**7.9000e-004**	**3.0000e-005**	**8.2000e-004**	**2.2000e-004**	**3.0000e-005**	**2.5000e-004**	**0.0000**	**1.6140**	**1.6140**	**3.0000e-005**	**2.2000e-004**	**1.6796**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.4100e-003	0.0123	0.0176	3.0000e-005		5.5000e-004	5.5000e-004		5.1000e-004	5.1000e-004	0.0000	2.3502	2.3502	6.8000e-004	0.0000	2.3673

John Abbott Mixed Use Project - Phase 4 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Paving	1.3100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**2.7200e-003**	**0.0123**	**0.0176**	**3.0000e-005**		**5.5000e-004**	**5.5000e-004**		**5.1000e-004**	**5.1000e-004**	**0.0000**	**2.3502**	**2.3502**	**6.8000e-004**	**0.0000**	**2.3673**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	6.0000e-005	3.3500e-003	7.5000e-004	1.0000e-005	4.3000e-004	3.0000e-005	4.6000e-004	1.2000e-004	3.0000e-005	1.5000e-004	0.0000	1.3395	1.3395	2.0000e-005	2.1000e-004	1.4028
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1000e-004	7.0000e-005	9.5000e-004	0.0000	3.6000e-004	0.0000	3.6000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.2745	0.2745	1.0000e-005	1.0000e-005	0.2768
Total	**1.7000e-004**	**3.4200e-003**	**1.7000e-003**	**1.0000e-005**	**7.9000e-004**	**3.0000e-005**	**8.2000e-004**	**2.2000e-004**	**3.0000e-005**	**2.5000e-004**	**0.0000**	**1.6140**	**1.6140**	**3.0000e-005**	**2.2000e-004**	**1.6796**

3.5 Architectural Coating - 2028

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0336					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

John Abbott Mixed Use Project - Phase 4 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Off-Road	4.3000e-004	2.8600e-003	4.5200e-003	1.0000e-005		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004	0.0000	0.6383	0.6383	3.0000e-005	0.0000	0.6392
Total	**0.0340**	**2.8600e-003**	**4.5200e-003**	**1.0000e-005**		**1.3000e-004**	**1.3000e-004**		**1.3000e-004**	**1.3000e-004**	**0.0000**	**0.6383**	**0.6383**	**3.0000e-005**	**0.0000**	**0.6392**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-005	1.0000e-005	1.0000e-004	0.0000	4.0000e-005	0.0000	4.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0299	0.0299	0.0000	0.0000	0.0301
Total	**1.0000e-005**	**1.0000e-005**	**1.0000e-004**	**0.0000**	**4.0000e-005**	**0.0000**	**4.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0299**	**0.0299**	**0.0000**	**0.0000**	**0.0301**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0336					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

John Abbott Mixed Use Project - Phase 4 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Off-Road	4.3000e-004	2.8600e-003	4.5200e-003	1.0000e-005		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004	0.0000	0.6383	0.6383	3.0000e-005	0.0000	0.6392
Total	**0.0340**	**2.8600e-003**	**4.5200e-003**	**1.0000e-005**		**1.3000e-004**	**1.3000e-004**		**1.3000e-004**	**1.3000e-004**	**0.0000**	**0.6383**	**0.6383**	**3.0000e-005**	**0.0000**	**0.6392**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-005	1.0000e-005	1.0000e-004	0.0000	4.0000e-005	0.0000	4.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0299	0.0299	0.0000	0.0000	0.0301
Total	**1.0000e-005**	**1.0000e-005**	**1.0000e-004**	**0.0000**	**4.0000e-005**	**0.0000**	**4.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0299**	**0.0299**	**0.0000**	**0.0000**	**0.0301**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

John Abbott Mixed Use Project - Phase 4 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.8372	0.8965	6.6795	0.0122	1.3284	0.0107	1.3391	0.3550	9.9600e-003	0.3650	0.0000	1,177.0443	1,177.0443	0.0930	0.0635	1,198.2936
Unmitigated	0.8372	0.8965	6.6795	0.0122	1.3284	0.0107	1.3391	0.3550	9.9600e-003	0.3650	0.0000	1,177.0443	1,177.0443	0.0930	0.0635	1,198.2936

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Fast Food Restaurant w/o Drive Thru	1,471.48	2,958.00	2125.00	2,865,853	2,865,853
Parking Lot	0.00	0.00	0.00		
Quality Restaurant	230.56	247.61	197.92	270,840	270,840
Strip Mall	310.24	294.28	143.01	437,477	437,477
Total	2,012.28	3,499.89	2,465.93	3,574,171	3,574,171

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Fast Food Restaurant w/o Drive Thru	9.50	7.30	7.30	1.50	79.50	19.00	51	37	12
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Quality Restaurant	9.50	7.30	7.30	12.00	69.00	19.00	38	18	44
Strip Mall	9.50	7.30	7.30	16.60	64.40	19.00	45	40	15

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Fast Food Restaurant w/o Drive Thru	0.533039	0.053900	0.191769	0.138335	0.024899	0.006270	0.010605	0.009380	0.001135	0.000556	0.025872	0.001193	0.003
Parking Lot	0.533039	0.053900	0.191769	0.138335	0.024899	0.006270	0.010605	0.009380	0.001135	0.000556	0.025872	0.001193	0.003
Quality Restaurant	0.533039	0.053900	0.191769	0.138335	0.024899	0.006270	0.010605	0.009380	0.001135	0.000556	0.025872	0.001193	0.003
Strip Mall	0.533039	0.053900	0.191769	0.138335	0.024899	0.006270	0.010605	0.009380	0.001135	0.000556	0.025872	0.001193	0.003

John Abbott Mixed Use Project - Phase 4 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	27.8367	27.8367	4.5000e-003	5.5000e-004	28.1120
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	27.8367	27.8367	4.5000e-003	5.5000e-004	28.1120
NaturalGas Mitigated	7.9100e-003	0.0719	0.0604	4.3000e-004		5.4700e-003	5.4700e-003		5.4700e-003	5.4700e-003	0.0000	78.2991	78.2991	1.5000e-003	1.4400e-003	78.7644
NaturalGas Unmitigated	7.9100e-003	0.0719	0.0604	4.3000e-004		5.4700e-003	5.4700e-003		5.4700e-003	5.4700e-003	0.0000	78.2991	78.2991	1.5000e-003	1.4400e-003	78.7644

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Fast Food Restaurant w/o Drive Thru	880897	4.7500e-003	0.0432	0.0363	2.6000e-004		3.2800e-003	3.2800e-003		3.2800e-003	3.2800e-003	0.0000	47.0081	47.0081	9.0000e-004	8.6000e-004	47.2874

John Abbott Mixed Use Project - Phase 4 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Quality Restaurant	569993	3.0700e-003	0.0279	0.0235	1.7000e-004		2.1200e-003	2.1200e-003		2.1200e-003	2.1200e-003	0.0000	30.4170	30.4170	5.8000e-004	5.6000e-004	30.5977
Strip Mall	16380	9.0000e-005	8.0000e-004	6.7000e-004	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.8741	0.8741	2.0000e-005	2.0000e-005	0.8793
Total		**7.9100e-003**	**0.0719**	**0.0604**	**4.3000e-004**		**5.4600e-003**	**5.4600e-003**		**5.4600e-003**	**5.4600e-003**	**0.0000**	**78.2991**	**78.2991**	**1.5000e-003**	**1.4400e-003**	**78.7644**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Fast Food Restaurant w/o Drive Thru	880897	4.7500e-003	0.0432	0.0363	2.6000e-004		3.2800e-003	3.2800e-003		3.2800e-003	3.2800e-003	0.0000	47.0081	47.0081	9.0000e-004	8.6000e-004	47.2874
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Quality Restaurant	569993	3.0700e-003	0.0279	0.0235	1.7000e-004		2.1200e-003	2.1200e-003		2.1200e-003	2.1200e-003	0.0000	30.4170	30.4170	5.8000e-004	5.6000e-004	30.5977
Strip Mall	16380	9.0000e-005	8.0000e-004	6.7000e-004	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.8741	0.8741	2.0000e-005	2.0000e-005	0.8793
Total		**7.9100e-003**	**0.0719**	**0.0604**	**4.3000e-004**		**5.4600e-003**	**5.4600e-003**		**5.4600e-003**	**5.4600e-003**	**0.0000**	**78.2991**	**78.2991**	**1.5000e-003**	**1.4400e-003**	**78.7644**

5.3 Energy by Land Use - Electricity

Unmitigated

John Abbott Mixed Use Project - Phase 4 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Fast Food Restaurant w/o Drive Thru	136723	12.6501	2.0500e-003	2.5000e-004	12.7752
Parking Lot	2940	0.2720	4.0000e-005	1.0000e-005	0.2747
Quality Restaurant	88467.5	8.1854	1.3200e-003	1.6000e-004	8.2663
Strip Mall	72730	6.7293	1.0900e-003	1.3000e-004	6.7958
Total		**27.8367**	**4.5000e-003**	**5.5000e-004**	**28.1120**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Fast Food Restaurant w/o Drive Thru	136723	12.6501	2.0500e-003	2.5000e-004	12.7752
Parking Lot	2940	0.2720	4.0000e-005	1.0000e-005	0.2747
Quality Restaurant	88467.5	8.1854	1.3200e-003	1.6000e-004	8.2663
Strip Mall	72730	6.7293	1.0900e-003	1.3000e-004	6.7958
Total		**27.8367**	**4.5000e-003**	**5.5000e-004**	**28.1120**

John Abbott Mixed Use Project - Phase 4 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0652	0.0000	4.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.7000e-004	8.7000e-004	0.0000	0.0000	9.3000e-004
Unmitigated	0.0652	0.0000	4.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.7000e-004	8.7000e-004	0.0000	0.0000	9.3000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	9.9100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0552					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	4.0000e-005	0.0000	4.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.7000e-004	8.7000e-004	0.0000	0.0000	9.3000e-004
Total	**0.0652**	**0.0000**	**4.5000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**8.7000e-004**	**8.7000e-004**	**0.0000**	**0.0000**	**9.3000e-004**

John Abbott Mixed Use Project - Phase 4 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	9.9100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0552					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	4.0000e-005	0.0000	4.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.7000e-004	8.7000e-004	0.0000	0.0000	9.3000e-004
Total	**0.0652**	**0.0000**	**4.5000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**8.7000e-004**	**8.7000e-004**	**0.0000**	**0.0000**	**9.3000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	2.3087	0.0864	2.0600e-003	5.0826

John Abbott Mixed Use Project - Phase 4 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Unmitigated	2.3087	0.0864	2.0600e-003	5.0826

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Fast Food Restaurant w/o Drive Thru	1.29002 / 0.0823416	1.0818	0.0421	1.0100e-003	2.4351
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Quality Restaurant	0.834718 / 0.0532798	0.7000	0.0273	6.5000e-004	1.5756
Strip Mall	0.518508 / 0.317795	0.5270	0.0170	4.1000e-004	1.0719
Total		**2.3087**	**0.0864**	**2.0700e-003**	**5.0826**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Fast Food Restaurant w/o Drive Thru	1.29002 / 0.0823416	1.0818	0.0421	1.0100e-003	2.4351

John Abbott Mixed Use Project - Phase 4 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Quality Restaurant	0.834718 / 0.0532798	0.7000	0.0273	6.5000e-004	1.5756
Strip Mall	0.518508 / 0.317795	0.5270	0.0170	4.1000e-004	1.0719
Total		**2.3087**	**0.0864**	**2.0700e-003**	**5.0826**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	11.9399	0.7056	0.0000	29.5807
Unmitigated	11.9399	0.7056	0.0000	29.5807

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e

John Abbott Mixed Use Project - Phase 4 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Land Use	tons	MT/yr			
Fast Food Restaurant w/o Drive Thru	48.96	9.9384	0.5873	0.0000	24.6221
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Quality Restaurant	2.51	0.5095	0.0301	0.0000	1.2623
Strip Mall	7.35	1.4920	0.0882	0.0000	3.6963
Total		**11.9399**	**0.7056**	**0.0000**	**29.5807**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Fast Food Restaurant w/o Drive Thru	48.96	9.9384	0.5873	0.0000	24.6221
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Quality Restaurant	2.51	0.5095	0.0301	0.0000	1.2623
Strip Mall	7.35	1.4920	0.0882	0.0000	3.6963
Total		**11.9399**	**0.7056**	**0.0000**	**29.5807**

9.0 Operational Offroad

John Abbott Mixed Use Project - Phase 4 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

-

-

048
048
048

-

John Abbott Mixed Use Project - Phase 5 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

John Abbott Mixed Use Project - Phase 5 Construction

Monterey Bay Unified APCD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	49.00	Space	1.30	19,600.00	0
Fast Food Restaurant w/o Drive Thru	4.24	1000sqft	0.00	4,240.00	0
Quality Restaurant	3.86	1000sqft	0.00	3,860.00	0
Strip Mall	8.10	1000sqft	0.00	8,100.00	0
Apartments Mid Rise	27.00	Dwelling Unit	0.00	29,400.00	77

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.8	**Precipitation Freq (Days)**	53
Climate Zone	4			**Operational Year**	2029
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Phase 5: 16,200 sf of retail. 8,100 sf of strip mall; 4,240 sf of fast food resturant w/o drive thru; 3,860 sf of quality resturant; 49 parking spaces on 1.3 acres

Construction Phase - Scaled the default construction schedule to match the proposed applicant schedule. Assuming demolition would occur all in Phase 1

Off-road Equipment - Default equipment

Trips and VMT - Based on Phase 5 parcel size, assuming 524 cy of pavement to be added to site (66 trips).

Demolition -

Grading - Earthwork import based on total net fill and allocated based on phase parcel area (522.55 cy of import)

John Abbott Mixed Use Project - Phase 5 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Architectural Coating - MBARD Rule 426 arch coatings 50 g/l for arch coating and 100 g/l for traffic markings.
https://www.mbard.org/files/b17e2b4e2/Final+Rule+426+%28Clean+Version%29.pdf

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	150.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	150.00	50.00
tblArchitecturalCoating	EF_Parking	150.00	100.00
tblArchitecturalCoating	EF_Residential_Exterior	100.00	50.00
tblArchitecturalCoating	EF_Residential_Interior	100.00	50.00
tblConstructionPhase	NumDays	200.00	236.00
tblConstructionPhase	NumDays	4.00	5.00
tblConstructionPhase	PhaseEndDate	5/25/2029	1/19/2029
tblConstructionPhase	PhaseEndDate	4/27/2029	1/19/2029
tblConstructionPhase	PhaseEndDate	7/21/2028	2/24/2028
tblConstructionPhase	PhaseEndDate	5/11/2029	3/9/2028
tblConstructionPhase	PhaseStartDate	5/12/2029	1/6/2029
tblConstructionPhase	PhaseStartDate	7/22/2028	2/25/2028
tblConstructionPhase	PhaseStartDate	7/18/2028	2/18/2028
tblConstructionPhase	PhaseStartDate	4/28/2029	2/25/2028
tblGrading	AcresOfGrading	5.00	4.00
tblGrading	MaterialImported	0.00	522.55
tblLandUse	LandUseSquareFeet	27,000.00	29,400.00
tblLandUse	LotAcreage	0.44	1.30
tblLandUse	LotAcreage	0.10	0.00
tblLandUse	LotAcreage	0.09	0.00
tblLandUse	LotAcreage	0.19	0.00
tblLandUse	LotAcreage	0.71	0.00
tblTripsAndVMT	HaulingTripNumber	65.00	66.00
tblTripsAndVMT	HaulingTripNumber	0.00	66.00

John Abbott Mixed Use Project - Phase 5 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2028	0.1645	1.2694	1.5328	3.0200e-003	0.0555	0.0464	0.1019	0.0189	0.0446	0.0635	0.0000	255.5292	255.5292	0.0369	3.7500e-003	257.5683
2029	0.1438	0.0873	0.1088	2.1000e-004	2.7500e-003	3.2300e-003	5.9800e-003	7.4000e-004	3.1300e-003	3.8700e-003	0.0000	17.7954	17.7954	2.3400e-003	2.2000e-004	17.9184
Maximum	**0.1645**	**1.2694**	**1.5328**	**3.0200e-003**	**0.0555**	**0.0464**	**0.1019**	**0.0189**	**0.0446**	**0.0635**	**0.0000**	**255.5292**	**255.5292**	**0.0369**	**3.7500e-003**	**257.5683**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2028	0.1645	1.2694	1.5328	3.0200e-003	0.0555	0.0464	0.1019	0.0189	0.0446	0.0635	0.0000	255.5290	255.5290	0.0369	3.7500e-003	257.5681
2029	0.1438	0.0873	0.1088	2.1000e-004	2.7500e-003	3.2300e-003	5.9800e-003	7.4000e-004	3.1300e-003	3.8700e-003	0.0000	17.7954	17.7954	2.3400e-003	2.2000e-004	17.9184
Maximum	**0.1645**	**1.2694**	**1.5328**	**3.0200e-003**	**0.0555**	**0.0464**	**0.1019**	**0.0189**	**0.0446**	**0.0635**	**0.0000**	**255.5290**	**255.5290**	**0.0369**	**3.7500e-003**	**257.5681**

John Abbott Mixed Use Project - Phase 5 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**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**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**7-14-2028**	**10-13-2028**	0.4038	0.4038
2	**10-14-2028**	**1-13-2029**	0.4842	0.4842
3	**1-14-2029**	**4-13-2029**	0.0859	0.0859
		Highest	0.4842	0.4842

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.2179	3.2100e-003	0.2790	1.0000e-005		1.5500e-003	1.5500e-003		1.5500e-003	1.5500e-003	0.0000	0.4565	0.4565	4.4000e-004	0.0000	0.4674
Energy	0.0104	0.0937	0.0744	5.7000e-004		7.1700e-003	7.1700e-003		7.1700e-003	7.1700e-003	0.0000	144.8697	144.8697	8.7900e-003	2.7100e-003	145.8970
Mobile	0.9086	0.9706	7.3811	0.0137	1.5412	0.0116	1.5528	0.4118	0.0108	0.4227	0.0000	1,332.7618	1,332.7618	0.1015	0.0701	1,356.1940
Waste						0.0000	0.0000		0.0000	0.0000	14.8772	0.0000	14.8772	0.8792	0.0000	36.8577
Water						0.0000	0.0000		0.0000	0.0000	1.5285	2.9410	4.4695	0.1575	3.7600e-003	9.5279
Total	**1.1369**	**1.0675**	**7.7345**	**0.0143**	**1.5412**	**0.0203**	**1.5615**	**0.4118**	**0.0196**	**0.4314**	**16.4057**	**1,481.0290**	**1,497.4346**	**1.1474**	**0.0766**	**1,548.9440**

Mitigated Operational

John Abbott Mixed Use Project - Phase 5 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.2179	3.2100e-003	0.2790	1.0000e-005		1.5500e-003	1.5500e-003		1.5500e-003	1.5500e-003	0.0000	0.4565	0.4565	4.4000e-004	0.0000	0.4674
Energy	0.0104	0.0937	0.0744	5.7000e-004		7.1700e-003	7.1700e-003		7.1700e-003	7.1700e-003	0.0000	144.8697	144.8697	8.7900e-003	2.7100e-003	145.8970
Mobile	0.9086	0.9706	7.3811	0.0137	1.5412	0.0116	1.5528	0.4118	0.0108	0.4227	0.0000	1,332.7618	1,332.7618	0.1015	0.0701	1,356.1940
Waste						0.0000	0.0000		0.0000	0.0000	14.8772	0.0000	14.8772	0.8792	0.0000	36.8577
Water						0.0000	0.0000		0.0000	0.0000	1.5285	2.9410	4.4695	0.1575	3.7600e-003	9.5279
Total	**1.1369**	**1.0675**	**7.7345**	**0.0143**	**1.5412**	**0.0203**	**1.5615**	**0.4118**	**0.0196**	**0.4314**	**16.4057**	**1,481.0290**	**1,497.4346**	**1.1474**	**0.0766**	**1,548.9440**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**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**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	2/18/2028	2/24/2028	5	5	
2	Building Construction	Building Construction	2/25/2028	1/19/2029	5	236	
3	Paving	Paving	2/25/2028	3/9/2028	5	10	
4	Architectural Coating	Architectural Coating	1/6/2029	1/19/2029	5	10	

Acres of Grading (Site Preparation Phase): 0

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John Abbott Mixed Use Project - Phase 5 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Acres of Grading (Grading Phase): 4

Acres of Paving: 1.3

Residential Indoor: 59,535; Residential Outdoor: 19,845; Non-Residential Indoor: 24,300; Non-Residential Outdoor: 8,100; Striped Parking Area: 1,176

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	1	6.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	4	10.00	0.00	66.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	34.00	9.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	66.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

John Abbott Mixed Use Project - Phase 5 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Architectural Coating	1	7.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Grading - 2028

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0172	0.0000	0.0172	8.5100e-003	0.0000	8.5100e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.9800e-003	0.0311	0.0212	5.0000e-005		1.2400e-003	1.2400e-003		1.1400e-003	1.1400e-003	0.0000	4.5264	4.5264	1.4600e-003	0.0000	4.5630
Total	**2.9800e-003**	**0.0311**	**0.0212**	**5.0000e-005**	**0.0172**	**1.2400e-003**	**0.0185**	**8.5100e-003**	**1.1400e-003**	**9.6500e-003**	**0.0000**	**4.5264**	**4.5264**	**1.4600e-003**	**0.0000**	**4.5630**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	8.0000e-005	4.3300e-003	9.9000e-004	2.0000e-005	5.6000e-004	4.0000e-005	6.0000e-004	1.5000e-004	4.0000e-005	1.9000e-004	0.0000	1.7231	1.7231	2.0000e-005	2.7000e-004	1.8045
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.0000e-005	4.0000e-005	5.0000e-004	0.0000	2.0000e-004	0.0000	2.0000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1495	0.1495	0.0000	0.0000	0.1507

John Abbott Mixed Use Project - Phase 5 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Total	**1.4000e-004**	**4.3700e-003**	**1.4900e-003**	**2.0000e-005**	**7.6000e-004**	**4.0000e-005**	**8.0000e-004**	**2.0000e-004**	**4.0000e-005**	**2.4000e-004**	**0.0000**	**1.8726**	**1.8726**	**2.0000e-005**	**2.7000e-004**	**1.9552**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0172	0.0000	0.0172	8.5100e-003	0.0000	8.5100e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.9800e-003	0.0311	0.0212	5.0000e-005		1.2400e-003	1.2400e-003		1.1400e-003	1.1400e-003	0.0000	4.5264	4.5264	1.4600e-003	0.0000	4.5630
Total	**2.9800e-003**	**0.0311**	**0.0212**	**5.0000e-005**	**0.0172**	**1.2400e-003**	**0.0185**	**8.5100e-003**	**1.1400e-003**	**9.6500e-003**	**0.0000**	**4.5264**	**4.5264**	**1.4600e-003**	**0.0000**	**4.5630**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	8.0000e-005	4.3300e-003	9.9000e-004	2.0000e-005	5.6000e-004	4.0000e-005	6.0000e-004	1.5000e-004	4.0000e-005	1.9000e-004	0.0000	1.7231	1.7231	2.0000e-005	2.7000e-004	1.8045
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.0000e-005	4.0000e-005	5.0000e-004	0.0000	2.0000e-004	0.0000	2.0000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1495	0.1495	0.0000	0.0000	0.1507

John Abbott Mixed Use Project - Phase 5 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Total	**1.4000e-004**	**4.3700e-003**	**1.4900e-003**	**2.0000e-005**	**7.6000e-004**	**4.0000e-005**	**8.0000e-004**	**2.0000e-004**	**4.0000e-005**	**2.4000e-004**	**0.0000**	**1.8726**	**1.8726**	**2.0000e-005**	**2.7000e-004**	**1.9552**

3.3 Building Construction - 2028

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1464	1.1506	1.3746	2.4400e-003		0.0434	0.0434		0.0418	0.0418	0.0000	200.7036	200.7036	0.0328	0.0000	201.5228
Total	**0.1464**	**1.1506**	**1.3746**	**2.4400e-003**		**0.0434**	**0.0434**		**0.0418**	**0.0418**	**0.0000**	**200.7036**	**200.7036**	**0.0328**	**0.0000**	**201.5228**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.1800e-003	0.0467	0.0140	1.9000e-004	6.5600e-003	2.9000e-004	6.8600e-003	1.9000e-003	2.8000e-004	2.1800e-003	0.0000	17.9614	17.9614	1.5000e-004	2.6300e-003	18.7481
Worker	9.0000e-003	5.5500e-003	0.0753	2.3000e-004	0.0299	1.5000e-004	0.0300	7.9500e-003	1.3000e-004	8.0800e-003	0.0000	22.4668	22.4668	5.5000e-004	5.7000e-004	22.6493
Total	**0.0102**	**0.0523**	**0.0893**	**4.2000e-004**	**0.0365**	**4.4000e-004**	**0.0369**	**9.8500e-003**	**4.1000e-004**	**0.0103**	**0.0000**	**40.4281**	**40.4281**	**7.0000e-004**	**3.2000e-003**	**41.3975**

John Abbott Mixed Use Project - Phase 5 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1464	1.1506	1.3746	2.4400e-003		0.0434	0.0434		0.0418	0.0418	0.0000	200.7034	200.7034	0.0328	0.0000	201.5226
Total	**0.1464**	**1.1506**	**1.3746**	**2.4400e-003**		**0.0434**	**0.0434**		**0.0418**	**0.0418**	**0.0000**	**200.7034**	**200.7034**	**0.0328**	**0.0000**	**201.5226**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.1800e-003	0.0467	0.0140	1.9000e-004	6.5600e-003	2.9000e-004	6.8600e-003	1.9000e-003	2.8000e-004	2.1800e-003	0.0000	17.9614	17.9614	1.5000e-004	2.6300e-003	18.7481
Worker	9.0000e-003	5.5500e-003	0.0753	2.3000e-004	0.0299	1.5000e-004	0.0300	7.9500e-003	1.3000e-004	8.0800e-003	0.0000	22.4668	22.4668	5.5000e-004	5.7000e-004	22.6493
Total	**0.0102**	**0.0523**	**0.0893**	**4.2000e-004**	**0.0365**	**4.4000e-004**	**0.0369**	**9.8500e-003**	**4.1000e-004**	**0.0103**	**0.0000**	**40.4281**	**40.4281**	**7.0000e-004**	**3.2000e-003**	**41.3975**

John Abbott Mixed Use Project - Phase 5 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Building Construction - 2029

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	9.9300e-003	0.0781	0.0933	1.7000e-004		2.9400e-003	2.9400e-003		2.8400e-003	2.8400e-003	0.0000	13.6224	13.6224	2.2200e-003	0.0000	13.6780
Total	**9.9300e-003**	**0.0781**	**0.0933**	**1.7000e-004**		**2.9400e-003**	**2.9400e-003**		**2.8400e-003**	**2.8400e-003**	**0.0000**	**13.6224**	**13.6224**	**2.2200e-003**	**0.0000**	**13.6780**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	8.0000e-005	3.1200e-003	9.4000e-004	1.0000e-005	4.5000e-004	2.0000e-005	4.7000e-004	1.3000e-004	2.0000e-005	1.5000e-004	0.0000	1.1940	1.1940	1.0000e-005	1.7000e-004	1.2462
Worker	5.8000e-004	3.5000e-004	4.8600e-003	2.0000e-005	2.0300e-003	1.0000e-005	2.0400e-003	5.4000e-004	1.0000e-005	5.5000e-004	0.0000	1.4970	1.4970	3.0000e-005	4.0000e-005	1.5087
Total	**6.6000e-004**	**3.4700e-003**	**5.8000e-003**	**3.0000e-005**	**2.4800e-003**	**3.0000e-005**	**2.5100e-003**	**6.7000e-004**	**3.0000e-005**	**7.0000e-004**	**0.0000**	**2.6909**	**2.6909**	**4.0000e-005**	**2.1000e-004**	**2.7549**

Mitigated Construction On-Site

John Abbott Mixed Use Project - Phase 5 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	9.9300e-003	0.0781	0.0933	1.7000e-004		2.9400e-003	2.9400e-003		2.8400e-003	2.8400e-003	0.0000	13.6224	13.6224	2.2200e-003	0.0000	13.6780
Total	**9.9300e-003**	**0.0781**	**0.0933**	**1.7000e-004**		**2.9400e-003**	**2.9400e-003**		**2.8400e-003**	**2.8400e-003**	**0.0000**	**13.6224**	**13.6224**	**2.2200e-003**	**0.0000**	**13.6780**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	8.0000e-005	3.1200e-003	9.4000e-004	1.0000e-005	4.5000e-004	2.0000e-005	4.7000e-004	1.3000e-004	2.0000e-005	1.5000e-004	0.0000	1.1940	1.1940	1.0000e-005	1.7000e-004	1.2462
Worker	5.8000e-004	3.5000e-004	4.8600e-003	2.0000e-005	2.0300e-003	1.0000e-005	2.0400e-003	5.4000e-004	1.0000e-005	5.5000e-004	0.0000	1.4970	1.4970	3.0000e-005	4.0000e-005	1.5087
Total	**6.6000e-004**	**3.4700e-003**	**5.8000e-003**	**3.0000e-005**	**2.4800e-003**	**3.0000e-005**	**2.5100e-003**	**6.7000e-004**	**3.0000e-005**	**7.0000e-004**	**0.0000**	**2.6909**	**2.6909**	**4.0000e-005**	**2.1000e-004**	**2.7549**

3.4 Paving - 2028

Unmitigated Construction On-Site

John Abbott Mixed Use Project - Phase 5 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.8700e-003	0.0266	0.0440	7.0000e-005		1.2300e-003	1.2300e-003		1.1400e-003	1.1400e-003	0.0000	5.8868	5.8868	1.8700e-003	0.0000	5.9334
Paving	1.7000e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**4.5700e-003**	**0.0266**	**0.0440**	**7.0000e-005**		**1.2300e-003**	**1.2300e-003**		**1.1400e-003**	**1.1400e-003**	**0.0000**	**5.8868**	**5.8868**	**1.8700e-003**	**0.0000**	**5.9334**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	8.0000e-005	4.3300e-003	9.9000e-004	2.0000e-005	5.6000e-004	4.0000e-005	6.0000e-004	1.5000e-004	4.0000e-005	1.9000e-004	0.0000	1.7231	1.7231	2.0000e-005	2.7000e-004	1.8045
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.6000e-004	1.0000e-004	1.3000e-003	0.0000	5.2000e-004	0.0000	5.2000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.3887	0.3887	1.0000e-005	1.0000e-005	0.3919
Total	**2.4000e-004**	**4.4300e-003**	**2.2900e-003**	**2.0000e-005**	**1.0800e-003**	**4.0000e-005**	**1.1200e-003**	**2.9000e-004**	**4.0000e-005**	**3.3000e-004**	**0.0000**	**2.1118**	**2.1118**	**3.0000e-005**	**2.8000e-004**	**2.1964**

Mitigated Construction On-Site

John Abbott Mixed Use Project - Phase 5 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.8700e-003	0.0266	0.0440	7.0000e-005		1.2300e-003	1.2300e-003		1.1400e-003	1.1400e-003	0.0000	5.8868	5.8868	1.8700e-003	0.0000	5.9334
Paving	1.7000e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**4.5700e-003**	**0.0266**	**0.0440**	**7.0000e-005**		**1.2300e-003**	**1.2300e-003**		**1.1400e-003**	**1.1400e-003**	**0.0000**	**5.8868**	**5.8868**	**1.8700e-003**	**0.0000**	**5.9334**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	8.0000e-005	4.3300e-003	9.9000e-004	2.0000e-005	5.6000e-004	4.0000e-005	6.0000e-004	1.5000e-004	4.0000e-005	1.9000e-004	0.0000	1.7231	1.7231	2.0000e-005	2.7000e-004	1.8045
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.6000e-004	1.0000e-004	1.3000e-003	0.0000	5.2000e-004	0.0000	5.2000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.3887	0.3887	1.0000e-005	1.0000e-005	0.3919
Total	**2.4000e-004**	**4.4300e-003**	**2.2900e-003**	**2.0000e-005**	**1.0800e-003**	**4.0000e-005**	**1.1200e-003**	**2.9000e-004**	**4.0000e-005**	**3.3000e-004**	**0.0000**	**2.1118**	**2.1118**	**3.0000e-005**	**2.8000e-004**	**2.1964**

3.5 Architectural Coating - 2029

Unmitigated Construction On-Site

John Abbott Mixed Use Project - Phase 5 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.1323					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.5000e-004	5.7300e-003	9.0500e-003	1.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004	0.0000	1.2766	1.2766	7.0000e-005	0.0000	1.2784
Total	**0.1331**	**5.7300e-003**	**9.0500e-003**	**1.0000e-005**		**2.6000e-004**	**2.6000e-004**		**2.6000e-004**	**2.6000e-004**	**0.0000**	**1.2766**	**1.2766**	**7.0000e-005**	**0.0000**	**1.2784**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.0000e-005	5.0000e-005	6.7000e-004	0.0000	2.8000e-004	0.0000	2.8000e-004	7.0000e-005	0.0000	8.0000e-005	0.0000	0.2055	0.2055	0.0000	1.0000e-005	0.2071
Total	**8.0000e-005**	**5.0000e-005**	**6.7000e-004**	**0.0000**	**2.8000e-004**	**0.0000**	**2.8000e-004**	**7.0000e-005**	**0.0000**	**8.0000e-005**	**0.0000**	**0.2055**	**0.2055**	**0.0000**	**1.0000e-005**	**0.2071**

Mitigated Construction On-Site

John Abbott Mixed Use Project - Phase 5 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.1323					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.5000e-004	5.7300e-003	9.0500e-003	1.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004	0.0000	1.2766	1.2766	7.0000e-005	0.0000	1.2784
Total	**0.1331**	**5.7300e-003**	**9.0500e-003**	**1.0000e-005**		**2.6000e-004**	**2.6000e-004**		**2.6000e-004**	**2.6000e-004**	**0.0000**	**1.2766**	**1.2766**	**7.0000e-005**	**0.0000**	**1.2784**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.0000e-005	5.0000e-005	6.7000e-004	0.0000	2.8000e-004	0.0000	2.8000e-004	7.0000e-005	0.0000	8.0000e-005	0.0000	0.2055	0.2055	0.0000	1.0000e-005	0.2071
Total	**8.0000e-005**	**5.0000e-005**	**6.7000e-004**	**0.0000**	**2.8000e-004**	**0.0000**	**2.8000e-004**	**7.0000e-005**	**0.0000**	**8.0000e-005**	**0.0000**	**0.2055**	**0.2055**	**0.0000**	**1.0000e-005**	**0.2071**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

John Abbott Mixed Use Project - Phase 5 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.9086	0.9706	7.3811	0.0137	1.5412	0.0116	1.5528	0.4118	0.0108	0.4227	0.0000	1,332.7618	1,332.7618	0.1015	0.0701	1,356.1940
Unmitigated	0.9086	0.9706	7.3811	0.0137	1.5412	0.0116	1.5528	0.4118	0.0108	0.4227	0.0000	1,332.7618	1,332.7618	0.1015	0.0701	1,356.1940

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Fast Food Restaurant w/o Drive Thru	1,468.02	2,951.04	2120.00	2,859,110	2,859,110
Parking Lot	0.00	0.00	0.00		
Quality Restaurant	323.62	347.55	277.80	380,161	380,161
Strip Mall	358.99	340.52	165.48	506,224	506,224
Apartments Mid Rise	146.88	132.57	110.43	402,254	402,254
Total	2,297.51	3,771.69	2,673.72	4,147,750	4,147,750

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Fast Food Restaurant w/o Drive Th	9.50	7.30	7.30	1.50	79.50	19.00	51	37	12
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Quality Restaurant	9.50	7.30	7.30	12.00	69.00	19.00	38	18	44
Strip Mall	9.50	7.30	7.30	16.60	64.40	19.00	45	40	15
Apartments Mid Rise	10.80	7.30	7.50	44.00	18.80	37.20	86	11	3

4.4 Fleet Mix

John Abbott Mixed Use Project - Phase 5 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Fast Food Restaurant w/o Drive Thru	0.537317	0.054217	0.191225	0.135968	0.024045	0.006114	0.010528	0.009307	0.001115	0.000549	0.025547	0.001164	0.002
Parking Lot	0.537317	0.054217	0.191225	0.135968	0.024045	0.006114	0.010528	0.009307	0.001115	0.000549	0.025547	0.001164	0.002
Quality Restaurant	0.537317	0.054217	0.191225	0.135968	0.024045	0.006114	0.010528	0.009307	0.001115	0.000549	0.025547	0.001164	0.002
Strip Mall	0.537317	0.054217	0.191225	0.135968	0.024045	0.006114	0.010528	0.009307	0.001115	0.000549	0.025547	0.001164	0.002
Apartments Mid Rise	0.537317	0.054217	0.191225	0.135968	0.024045	0.006114	0.010528	0.009307	0.001115	0.000549	0.025547	0.001164	0.002

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	42.1899	42.1899	6.8300e-003	8.3000e-004	42.6071
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	42.1899	42.1899	6.8300e-003	8.3000e-004	42.6071
NaturalGas Mitigated	0.0104	0.0937	0.0744	5.7000e-004		7.1700e-003	7.1700e-003		7.1700e-003	7.1700e-003	0.0000	102.6798	102.6798	1.9700e-003	1.8800e-003	103.2900
NaturalGas Unmitigated	0.0104	0.0937	0.0744	5.7000e-004		7.1700e-003	7.1700e-003		7.1700e-003	7.1700e-003	0.0000	102.6798	102.6798	1.9700e-003	1.8800e-003	103.2900

5.2 Energy by Land Use - NaturalGas

Unmitigated

John Abbott Mixed Use Project - Phase 5 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	226305	1.2200e-003	0.0104	4.4400e-003	7.0000e-005		8.4000e-004	8.4000e-004		8.4000e-004	8.4000e-004	0.0000	12.0765	12.0765	2.3000e-004	2.2000e-004	12.1483
Fast Food Restaurant w/o Drive Thru	878825	4.7400e-003	0.0431	0.0362	2.6000e-004		3.2700e-003	3.2700e-003		3.2700e-003	3.2700e-003	0.0000	46.8974	46.8974	9.0000e-004	8.6000e-004	47.1761
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Quality Restaurant	800062	4.3100e-003	0.0392	0.0329	2.4000e-004		2.9800e-003	2.9800e-003		2.9800e-003	2.9800e-003	0.0000	42.6944	42.6944	8.2000e-004	7.8000e-004	42.9481
Strip Mall	18954	1.0000e-004	9.3000e-004	7.8000e-004	1.0000e-005		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	1.0115	1.0115	2.0000e-005	2.0000e-005	1.0175
Total		**0.0104**	**0.0937**	**0.0744**	**5.8000e-004**		**7.1600e-003**	**7.1600e-003**		**7.1600e-003**	**7.1600e-003**	**0.0000**	**102.6798**	**102.6798**	**1.9700e-003**	**1.8800e-003**	**103.2900**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	226305	1.2200e-003	0.0104	4.4400e-003	7.0000e-005		8.4000e-004	8.4000e-004		8.4000e-004	8.4000e-004	0.0000	12.0765	12.0765	2.3000e-004	2.2000e-004	12.1483
Fast Food Restaurant w/o Drive Thru	878825	4.7400e-003	0.0431	0.0362	2.6000e-004		3.2700e-003	3.2700e-003		3.2700e-003	3.2700e-003	0.0000	46.8974	46.8974	9.0000e-004	8.6000e-004	47.1761
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Quality Restaurant	800062	4.3100e-003	0.0392	0.0329	2.4000e-004		2.9800e-003	2.9800e-003		2.9800e-003	2.9800e-003	0.0000	42.6944	42.6944	8.2000e-004	7.8000e-004	42.9481

John Abbott Mixed Use Project - Phase 5 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Strip Mall	18954	1.0000e-004	9.3000e-004	7.8000e-004	1.0000e-005		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	1.0115	1.0115	2.0000e-005	2.0000e-005	1.0175
Total		**0.0104**	**0.0937**	**0.0744**	**5.8000e-004**		**7.1600e-003**	**7.1600e-003**		**7.1600e-003**	**7.1600e-003**	**0.0000**	**102.6798**	**102.6798**	**1.9700e-003**	**1.8800e-003**	**103.2900**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	104394	9.6589	1.5600e-003	1.9000e-004	9.7544
Fast Food Restaurant w/o Drive Thru	136401	12.6203	2.0400e-003	2.5000e-004	12.7451
Parking Lot	6860	0.6347	1.0000e-004	1.0000e-005	0.6410
Quality Restaurant	124176	11.4893	1.8600e-003	2.3000e-004	11.6029
Strip Mall	84159	7.7867	1.2600e-003	1.5000e-004	7.8637
Total		**42.1899**	**6.8200e-003**	**8.3000e-004**	**42.6071**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e

John Abbott Mixed Use Project - Phase 5 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	104394	9.6589	1.5600e-003	1.9000e-004	9.7544
Fast Food Restaurant w/o Drive Thru	136401	12.6203	2.0400e-003	2.5000e-004	12.7451
Parking Lot	6860	0.6347	1.0000e-004	1.0000e-005	0.6410
Quality Restaurant	124176	11.4893	1.8600e-003	2.3000e-004	11.6029
Strip Mall	84159	7.7867	1.2600e-003	1.5000e-004	7.8637
Total		**42.1899**	**6.8200e-003**	**8.3000e-004**	**42.6071**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.2179	3.2100e-003	0.2790	1.0000e-005		1.5500e-003	1.5500e-003		1.5500e-003	1.5500e-003	0.0000	0.4565	0.4565	4.4000e-004	0.0000	0.4674
Unmitigated	0.2179	3.2100e-003	0.2790	1.0000e-005		1.5500e-003	1.5500e-003		1.5500e-003	1.5500e-003	0.0000	0.4565	0.4565	4.4000e-004	0.0000	0.4674

6.2 Area by SubCategory

John Abbott Mixed Use Project - Phase 5 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0301					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1794					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	8.4300e-003	3.2100e-003	0.2790	1.0000e-005		1.5500e-003	1.5500e-003		1.5500e-003	1.5500e-003	0.0000	0.4565	0.4565	4.4000e-004	0.0000	0.4674
Total	**0.2179**	**3.2100e-003**	**0.2790**	**1.0000e-005**		**1.5500e-003**	**1.5500e-003**		**1.5500e-003**	**1.5500e-003**	**0.0000**	**0.4565**	**0.4565**	**4.4000e-004**	**0.0000**	**0.4674**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0301					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1794					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	8.4300e-003	3.2100e-003	0.2790	1.0000e-005		1.5500e-003	1.5500e-003		1.5500e-003	1.5500e-003	0.0000	0.4565	0.4565	4.4000e-004	0.0000	0.4674

John Abbott Mixed Use Project - Phase 5 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Total	**0.2179**	**3.2100e-003**	**0.2790**	**1.0000e-005**		**1.5500e-003**	**1.5500e-003**		**1.5500e-003**	**1.5500e-003**	**0.0000**	**0.4565**	**0.4565**	**4.4000e-004**	**0.0000**	**0.4674**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	4.4695	0.1575	3.7600e-003	9.5279
Unmitigated	4.4695	0.1575	3.7600e-003	9.5279

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	1.75916 / 1.10903	1.7980	0.0575	1.3800e-003	3.6466
Fast Food Restaurant w/o Drive Thru	1.28698 / 0.0821479	1.0792	0.0420	1.0000e-003	2.4294

John Abbott Mixed Use Project - Phase 5 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Quality Restaurant	1.17164 / 0.0747855	0.9825	0.0383	9.1000e-004	2.2116
Strip Mall	0.599987 / 0.367734	0.6098	0.0196	4.7000e-004	1.2403
Total		**4.4695**	**0.1575**	**3.7600e-003**	**9.5279**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	1.75916 / 1.10903	1.7980	0.0575	1.3800e-003	3.6466
Fast Food Restaurant w/o Drive Thru	1.28698 / 0.0821479	1.0792	0.0420	1.0000e-003	2.4294
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Quality Restaurant	1.17164 / 0.0747855	0.9825	0.0383	9.1000e-004	2.2116
Strip Mall	0.599987 / 0.367734	0.6098	0.0196	4.7000e-004	1.2403
Total		**4.4695**	**0.1575**	**3.7600e-003**	**9.5279**

8.0 Waste Detail

8.1 Mitigation Measures Waste

John Abbott Mixed Use Project - Phase 5 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	14.8772	0.8792	0.0000	36.8577
Unmitigated	14.8772	0.8792	0.0000	36.8577

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	12.42	2.5212	0.1490	0.0000	6.2460
Fast Food Restaurant w/o Drive Thru	48.84	9.9141	0.5859	0.0000	24.5617
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Quality Restaurant	3.52	0.7145	0.0422	0.0000	1.7702
Strip Mall	8.51	1.7275	0.1021	0.0000	4.2797
Total		**14.8772**	**0.8792**	**0.0000**	**36.8577**

John Abbott Mixed Use Project - Phase 5 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	12.42	2.5212	0.1490	0.0000	6.2460
Fast Food Restaurant w/o Drive Thru	48.84	9.9141	0.5859	0.0000	24.5617
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Quality Restaurant	3.52	0.7145	0.0422	0.0000	1.7702
Strip Mall	8.51	1.7275	0.1021	0.0000	4.2797
Total		**14.8772**	**0.8792**	**0.0000**	**36.8577**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

John Abbott Mixed Use Project - Phase 5 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

-

-

906
906
906
906
906

-

John Abbott Mixed Use Project - Phase 6 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

John Abbott Mixed Use Project - Phase 6 Construction

Monterey Bay Unified APCD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking Structure	168.00	Space	0.00	19,200.00	0
Parking Lot	241.00	Space	4.70	96,400.00	0
Apartments Low Rise	30.00	Dwelling Unit	0.00	40,000.00	86
Apartments Mid Rise	70.00	Dwelling Unit	0.00	69,600.00	200
Strip Mall	51.00	1000sqft	0.00	51,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.8	**Precipitation Freq (Days)**	53
Climate Zone	4			**Operational Year**	2030
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Phase 6: 100 dwelling units and 23,800 sf of strip mall. 19,200 sf of parking lifts with 168 spaces and 241 parking lot spaces

Construction Phase - Scaled the default construction schedule to match the proposed applicant schedule.

Off-road Equipment - Default equipment

Trips and VMT - Based on Phase 6 parcel size, assuming 1,896 cy of pavement to be added to site (237 trips).

Demolition -

Grading - Earthwork import based on total net fill and allocated based on phase parcel area (1,889.22 cy of import)

John Abbott Mixed Use Project - Phase 6 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Architectural Coating - MBARD Rule 426 arch coatings 50 g/l for arch coating and 100 g/l for traffic markings.
https://www.mbard.org/files/b17e2b4e2/Final+Rule+426+%28Clean+Version%29.pdf

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Area Coating -

Water And Wastewater -

Solid Waste -

Fleet Mix -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	150.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	150.00	50.00
tblArchitecturalCoating	EF_Parking	150.00	100.00
tblArchitecturalCoating	EF_Residential_Exterior	100.00	50.00
tblArchitecturalCoating	EF_Residential_Interior	100.00	50.00
tblConstructionPhase	NumDays	230.00	425.00
tblConstructionPhase	NumDays	8.00	15.00
tblConstructionPhase	PhaseEndDate	8/22/2030	9/27/2030
tblConstructionPhase	PhaseEndDate	7/3/2030	9/27/2030
tblConstructionPhase	PhaseEndDate	8/15/2029	2/9/2029
tblConstructionPhase	PhaseEndDate	7/29/2030	3/7/2029
tblConstructionPhase	PhaseStartDate	7/30/2030	9/4/2030
tblConstructionPhase	PhaseStartDate	8/16/2029	2/10/2029
tblConstructionPhase	PhaseStartDate	8/4/2029	1/20/2029
tblConstructionPhase	PhaseStartDate	7/4/2030	2/10/2029
tblGrading	AcresOfGrading	15.00	8.00
tblGrading	MaterialImported	0.00	1,889.22
tblLandUse	LandUseSquareFeet	67,200.00	19,200.00
tblLandUse	LandUseSquareFeet	30,000.00	40,000.00

John Abbott Mixed Use Project - Phase 6 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblLandUse	LandUseSquareFeet	70,000.00	69,600.00
tblLandUse	LotAcreage	1.51	0.00
tblLandUse	LotAcreage	2.17	4.70
tblLandUse	LotAcreage	1.88	0.00
tblLandUse	LotAcreage	1.84	0.00
tblLandUse	LotAcreage	1.17	0.00
tblTripsAndVMT	HaulingTripNumber	236.00	237.00
tblTripsAndVMT	HaulingTripNumber	0.00	237.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2029	0.2249	1.8783	2.4515	5.4100e-003	0.2108	0.0709	0.2817	0.0689	0.0666	0.1355	0.0000	486.4635	486.4635	0.0769	0.0156	493.0224
2030	0.6383	0.9626	1.8806	4.4900e-003	0.1320	0.0161	0.1481	0.0357	0.0160	0.0517	0.0000	399.3442	399.3442	0.0126	0.0112	402.9941
Maximum	**0.6383**	**1.8783**	**2.4515**	**5.4100e-003**	**0.2108**	**0.0709**	**0.2817**	**0.0689**	**0.0666**	**0.1355**	**0.0000**	**486.4635**	**486.4635**	**0.0769**	**0.0156**	**493.0224**

Mitigated Construction

John Abbott Mixed Use Project - Phase 6 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2029	0.2249	1.8783	2.4515	5.4100e-003	0.2108	0.0709	0.2817	0.0689	0.0666	0.1355	0.0000	486.4631	486.4631	0.0769	0.0156	493.0221
2030	0.6383	0.9626	1.8806	4.4900e-003	0.1320	0.0161	0.1481	0.0357	0.0160	0.0517	0.0000	399.3439	399.3439	0.0126	0.0112	402.9938
Maximum	**0.6383**	**1.8783**	**2.4515**	**5.4100e-003**	**0.2108**	**0.0709**	**0.2817**	**0.0689**	**0.0666**	**0.1355**	**0.0000**	**486.4631**	**486.4631**	**0.0769**	**0.0156**	**493.0221**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**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**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	7-30-2029	10-29-2029	0.5291	0.5291
2	10-30-2029	1-29-2030	0.4846	0.4846
3	1-30-2030	4-29-2030	0.3700	0.3700
4	4-30-2030	7-29-2030	0.3706	0.3706
5	7-30-2030	9-30-2030	0.7080	0.7080
		Highest	0.7080	0.7080

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

John Abbott Mixed Use Project - Phase 6 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Area	0.7724	0.0119	1.0344	5.0000e-005		5.7400e-003	5.7400e-003		5.7400e-003	5.7400e-003	0.0000	1.6960	1.6960	1.6300e-003	0.0000	1.7368
Energy	5.4000e-003	0.0465	0.0222	2.9000e-004		3.7300e-003	3.7300e-003		3.7300e-003	3.7300e-003	0.0000	151.2647	151.2647	0.0169	2.9000e-003	152.5495
Mobile	0.9472	1.0364	8.0452	0.0156	1.8055	0.0126	1.8181	0.4824	0.0118	0.4942	0.0000	1,520.8727	1,520.8727	0.1086	0.0763	1,546.3288
Waste						0.0000	0.0000		0.0000	0.0000	20.2078	0.0000	20.2078	1.1942	0.0000	50.0639
Water						0.0000	0.0000		0.0000	0.0000	3.2655	7.2332	10.4987	0.3366	8.0600e-003	21.3152
Total	**1.7250**	**1.0949**	**9.1018**	**0.0159**	**1.8055**	**0.0221**	**1.8276**	**0.4824**	**0.0213**	**0.5036**	**23.4733**	**1,681.0665**	**1,704.5398**	**1.6579**	**0.0873**	**1,771.9942**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.7724	0.0119	1.0344	5.0000e-005		5.7400e-003	5.7400e-003		5.7400e-003	5.7400e-003	0.0000	1.6960	1.6960	1.6300e-003	0.0000	1.7368
Energy	5.4000e-003	0.0465	0.0222	2.9000e-004		3.7300e-003	3.7300e-003		3.7300e-003	3.7300e-003	0.0000	151.2647	151.2647	0.0169	2.9000e-003	152.5495
Mobile	0.9472	1.0364	8.0452	0.0156	1.8055	0.0126	1.8181	0.4824	0.0118	0.4942	0.0000	1,520.8727	1,520.8727	0.1086	0.0763	1,546.3288
Waste						0.0000	0.0000		0.0000	0.0000	20.2078	0.0000	20.2078	1.1942	0.0000	50.0639
Water						0.0000	0.0000		0.0000	0.0000	3.2655	7.2332	10.4987	0.3366	8.0600e-003	21.3152
Total	**1.7250**	**1.0949**	**9.1018**	**0.0159**	**1.8055**	**0.0221**	**1.8276**	**0.4824**	**0.0213**	**0.5036**	**23.4733**	**1,681.0665**	**1,704.5398**	**1.6579**	**0.0873**	**1,771.9942**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e

John Abbott Mixed Use Project - Phase 6 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Percent Reduction	**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**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	1/20/2029	2/9/2029	5	15	
2	Building Construction	Building Construction	2/10/2029	9/27/2030	5	425	
3	Paving	Paving	2/10/2029	3/7/2029	5	18	
4	Architectural Coating	Architectural Coating	9/4/2030	9/27/2030	5	18	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 8

Acres of Paving: 4.7

Residential Indoor: 221,940; Residential Outdoor: 73,980; Non-Residential Indoor: 76,500; Non-Residential Outdoor: 25,500; Striped Parking Area: 6,936

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Cement and Mortar Mixers	2	6.00	9	0.56

John Abbott Mixed Use Project - Phase 6 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	2	6.00	132	0.36
Paving	Rollers	2	6.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	6	15.00	0.00	237.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	137.00	38.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	237.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	27.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Grading - 2029

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0496	0.0000	0.0496	0.0253	0.0000	0.0253	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0114	0.1149	0.1091	2.2000e-004		4.6800e-003	4.6800e-003		4.3000e-003	4.3000e-003	0.0000	19.5524	19.5524	6.3200e-003	0.0000	19.7105
Total	**0.0114**	**0.1149**	**0.1091**	**2.2000e-004**	**0.0496**	**4.6800e-003**	**0.0542**	**0.0253**	**4.3000e-003**	**0.0296**	**0.0000**	**19.5524**	**19.5524**	**6.3200e-003**	**0.0000**	**19.7105**

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John Abbott Mixed Use Project - Phase 6 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.7000e-004	0.0153	3.5500e-003	6.0000e-005	2.0200e-003	1.4000e-004	2.1500e-003	5.5000e-004	1.3000e-004	6.9000e-004	0.0000	6.0311	6.0311	7.0000e-005	9.5000e-004	6.3162
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.5000e-004	1.5000e-004	2.1400e-003	1.0000e-005	9.0000e-004	0.0000	9.0000e-004	2.4000e-004	0.0000	2.4000e-004	0.0000	0.6604	0.6604	2.0000e-005	2.0000e-005	0.6656
Total	**5.2000e-004**	**0.0154**	**5.6900e-003**	**7.0000e-005**	**2.9200e-003**	**1.4000e-004**	**3.0500e-003**	**7.9000e-004**	**1.3000e-004**	**9.3000e-004**	**0.0000**	**6.6915**	**6.6915**	**9.0000e-005**	**9.7000e-004**	**6.9818**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0496	0.0000	0.0496	0.0253	0.0000	0.0253	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0114	0.1149	0.1091	2.2000e-004		4.6800e-003	4.6800e-003		4.3000e-003	4.3000e-003	0.0000	19.5523	19.5523	6.3200e-003	0.0000	19.7104
Total	**0.0114**	**0.1149**	**0.1091**	**2.2000e-004**	**0.0496**	**4.6800e-003**	**0.0542**	**0.0253**	**4.3000e-003**	**0.0296**	**0.0000**	**19.5523**	**19.5523**	**6.3200e-003**	**0.0000**	**19.7104**

John Abbott Mixed Use Project - Phase 6 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.7000e-004	0.0153	3.5500e-003	6.0000e-005	2.0200e-003	1.4000e-004	2.1500e-003	5.5000e-004	1.3000e-004	6.9000e-004	0.0000	6.0311	6.0311	7.0000e-005	9.5000e-004	6.3162
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.5000e-004	1.5000e-004	2.1400e-003	1.0000e-005	9.0000e-004	0.0000	9.0000e-004	2.4000e-004	0.0000	2.4000e-004	0.0000	0.6604	0.6604	2.0000e-005	2.0000e-005	0.6656
Total	**5.2000e-004**	**0.0154**	**5.6900e-003**	**7.0000e-005**	**2.9200e-003**	**1.4000e-004**	**3.0500e-003**	**7.9000e-004**	**1.3000e-004**	**9.3000e-004**	**0.0000**	**6.6915**	**6.6915**	**9.0000e-005**	**9.7000e-004**	**6.9818**

3.3 Building Construction - 2029

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1579	1.4403	1.8578	3.1100e-003		0.0609	0.0609		0.0573	0.0573	0.0000	267.8670	267.8670	0.0630	0.0000	269.4412
Total	**0.1579**	**1.4403**	**1.8578**	**3.1100e-003**		**0.0609**	**0.0609**		**0.0573**	**0.0573**	**0.0000**	**267.8670**	**267.8670**	**0.0630**	**0.0000**	**269.4412**

Unmitigated Construction Off-Site

John Abbott Mixed Use Project - Phase 6 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.0600e-003	0.2030	0.0608	8.1000e-004	0.0290	1.2800e-003	0.0302	8.3700e-003	1.2200e-003	9.5900e-003	0.0000	77.6342	77.6342	6.7000e-004	0.0113	81.0298
Worker	0.0357	0.0215	0.3015	9.5000e-004	0.1259	5.8000e-004	0.1265	0.0335	5.3000e-004	0.0340	0.0000	92.8903	92.8903	2.1300e-003	2.2800e-003	93.6218
Total	**0.0408**	**0.2245**	**0.3624**	**1.7600e-003**	**0.1549**	**1.8600e-003**	**0.1567**	**0.0418**	**1.7500e-003**	**0.0436**	**0.0000**	**170.5245**	**170.5245**	**2.8000e-003**	**0.0136**	**174.6516**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1579	1.4403	1.8578	3.1100e-003		0.0609	0.0609		0.0573	0.0573	0.0000	267.8667	267.8667	0.0630	0.0000	269.4408
Total	**0.1579**	**1.4403**	**1.8578**	**3.1100e-003**		**0.0609**	**0.0609**		**0.0573**	**0.0573**	**0.0000**	**267.8667**	**267.8667**	**0.0630**	**0.0000**	**269.4408**

Mitigated Construction Off-Site

John Abbott Mixed Use Project - Phase 6 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.0600e-003	0.2030	0.0608	8.1000e-004	0.0290	1.2800e-003	0.0302	8.3700e-003	1.2200e-003	9.5900e-003	0.0000	77.6342	77.6342	6.7000e-004	0.0113	81.0298
Worker	0.0357	0.0215	0.3015	9.5000e-004	0.1259	5.8000e-004	0.1265	0.0335	5.3000e-004	0.0340	0.0000	92.8903	92.8903	2.1300e-003	2.2800e-003	93.6218
Total	**0.0408**	**0.2245**	**0.3624**	**1.7600e-003**	**0.1549**	**1.8600e-003**	**0.1567**	**0.0418**	**1.7500e-003**	**0.0436**	**0.0000**	**170.5245**	**170.5245**	**2.8000e-003**	**0.0136**	**174.6516**

3.3 Building Construction - 2030

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1270	0.7697	1.5672	3.0000e-003		0.0144	0.0144		0.0144	0.0144	0.0000	254.9752	254.9752	0.0102	0.0000	255.2309
Total	**0.1270**	**0.7697**	**1.5672**	**3.0000e-003**		**0.0144**	**0.0144**		**0.0144**	**0.0144**	**0.0000**	**254.9752**	**254.9752**	**0.0102**	**0.0000**	**255.2309**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

John Abbott Mixed Use Project - Phase 6 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.1500e-003	0.1682	0.0505	6.6000e-004	0.0243	1.0600e-003	0.0254	7.0300e-003	1.0100e-003	8.0400e-003	0.0000	63.9560	63.9560	5.5000e-004	9.3300e-003	66.7495
Worker	0.0283	0.0167	0.2422	7.8000e-004	0.1057	4.6000e-004	0.1062	0.0281	4.2000e-004	0.0285	0.0000	76.7124	76.7124	1.6600e-003	1.8300e-003	77.2999
Total	**0.0324**	**0.1849**	**0.2928**	**1.4400e-003**	**0.1301**	**1.5200e-003**	**0.1316**	**0.0351**	**1.4300e-003**	**0.0366**	**0.0000**	**140.6683**	**140.6683**	**2.2100e-003**	**0.0112**	**144.0494**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1270	0.7697	1.5672	3.0000e-003		0.0144	0.0144		0.0144	0.0144	0.0000	254.9749	254.9749	0.0102	0.0000	255.2306
Total	**0.1270**	**0.7697**	**1.5672**	**3.0000e-003**		**0.0144**	**0.0144**		**0.0144**	**0.0144**	**0.0000**	**254.9749**	**254.9749**	**0.0102**	**0.0000**	**255.2306**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

John Abbott Mixed Use Project - Phase 6 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.1500e-003	0.1682	0.0505	6.6000e-004	0.0243	1.0600e-003	0.0254	7.0300e-003	1.0100e-003	8.0400e-003	0.0000	63.9560	63.9560	5.5000e-004	9.3300e-003	66.7495
Worker	0.0283	0.0167	0.2422	7.8000e-004	0.1057	4.6000e-004	0.1062	0.0281	4.2000e-004	0.0285	0.0000	76.7124	76.7124	1.6600e-003	1.8300e-003	77.2999
Total	**0.0324**	**0.1849**	**0.2928**	**1.4400e-003**	**0.1301**	**1.5200e-003**	**0.1316**	**0.0351**	**1.4300e-003**	**0.0366**	**0.0000**	**140.6683**	**140.6683**	**2.2100e-003**	**0.0112**	**144.0494**

3.4 Paving - 2029

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	7.3800e-003	0.0678	0.1096	1.7000e-004		3.1700e-003	3.1700e-003		2.9300e-003	2.9300e-003	0.0000	14.7404	14.7404	4.6300e-003	0.0000	14.8562
Paving	6.1600e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0135**	**0.0678**	**0.1096**	**1.7000e-004**		**3.1700e-003**	**3.1700e-003**		**2.9300e-003**	**2.9300e-003**	**0.0000**	**14.7404**	**14.7404**	**4.6300e-003**	**0.0000**	**14.8562**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

John Abbott Mixed Use Project - Phase 6 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Hauling	2.7000e-004	0.0153	3.5500e-003	6.0000e-005	2.0200e-003	1.4000e-004	2.1500e-003	5.5000e-004	1.3000e-004	6.9000e-004	0.0000	6.0311	6.0311	7.0000e-005	9.5000e-004	6.3162
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.1000e-004	2.4000e-004	3.4300e-003	1.0000e-005	1.4300e-003	1.0000e-005	1.4400e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.0567	1.0567	2.0000e-005	3.0000e-005	1.0650
Total	**6.8000e-004**	**0.0155**	**6.9800e-003**	**7.0000e-005**	**3.4500e-003**	**1.5000e-004**	**3.5900e-003**	**9.3000e-004**	**1.4000e-004**	**1.0800e-003**	**0.0000**	**7.0878**	**7.0878**	**9.0000e-005**	**9.8000e-004**	**7.3812**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	7.3800e-003	0.0678	0.1096	1.7000e-004		3.1700e-003	3.1700e-003		2.9300e-003	2.9300e-003	0.0000	14.7404	14.7404	4.6300e-003	0.0000	14.8562
Paving	6.1600e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0135**	**0.0678**	**0.1096**	**1.7000e-004**		**3.1700e-003**	**3.1700e-003**		**2.9300e-003**	**2.9300e-003**	**0.0000**	**14.7404**	**14.7404**	**4.6300e-003**	**0.0000**	**14.8562**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

John Abbott Mixed Use Project - Phase 6 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Hauling	2.7000e-004	0.0153	3.5500e-003	6.0000e-005	2.0200e-003	1.4000e-004	2.1500e-003	5.5000e-004	1.3000e-004	6.9000e-004	0.0000	6.0311	6.0311	7.0000e-005	9.5000e-004	6.3162
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.1000e-004	2.4000e-004	3.4300e-003	1.0000e-005	1.4300e-003	1.0000e-005	1.4400e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.0567	1.0567	2.0000e-005	3.0000e-005	1.0650
Total	**6.8000e-004**	**0.0155**	**6.9800e-003**	**7.0000e-005**	**3.4500e-003**	**1.5000e-004**	**3.5900e-003**	**9.3000e-004**	**1.4000e-004**	**1.0800e-003**	**0.0000**	**7.0878**	**7.0878**	**9.0000e-005**	**9.8000e-004**	**7.3812**

3.5 Architectural Coating - 2030

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.4772					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.1800e-003	7.7100e-003	0.0162	3.0000e-005		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004	0.0000	2.2979	2.2979	9.0000e-005	0.0000	2.3003
Total	**0.4783**	**7.7100e-003**	**0.0162**	**3.0000e-005**		**1.8000e-004**	**1.8000e-004**		**1.8000e-004**	**1.8000e-004**	**0.0000**	**2.2979**	**2.2979**	**9.0000e-005**	**0.0000**	**2.3003**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

John Abbott Mixed Use Project - Phase 6 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.2000e-004	3.0000e-004	4.4300e-003	1.0000e-005	1.9300e-003	1.0000e-005	1.9400e-003	5.1000e-004	1.0000e-005	5.2000e-004	0.0000	1.4028	1.4028	3.0000e-005	3.0000e-005	1.4135
Total	**5.2000e-004**	**3.0000e-004**	**4.4300e-003**	**1.0000e-005**	**1.9300e-003**	**1.0000e-005**	**1.9400e-003**	**5.1000e-004**	**1.0000e-005**	**5.2000e-004**	**0.0000**	**1.4028**	**1.4028**	**3.0000e-005**	**3.0000e-005**	**1.4135**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.4772					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.1800e-003	7.7100e-003	0.0162	3.0000e-005		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004	0.0000	2.2979	2.2979	9.0000e-005	0.0000	2.3003
Total	**0.4783**	**7.7100e-003**	**0.0162**	**3.0000e-005**		**1.8000e-004**	**1.8000e-004**		**1.8000e-004**	**1.8000e-004**	**0.0000**	**2.2979**	**2.2979**	**9.0000e-005**	**0.0000**	**2.3003**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

John Abbott Mixed Use Project - Phase 6 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.2000e-004	3.0000e-004	4.4300e-003	1.0000e-005	1.9300e-003	1.0000e-005	1.9400e-003	5.1000e-004	1.0000e-005	5.2000e-004	0.0000	1.4028	1.4028	3.0000e-005	3.0000e-005	1.4135
Total	**5.2000e-004**	**3.0000e-004**	**4.4300e-003**	**1.0000e-005**	**1.9300e-003**	**1.0000e-005**	**1.9400e-003**	**5.1000e-004**	**1.0000e-005**	**5.2000e-004**	**0.0000**	**1.4028**	**1.4028**	**3.0000e-005**	**3.0000e-005**	**1.4135**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.9472	1.0364	8.0452	0.0156	1.8055	0.0126	1.8181	0.4824	0.0118	0.4942	0.0000	1,520.8727	1,520.8727	0.1086	0.0763	1,546.3288
Unmitigated	0.9472	1.0364	8.0452	0.0156	1.8055	0.0126	1.8181	0.4824	0.0118	0.4942	0.0000	1,520.8727	1,520.8727	0.1086	0.0763	1,546.3288

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	219.60	244.20	188.40	629,927	629,927
Apartments Mid Rise	380.80	343.70	286.30	1,042,882	1,042,882

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Enclosed Parking Structure	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Strip Mall	2,260.32	2,144.04	1041.93	3,187,334	3,187,334
Total	2,860.72	2,731.94	1,516.63	4,860,143	4,860,143

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	10.80	7.30	7.50	44.00	18.80	37.20	86	11	3
Apartments Mid Rise	10.80	7.30	7.50	44.00	18.80	37.20	86	11	3
Enclosed Parking Structure	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Strip Mall	9.50	7.30	7.30	16.60	64.40	19.00	45	40	15

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.541220	0.054515	0.190757	0.133854	0.023260	0.005971	0.010451	0.009212	0.001090	0.000543	0.025209	0.001134	0.002
Apartments Mid Rise	0.541220	0.054515	0.190757	0.133854	0.023260	0.005971	0.010451	0.009212	0.001090	0.000543	0.025209	0.001134	0.002
Enclosed Parking Structure	0.541220	0.054515	0.190757	0.133854	0.023260	0.005971	0.010451	0.009212	0.001090	0.000543	0.025209	0.001134	0.002
Parking Lot	0.541220	0.054515	0.190757	0.133854	0.023260	0.005971	0.010451	0.009212	0.001090	0.000543	0.025209	0.001134	0.002
Strip Mall	0.541220	0.054515	0.190757	0.133854	0.023260	0.005971	0.010451	0.009212	0.001090	0.000543	0.025209	0.001134	0.002

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

John Abbott Mixed Use Project - Phase 6 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	97.7893	97.7893	0.0158	1.9200e-003	98.7563
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	97.7893	97.7893	0.0158	1.9200e-003	98.7563
NaturalGas Mitigated	5.4000e-003	0.0465	0.0222	2.9000e-004		3.7300e-003	3.7300e-003		3.7300e-003	3.7300e-003	0.0000	53.4754	53.4754	1.0200e-003	9.8000e-004	53.7932
NaturalGas Unmitigated	5.4000e-003	0.0465	0.0222	2.9000e-004		3.7300e-003	3.7300e-003		3.7300e-003	3.7300e-003	0.0000	53.4754	53.4754	1.0200e-003	9.8000e-004	53.7932

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Low Rise	296034	1.6000e-003	0.0136	5.8000e-003	9.0000e-005		1.1000e-003	1.1000e-003		1.1000e-003	1.1000e-003	0.0000	15.7975	15.7975	3.0000e-004	2.9000e-004	15.8914
Apartments Mid Rise	586718	3.1600e-003	0.0270	0.0115	1.7000e-004		2.1900e-003	2.1900e-003		2.1900e-003	2.1900e-003	0.0000	31.3095	31.3095	6.0000e-004	5.7000e-004	31.4955
Enclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	119340	6.4000e-004	5.8500e-003	4.9100e-003	4.0000e-005		4.4000e-004	4.4000e-004		4.4000e-004	4.4000e-004	0.0000	6.3684	6.3684	1.2000e-004	1.2000e-004	6.4063
Total		**5.4000e-003**	**0.0465**	**0.0222**	**3.0000e-004**		**3.7300e-003**	**3.7300e-003**		**3.7300e-003**	**3.7300e-003**	**0.0000**	**53.4754**	**53.4754**	**1.0200e-003**	**9.8000e-004**	**53.7932**

John Abbott Mixed Use Project - Phase 6 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Low Rise	296034	1.6000e-003	0.0136	5.8000e-003	9.0000e-005		1.1000e-003	1.1000e-003		1.1000e-003	1.1000e-003	0.0000	15.7975	15.7975	3.0000e-004	2.9000e-004	15.8914
Apartments Mid Rise	586718	3.1600e-003	0.0270	0.0115	1.7000e-004		2.1900e-003	2.1900e-003		2.1900e-003	2.1900e-003	0.0000	31.3095	31.3095	6.0000e-004	5.7000e-004	31.4955
Enclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	119340	6.4000e-004	5.8500e-003	4.9100e-003	4.0000e-005		4.4000e-004	4.4000e-004		4.4000e-004	4.4000e-004	0.0000	6.3684	6.3684	1.2000e-004	1.2000e-004	6.4063
Total		**5.4000e-003**	**0.0465**	**0.0222**	**3.0000e-004**		**3.7300e-003**	**3.7300e-003**		**3.7300e-003**	**3.7300e-003**	**0.0000**	**53.4754**	**53.4754**	**1.0200e-003**	**9.8000e-004**	**53.7932**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	121830	11.2722	1.8200e-003	2.2000e-004	11.3837
Apartments Mid Rise	270650	25.0416	4.0500e-003	4.9000e-004	25.2892
Enclosed Parking Structure	100800	9.3264	1.5100e-003	1.8000e-004	9.4186

John Abbott Mixed Use Project - Phase 6 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Parking Lot	33740	3.1218	5.1000e-004	6.0000e-005	3.1526
Strip Mall	529890	49.0274	7.9300e-003	9.6000e-004	49.5122
Total		**97.7893**	**0.0158**	**1.9100e-003**	**98.7563**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	121830	11.2722	1.8200e-003	2.2000e-004	11.3837
Apartments Mid Rise	270650	25.0416	4.0500e-003	4.9000e-004	25.2892
Enclosed Parking Structure	100800	9.3264	1.5100e-003	1.8000e-004	9.4186
Parking Lot	33740	3.1218	5.1000e-004	6.0000e-005	3.1526
Strip Mall	529890	49.0274	7.9300e-003	9.6000e-004	49.5122
Total		**97.7893**	**0.0158**	**1.9100e-003**	**98.7563**

6.0 Area Detail

6.1 Mitigation Measures Area

John Abbott Mixed Use Project - Phase 6 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.7724	0.0119	1.0344	5.0000e-005		5.7400e-003	5.7400e-003		5.7400e-003	5.7400e-003	0.0000	1.6960	1.6960	1.6300e-003	0.0000	1.7368
Unmitigated	0.7724	0.0119	1.0344	5.0000e-005		5.7400e-003	5.7400e-003		5.7400e-003	5.7400e-003	0.0000	1.6960	1.6960	1.6300e-003	0.0000	1.7368

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1065					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.6347					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0313	0.0119	1.0344	5.0000e-005		5.7400e-003	5.7400e-003		5.7400e-003	5.7400e-003	0.0000	1.6960	1.6960	1.6300e-003	0.0000	1.7368
Total	**0.7725**	**0.0119**	**1.0344**	**5.0000e-005**		**5.7400e-003**	**5.7400e-003**		**5.7400e-003**	**5.7400e-003**	**0.0000**	**1.6960**	**1.6960**	**1.6300e-003**	**0.0000**	**1.7368**

John Abbott Mixed Use Project - Phase 6 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1065					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.6347					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0313	0.0119	1.0344	5.0000e-005		5.7400e-003	5.7400e-003		5.7400e-003	5.7400e-003	0.0000	1.6960	1.6960	1.6300e-003	0.0000	1.7368
Total	**0.7725**	**0.0119**	**1.0344**	**5.0000e-005**		**5.7400e-003**	**5.7400e-003**		**5.7400e-003**	**5.7400e-003**	**0.0000**	**1.6960**	**1.6960**	**1.6300e-003**	**0.0000**	**1.7368**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	10.4987	0.3366	8.0600e-003	21.3152
Unmitigated	10.4987	0.3366	8.0600e-003	21.3152

John Abbott Mixed Use Project - Phase 6 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	1.95462 / 1.23226	1.9977	0.0639	1.5300e-003	4.0518
Apartments Mid Rise	4.56078 / 2.87528	4.6614	0.1491	3.5700e-003	9.4542
Enclosed Parking Structure	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Strip Mall	3.7777 / 2.31536	3.8396	0.1235	2.9600e-003	7.8093
Total		**10.4987**	**0.3366**	**8.0600e-003**	**21.3152**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	1.95462 / 1.23226	1.9977	0.0639	1.5300e-003	4.0518

John Abbott Mixed Use Project - Phase 6 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Apartments Mid Rise	4.56078 / 2.87528	4.6614	0.1491	3.5700e-003	9.4542
Enclosed Parking Structure	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Strip Mall	3.7777 / 2.31536	3.8396	0.1235	2.9600e-003	7.8093
Total		**10.4987**	**0.3366**	**8.0600e-003**	**21.3152**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	20.2078	1.1942	0.0000	50.0639
Unmitigated	20.2078	1.1942	0.0000	50.0639

8.2 Waste by Land Use

Unmitigated

John Abbott Mixed Use Project - Phase 6 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	13.8	2.8013	0.1656	0.0000	6.9400
Apartments Mid Rise	32.2	6.5363	0.3863	0.0000	16.1934
Enclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	53.55	10.8702	0.6424	0.0000	26.9304
Total		**20.2078**	**1.1942**	**0.0000**	**50.0639**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	13.8	2.8013	0.1656	0.0000	6.9400
Apartments Mid Rise	32.2	6.5363	0.3863	0.0000	16.1934
Enclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	53.55	10.8702	0.6424	0.0000	26.9304
Total		**20.2078**	**1.1942**	**0.0000**	**50.0639**

John Abbott Mixed Use Project - Phase 6 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

-

-

785
785
785
785

-

John Abbott Mixed Use Project - Phase 7 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

John Abbott Mixed Use Project - Phase 7 Construction

Monterey Bay Unified APCD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	8.50	1000sqft	4.70	8,500.00	0
Medical Office Building	9.60	1000sqft	0.00	9,600.00	0
Parking Lot	111.00	Space	0.00	44,400.00	0
Apartments Mid Rise	87.00	Dwelling Unit	0.00	83,000.00	249
Strip Mall	8.50	1000sqft	0.00	8,500.00	0
Supermarket	11.20	1000sqft	0.00	11,200.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.8	**Precipitation Freq (Days)**	53
Climate Zone	4			**Operational Year**	2032
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Phase 7: 87 residential units and 37,800 sf of retail/office

Construction Phase - Scaled the default construction schedule to match the proposed applicant schedule.

Off-road Equipment - default equipment

Trips and VMT - Based on Phase 7 parcel size, assuming 1,896 cy of pavement to be added to site (237 trips).

Demolition -

John Abbott Mixed Use Project - Phase 7 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Grading - Earthwork import based on total net fill and allocated based on phase parcel area (1889.22 cy of import)

Architectural Coating - MBARD Rule 426 arch coatings 50 g/l for arch coating and 100 g/l for traffic markings.
https://www.mbard.org/files/b17c2b4e2/Final+Rule+426+%28Clean+Version%29.pdf

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	150.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	150.00	50.00
tblArchitecturalCoating	EF_Parking	150.00	100.00
tblArchitecturalCoating	EF_Residential_Exterior	100.00	50.00
tblArchitecturalCoating	EF_Residential_Interior	100.00	50.00
tblConstructionPhase	NumDays	230.00	443.00
tblConstructionPhase	NumDays	8.00	15.00
tblGrading	AcresOfGrading	15.00	8.00
tblGrading	MaterialImported	0.00	1,889.22
tblLandUse	LandUseSquareFeet	87,000.00	83,000.00
tblLandUse	LotAcreage	0.20	4.70
tblLandUse	LotAcreage	0.22	0.00
tblLandUse	LotAcreage	1.00	0.00
tblLandUse	LotAcreage	2.29	0.00
tblLandUse	LotAcreage	0.20	0.00
tblLandUse	LotAcreage	0.26	0.00
tblTripsAndVMT	HaulingTripNumber	236.00	237.00
tblTripsAndVMT	HaulingTripNumber	0.00	237.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

John Abbott Mixed Use Project - Phase 7 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2030	0.0635	0.3813	0.7110	1.6700e-003	0.0791	8.4200e-003	0.0875	0.0333	8.3900e-003	0.0417	0.0000	147.1433	147.1433	5.1400e-003	3.7400e-003	148.3877
2031	0.1984	1.1850	2.3616	5.2700e-003	0.1164	0.0206	0.1369	0.0314	0.0205	0.0519	0.0000	463.1947	463.1947	0.0156	9.0700e-003	466.2869
2032	0.4531	0.5969	1.1914	2.6500e-003	0.0593	0.0104	0.0697	0.0160	0.0104	0.0264	0.0000	233.0929	233.0929	7.8400e-003	4.4500e-003	234.6152
Maximum	**0.4531**	**1.1850**	**2.3616**	**5.2700e-003**	**0.1164**	**0.0206**	**0.1369**	**0.0333**	**0.0205**	**0.0519**	**0.0000**	**463.1947**	**463.1947**	**0.0156**	**9.0700e-003**	**466.2869**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2030	0.0635	0.3813	0.7110	1.6700e-003	0.0791	8.4200e-003	0.0875	0.0333	8.3900e-003	0.0417	0.0000	147.1432	147.1432	5.1400e-003	3.7400e-003	148.3875
2031	0.1984	1.1850	2.3616	5.2700e-003	0.1164	0.0206	0.1369	0.0314	0.0205	0.0519	0.0000	463.1943	463.1943	0.0156	9.0700e-003	466.2865
2032	0.4531	0.5969	1.1914	2.6500e-003	0.0593	0.0104	0.0697	0.0160	0.0104	0.0264	0.0000	233.0927	233.0927	7.8400e-003	4.4500e-003	234.6150
Maximum	**0.4531**	**1.1850**	**2.3616**	**5.2700e-003**	**0.1164**	**0.0206**	**0.1369**	**0.0333**	**0.0205**	**0.0519**	**0.0000**	**463.1943**	**463.1943**	**0.0156**	**9.0700e-003**	**466.2865**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**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**	**0.00**	**0.00**

John Abbott Mixed Use Project - Phase 7 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
5	7-31-2030	10-30-2030	0.1713	0.1713
6	10-31-2030	1-30-2031	0.3967	0.3967
7	1-31-2031	4-29-2031	0.3375	0.3375
8	4-30-2031	7-30-2031	0.3467	0.3467
9	7-31-2031	10-30-2031	0.3478	0.3478
10	10-31-2031	1-30-2032	0.3496	0.3496
11	1-31-2032	4-29-2032	0.3403	0.3403
12	4-30-2032	7-30-2032	0.6074	0.6074
		Highest	0.6074	0.6074

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.5807	0.0103	0.8967	5.0000e-005		4.9800e-003	4.9800e-003		4.9800e-003	4.9800e-003	0.0000	1.4693	1.4693	1.4100e-003	0.0000	1.5044
Energy	6.9700e-003	0.0612	0.0375	3.8000e-004		4.8100e-003	4.8100e-003		4.8100e-003	4.8100e-003	0.0000	180.5149	180.5149	0.0194	3.4500e-003	182.0278
Mobile	0.7857	0.8174	6.6207	0.0125	1.5109	9.5900e-003	1.5204	0.4036	8.9500e-003	0.4125	0.0000	1,233.2558	1,233.2558	0.0887	0.0626	1,254.1195
Waste						0.0000	0.0000		0.0000	0.0000	45.4111	0.0000	45.4111	2.6837	0.0000	112.5041
Water						0.0000	0.0000		0.0000	0.0000	3.2975	6.8739	10.1714	0.3398	8.1300e-003	21.0897
Total	**1.3734**	**0.8889**	**7.5549**	**0.0130**	**1.5109**	**0.0194**	**1.5302**	**0.4036**	**0.0187**	**0.4223**	**48.7086**	**1,422.1138**	**1,470.8225**	**3.1330**	**0.0742**	**1,571.2455**

John Abbott Mixed Use Project - Phase 7 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.5807	0.0103	0.8967	5.0000e-005		4.9800e-003	4.9800e-003		4.9800e-003	4.9800e-003	0.0000	1.4693	1.4693	1.4100e-003	0.0000	1.5044
Energy	6.9700e-003	0.0612	0.0375	3.8000e-004		4.8100e-003	4.8100e-003		4.8100e-003	4.8100e-003	0.0000	180.5149	180.5149	0.0194	3.4500e-003	182.0278
Mobile	0.7857	0.8174	6.6207	0.0125	1.5109	9.5900e-003	1.5204	0.4036	8.9500e-003	0.4125	0.0000	1,233.2558	1,233.2558	0.0887	0.0626	1,254.1195
Waste						0.0000	0.0000		0.0000	0.0000	45.4111	0.0000	45.4111	2.6837	0.0000	112.5041
Water						0.0000	0.0000		0.0000	0.0000	3.2975	6.8739	10.1714	0.3398	8.1300e-003	21.0897
Total	**1.3734**	**0.8889**	**7.5549**	**0.0130**	**1.5109**	**0.0194**	**1.5302**	**0.4036**	**0.0187**	**0.4223**	**48.7086**	**1,422.1138**	**1,470.8225**	**3.1330**	**0.0742**	**1,571.2455**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**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**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	9/28/2030	10/18/2030	5	15	
2	Building Construction	Building Construction	10/19/2030	6/30/2032	5	443	
3	Paving	Paving	10/19/2030	11/13/2030	5	18	

John Abbott Mixed Use Project - Phase 7 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4	Architectural Coating	Architectural Coating	6/5/2032	6/30/2032	5	18	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 8

Acres of Paving: 0

Residential Indoor: 168,075; Residential Outdoor: 56,025; Non-Residential Indoor: 56,700; Non-Residential Outdoor: 18,900; Striped Parking Area: 2,664

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	2	6.00	132	0.36
Paving	Rollers	2	6.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class

John Abbott Mixed Use Project - Phase 7 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Grading	6	15.00	0.00	237.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	93.00	23.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	237.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	19.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Grading - 2030

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0496	0.0000	0.0496	0.0253	0.0000	0.0253	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0121	0.0581	0.1084	2.7000e-004		1.7600e-003	1.7600e-003		1.7600e-003	1.7600e-003	0.0000	23.4035	23.4035	9.8000e-004	0.0000	23.4279
Total	**0.0121**	**0.0581**	**0.1084**	**2.7000e-004**	**0.0496**	**1.7600e-003**	**0.0513**	**0.0253**	**1.7600e-003**	**0.0271**	**0.0000**	**23.4035**	**23.4035**	**9.8000e-004**	**0.0000**	**23.4279**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.7000e-004	0.0150	3.5500e-003	6.0000e-005	2.0200e-003	1.4000e-004	2.1500e-003	5.5000e-004	1.3000e-004	6.8000e-004	0.0000	5.8923	5.8923	7.0000e-005	9.3000e-004	6.1709

John Abbott Mixed Use Project - Phase 7 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.4000e-004	1.4000e-004	2.0500e-003	1.0000e-005	9.0000e-004	0.0000	9.0000e-004	2.4000e-004	0.0000	2.4000e-004	0.0000	0.6494	0.6494	1.0000e-005	2.0000e-005	0.6544
Total	**5.1000e-004**	**0.0152**	**5.6000e-003**	**7.0000e-005**	**2.9200e-003**	**1.4000e-004**	**3.0500e-003**	**7.9000e-004**	**1.3000e-004**	**9.2000e-004**	**0.0000**	**6.5417**	**6.5417**	**8.0000e-005**	**9.5000e-004**	**6.8253**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0496	0.0000	0.0496	0.0253	0.0000	0.0253	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0121	0.0581	0.1084	2.7000e-004		1.7600e-003	1.7600e-003		1.7600e-003	1.7600e-003	0.0000	23.4034	23.4034	9.8000e-004	0.0000	23.4279
Total	**0.0121**	**0.0581**	**0.1084**	**2.7000e-004**	**0.0496**	**1.7600e-003**	**0.0513**	**0.0253**	**1.7600e-003**	**0.0271**	**0.0000**	**23.4034**	**23.4034**	**9.8000e-004**	**0.0000**	**23.4279**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.7000e-004	0.0150	3.5500e-003	6.0000e-005	2.0200e-003	1.4000e-004	2.1500e-003	5.5000e-004	1.3000e-004	6.8000e-004	0.0000	5.8923	5.8923	7.0000e-005	9.3000e-004	6.1709

John Abbott Mixed Use Project - Phase 7 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.4000e-004	1.4000e-004	2.0500e-003	1.0000e-005	9.0000e-004	0.0000	9.0000e-004	2.4000e-004	0.0000	2.4000e-004	0.0000	0.6494	0.6494	1.0000e-005	2.0000e-005	0.6544
Total	**5.1000e-004**	**0.0152**	**5.6000e-003**	**7.0000e-005**	**2.9200e-003**	**1.4000e-004**	**3.0500e-003**	**7.9000e-004**	**1.3000e-004**	**9.2000e-004**	**0.0000**	**6.5417**	**6.5417**	**8.0000e-005**	**9.5000e-004**	**6.8253**

3.3 Building Construction - 2030

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0340	0.2063	0.4201	8.0000e-004		3.8500e-003	3.8500e-003		3.8500e-003	3.8500e-003	0.0000	68.3439	68.3439	2.7400e-003	0.0000	68.4124
Total	**0.0340**	**0.2063**	**0.4201**	**8.0000e-004**		**3.8500e-003**	**3.8500e-003**		**3.8500e-003**	**3.8500e-003**	**0.0000**	**68.3439**	**68.3439**	**2.7400e-003**	**0.0000**	**68.4124**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.7000e-004	0.0273	8.2000e-003	1.1000e-004	3.9500e-003	1.7000e-004	4.1200e-003	1.1400e-003	1.6000e-004	1.3000e-003	0.0000	10.3759	10.3759	9.0000e-005	1.5100e-003	10.8291

John Abbott Mixed Use Project - Phase 7 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Worker	5.1500e-003	3.0300e-003	0.0441	1.4000e-004	0.0192	8.0000e-005	0.0193	5.1100e-003	8.0000e-005	5.1900e-003	0.0000	13.9582	13.9582	3.0000e-004	3.3000e-004	14.0651
Total	**5.8200e-003**	**0.0303**	**0.0523**	**2.5000e-004**	**0.0232**	**2.5000e-004**	**0.0234**	**6.2500e-003**	**2.4000e-004**	**6.4900e-003**	**0.0000**	**24.3341**	**24.3341**	**3.9000e-004**	**1.8400e-003**	**24.8942**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0340	0.2063	0.4201	8.0000e-004		3.8500e-003	3.8500e-003		3.8500e-003	3.8500e-003	0.0000	68.3438	68.3438	2.7400e-003	0.0000	68.4123
Total	**0.0340**	**0.2063**	**0.4201**	**8.0000e-004**		**3.8500e-003**	**3.8500e-003**		**3.8500e-003**	**3.8500e-003**	**0.0000**	**68.3438**	**68.3438**	**2.7400e-003**	**0.0000**	**68.4123**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.7000e-004	0.0273	8.2000e-003	1.1000e-004	3.9500e-003	1.7000e-004	4.1200e-003	1.1400e-003	1.6000e-004	1.3000e-003	0.0000	10.3759	10.3759	9.0000e-005	1.5100e-003	10.8291
Worker	5.1500e-003	3.0300e-003	0.0441	1.4000e-004	0.0192	8.0000e-005	0.0193	5.1100e-003	8.0000e-005	5.1900e-003	0.0000	13.9582	13.9582	3.0000e-004	3.3000e-004	14.0651

John Abbott Mixed Use Project - Phase 7 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Total	**5.8200e-003**	**0.0303**	**0.0523**	**2.5000e-004**	**0.0232**	**2.5000e-004**	**0.0234**	**6.2500e-003**	**2.4000e-004**	**6.4900e-003**	**0.0000**	**24.3341**	**24.3341**	**3.9000e-004**	**1.8400e-003**	**24.8942**

3.3 Building Construction - 2031

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1708	1.0355	2.1085	4.0400e-003		0.0193	0.0193		0.0193	0.0193	0.0000	343.0336	343.0336	0.0138	0.0000	343.3777
Total	**0.1708**	**1.0355**	**2.1085**	**4.0400e-003**		**0.0193**	**0.0193**		**0.0193**	**0.0193**	**0.0000**	**343.0336**	**343.0336**	**0.0138**	**0.0000**	**343.3777**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.3200e-003	0.1354	0.0408	5.3000e-004	0.0198	8.5000e-004	0.0207	5.7300e-003	8.1000e-004	6.5400e-003	0.0000	51.1745	51.1745	4.5000e-004	7.4600e-003	53.4073
Worker	0.0243	0.0141	0.2123	7.0000e-004	0.0966	3.9000e-004	0.0970	0.0257	3.6000e-004	0.0260	0.0000	68.9866	68.9866	1.4000e-003	1.6100e-003	69.5019
Total	**0.0276**	**0.1495**	**0.2531**	**1.2300e-003**	**0.1164**	**1.2400e-003**	**0.1176**	**0.0314**	**1.1700e-003**	**0.0326**	**0.0000**	**120.1611**	**120.1611**	**1.8500e-003**	**9.0700e-003**	**122.9092**

John Abbott Mixed Use Project - Phase 7 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1708	1.0355	2.1085	4.0400e-003		0.0193	0.0193		0.0193	0.0193	0.0000	343.0332	343.0332	0.0138	0.0000	343.3773
Total	**0.1708**	**1.0355**	**2.1085**	**4.0400e-003**		**0.0193**	**0.0193**		**0.0193**	**0.0193**	**0.0000**	**343.0332**	**343.0332**	**0.0138**	**0.0000**	**343.3773**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.3200e-003	0.1354	0.0408	5.3000e-004	0.0198	8.5000e-004	0.0207	5.7300e-003	8.1000e-004	6.5400e-003	0.0000	51.1745	51.1745	4.5000e-004	7.4600e-003	53.4073
Worker	0.0243	0.0141	0.2123	7.0000e-004	0.0966	3.9000e-004	0.0970	0.0257	3.6000e-004	0.0260	0.0000	68.9866	68.9866	1.4000e-003	1.6100e-003	69.5019
Total	**0.0276**	**0.1495**	**0.2531**	**1.2300e-003**	**0.1164**	**1.2400e-003**	**0.1176**	**0.0314**	**1.1700e-003**	**0.0326**	**0.0000**	**120.1611**	**120.1611**	**1.8500e-003**	**9.0700e-003**	**122.9092**

John Abbott Mixed Use Project - Phase 7 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Building Construction - 2032

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0851	0.5158	1.0502	2.0100e-003		9.6300e-003	9.6300e-003		9.6300e-003	9.6300e-003	0.0000	170.8597	170.8597	6.8500e-003	0.0000	171.0310
Total	**0.0851**	**0.5158**	**1.0502**	**2.0100e-003**		**9.6300e-003**	**9.6300e-003**		**9.6300e-003**	**9.6300e-003**	**0.0000**	**170.8597**	**170.8597**	**6.8500e-003**	**0.0000**	**171.0310**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.6200e-003	0.0667	0.0202	2.6000e-004	9.8700e-003	4.2000e-004	0.0103	2.8500e-003	4.0000e-004	3.2500e-003	0.0000	25.0927	25.0927	2.2000e-004	3.6500e-003	26.1865
Worker	0.0114	6.5800e-003	0.1019	3.4000e-004	0.0481	1.8000e-004	0.0483	0.0128	1.7000e-004	0.0130	0.0000	33.8841	33.8841	6.5000e-004	7.8000e-004	34.1319
Total	**0.0130**	**0.0733**	**0.1221**	**6.0000e-004**	**0.0580**	**6.0000e-004**	**0.0586**	**0.0156**	**5.7000e-004**	**0.0162**	**0.0000**	**58.9768**	**58.9768**	**8.7000e-004**	**4.4300e-003**	**60.3184**

Mitigated Construction On-Site

John Abbott Mixed Use Project - Phase 7 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0851	0.5158	1.0502	2.0100e-003		9.6300e-003	9.6300e-003		9.6300e-003	9.6300e-003	0.0000	170.8595	170.8595	6.8500e-003	0.0000	171.0308
Total	**0.0851**	**0.5158**	**1.0502**	**2.0100e-003**		**9.6300e-003**	**9.6300e-003**		**9.6300e-003**	**9.6300e-003**	**0.0000**	**170.8595**	**170.8595**	**6.8500e-003**	**0.0000**	**171.0308**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.6200e-003	0.0667	0.0202	2.6000e-004	9.8700e-003	4.2000e-004	0.0103	2.8500e-003	4.0000e-004	3.2500e-003	0.0000	25.0927	25.0927	2.2000e-004	3.6500e-003	26.1865
Worker	0.0114	6.5800e-003	0.1019	3.4000e-004	0.0481	1.8000e-004	0.0483	0.0128	1.7000e-004	0.0130	0.0000	33.8841	33.8841	6.5000e-004	7.8000e-004	34.1319
Total	**0.0130**	**0.0733**	**0.1221**	**6.0000e-004**	**0.0580**	**6.0000e-004**	**0.0586**	**0.0156**	**5.7000e-004**	**0.0162**	**0.0000**	**58.9768**	**58.9768**	**8.7000e-004**	**4.4300e-003**	**60.3184**

3.4 Paving - 2030

Unmitigated Construction On-Site

John Abbott Mixed Use Project - Phase 7 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0104	0.0561	0.1178	2.1000e-004		2.2800e-003	2.2800e-003		2.2800e-003	2.2800e-003	0.0000	17.5888	17.5888	8.4000e-004	0.0000	17.6099
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0104**	**0.0561**	**0.1178**	**2.1000e-004**		**2.2800e-003**	**2.2800e-003**		**2.2800e-003**	**2.2800e-003**	**0.0000**	**17.5888**	**17.5888**	**8.4000e-004**	**0.0000**	**17.6099**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.7000e-004	0.0150	3.5500e-003	6.0000e-005	2.0200e-003	1.4000e-004	2.1500e-003	5.5000e-004	1.3000e-004	6.8000e-004	0.0000	5.8923	5.8923	7.0000e-005	9.3000e-004	6.1709
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.8000e-004	2.3000e-004	3.2800e-003	1.0000e-005	1.4300e-003	1.0000e-005	1.4400e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.0391	1.0391	2.0000e-005	2.0000e-005	1.0470
Total	**6.5000e-004**	**0.0153**	**6.8300e-003**	**7.0000e-005**	**3.4500e-003**	**1.5000e-004**	**3.5900e-003**	**9.3000e-004**	**1.4000e-004**	**1.0700e-003**	**0.0000**	**6.9314**	**6.9314**	**9.0000e-005**	**9.5000e-004**	**7.2179**

Mitigated Construction On-Site

John Abbott Mixed Use Project - Phase 7 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0104	0.0561	0.1178	2.1000e-004		2.2800e-003	2.2800e-003		2.2800e-003	2.2800e-003	0.0000	17.5888	17.5888	8.4000e-004	0.0000	17.6099
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0104**	**0.0561**	**0.1178**	**2.1000e-004**		**2.2800e-003**	**2.2800e-003**		**2.2800e-003**	**2.2800e-003**	**0.0000**	**17.5888**	**17.5888**	**8.4000e-004**	**0.0000**	**17.6099**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.7000e-004	0.0150	3.5500e-003	6.0000e-005	2.0200e-003	1.4000e-004	2.1500e-003	5.5000e-004	1.3000e-004	6.8000e-004	0.0000	5.8923	5.8923	7.0000e-005	9.3000e-004	6.1709
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.8000e-004	2.3000e-004	3.2800e-003	1.0000e-005	1.4300e-003	1.0000e-005	1.4400e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.0391	1.0391	2.0000e-005	2.0000e-005	1.0470
Total	**6.5000e-004**	**0.0153**	**6.8300e-003**	**7.0000e-005**	**3.4500e-003**	**1.5000e-004**	**3.5900e-003**	**9.3000e-004**	**1.4000e-004**	**1.0700e-003**	**0.0000**	**6.9314**	**6.9314**	**9.0000e-005**	**9.5000e-004**	**7.2179**

3.5 Architectural Coating - 2032

Unmitigated Construction On-Site

John Abbott Mixed Use Project - Phase 7 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.3535					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.1800e-003	7.7100e-003	0.0162	3.0000e-005		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004	0.0000	2.2979	2.2979	9.0000e-005	0.0000	2.3003
Total	**0.3546**	**7.7100e-003**	**0.0162**	**3.0000e-005**		**1.8000e-004**	**1.8000e-004**		**1.8000e-004**	**1.8000e-004**	**0.0000**	**2.2979**	**2.2979**	**9.0000e-005**	**0.0000**	**2.3003**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.2000e-004	1.9000e-004	2.8800e-003	1.0000e-005	1.3600e-003	1.0000e-005	1.3700e-003	3.6000e-004	0.0000	3.7000e-004	0.0000	0.9585	0.9585	2.0000e-005	2.0000e-005	0.9655
Total	**3.2000e-004**	**1.9000e-004**	**2.8800e-003**	**1.0000e-005**	**1.3600e-003**	**1.0000e-005**	**1.3700e-003**	**3.6000e-004**	**0.0000**	**3.7000e-004**	**0.0000**	**0.9585**	**0.9585**	**2.0000e-005**	**2.0000e-005**	**0.9655**

Mitigated Construction On-Site

John Abbott Mixed Use Project - Phase 7 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.3535					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.1800e-003	7.7100e-003	0.0162	3.0000e-005		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004	0.0000	2.2979	2.2979	9.0000e-005	0.0000	2.3003
Total	**0.3546**	**7.7100e-003**	**0.0162**	**3.0000e-005**		**1.8000e-004**	**1.8000e-004**		**1.8000e-004**	**1.8000e-004**	**0.0000**	**2.2979**	**2.2979**	**9.0000e-005**	**0.0000**	**2.3003**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.2000e-004	1.9000e-004	2.8800e-003	1.0000e-005	1.3600e-003	1.0000e-005	1.3700e-003	3.6000e-004	0.0000	3.7000e-004	0.0000	0.9585	0.9585	2.0000e-005	2.0000e-005	0.9655
Total	**3.2000e-004**	**1.9000e-004**	**2.8800e-003**	**1.0000e-005**	**1.3600e-003**	**1.0000e-005**	**1.3700e-003**	**3.6000e-004**	**0.0000**	**3.7000e-004**	**0.0000**	**0.9585**	**0.9585**	**2.0000e-005**	**2.0000e-005**	**0.9655**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

John Abbott Mixed Use Project - Phase 7 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.7857	0.8174	6.6207	0.0125	1.5109	9.5900e-003	1.5204	0.4036	8.9500e-003	0.4125	0.0000	1,233.2558	1,233.2558	0.0887	0.0626	1,254.1195
Unmitigated	0.7857	0.8174	6.6207	0.0125	1.5109	9.5900e-003	1.5204	0.4036	8.9500e-003	0.4125	0.0000	1,233.2558	1,233.2558	0.0887	0.0626	1,254.1195

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	473.28	427.17	355.83	1,296,153	1,296,153
General Office Building	82.79	18.79	5.95	149,764	149,764
Medical Office Building	334.08	82.27	13.63	493,871	493,871
Parking Lot	0.00	0.00	0.00		
Strip Mall	376.72	357.34	173.66	531,222	531,222
Supermarket	1,195.94	1,989.34	1864.46	1,597,863	1,597,863
Total	2,462.81	2,874.91	2,413.53	4,068,873	4,068,873

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	10.80	7.30	7.50	44.00	18.80	37.20	86	11	3
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Medical Office Building	9.50	7.30	7.30	29.60	51.40	19.00	60	30	10
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Strip Mall	9.50	7.30	7.30	16.60	64.40	19.00	45	40	15
Supermarket	9.50	7.30	7.30	6.50	74.50	19.00	34	30	36

John Abbott Mixed Use Project - Phase 7 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.547927	0.055104	0.189836	0.130415	0.021966	0.005706	0.010237	0.008984	0.001042	0.000530	0.024593	0.001076	0.0025
General Office Building	0.547927	0.055104	0.189836	0.130415	0.021966	0.005706	0.010237	0.008984	0.001042	0.000530	0.024593	0.001076	0.0025
Medical Office Building	0.547927	0.055104	0.189836	0.130415	0.021966	0.005706	0.010237	0.008984	0.001042	0.000530	0.024593	0.001076	0.0025
Parking Lot	0.547927	0.055104	0.189836	0.130415	0.021966	0.005706	0.010237	0.008984	0.001042	0.000530	0.024593	0.001076	0.0025
Strip Mall	0.547927	0.055104	0.189836	0.130415	0.021966	0.005706	0.010237	0.008984	0.001042	0.000530	0.024593	0.001076	0.0025
Supermarket	0.547927	0.055104	0.189836	0.130415	0.021966	0.005706	0.010237	0.008984	0.001042	0.000530	0.024593	0.001076	0.0025

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	111.5588	111.5588	0.0181	2.1900e-003	112.6619
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	111.5588	111.5588	0.0181	2.1900e-003	112.6619
NaturalGas Mitigated	6.9700e-003	0.0612	0.0375	3.8000e-004		4.8100e-003	4.8100e-003		4.8100e-003	4.8100e-003	0.0000	68.9561	68.9561	1.3200e-003	1.2600e-003	69.3659
NaturalGas Unmitigated	6.9700e-003	0.0612	0.0375	3.8000e-004		4.8100e-003	4.8100e-003		4.8100e-003	4.8100e-003	0.0000	68.9561	68.9561	1.3200e-003	1.2600e-003	69.3659

John Abbott Mixed Use Project - Phase 7 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	729206	3.9300e-003	0.0336	0.0143	2.1000e-004		2.7200e-003	2.7200e-003		2.7200e-003	2.7200e-003	0.0000	38.9132	38.9132	7.5000e-004	7.1000e-004	39.1445
General Office Building	137700	7.4000e-004	6.7500e-003	5.6700e-003	4.0000e-005		5.1000e-004	5.1000e-004		5.1000e-004	5.1000e-004	0.0000	7.3482	7.3482	1.4000e-004	1.3000e-004	7.3919
Medical Office Building	155520	8.4000e-004	7.6200e-003	6.4000e-003	5.0000e-005		5.8000e-004	5.8000e-004		5.8000e-004	5.8000e-004	0.0000	8.2991	8.2991	1.6000e-004	1.5000e-004	8.3485
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	19890	1.1000e-004	9.7000e-004	8.2000e-004	1.0000e-005		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	1.0614	1.0614	2.0000e-005	2.0000e-005	1.0677
Supermarket	249872	1.3500e-003	0.0123	0.0103	7.0000e-005		9.3000e-004	9.3000e-004		9.3000e-004	9.3000e-004	0.0000	13.3341	13.3341	2.6000e-004	2.4000e-004	13.4134
Total		**6.9700e-003**	**0.0612**	**0.0375**	**3.8000e-004**		**4.8100e-003**	**4.8100e-003**		**4.8100e-003**	**4.8100e-003**	**0.0000**	**68.9561**	**68.9561**	**1.3300e-003**	**1.2500e-003**	**69.3659**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	729206	3.9300e-003	0.0336	0.0143	2.1000e-004		2.7200e-003	2.7200e-003		2.7200e-003	2.7200e-003	0.0000	38.9132	38.9132	7.5000e-004	7.1000e-004	39.1445

John Abbott Mixed Use Project - Phase 7 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

General Office Building	137700	7.4000e-004	6.7500e-003	5.6700e-003	4.0000e-005		5.1000e-004	5.1000e-004		5.1000e-004	5.1000e-004	0.0000	7.3482	7.3482	1.4000e-004	1.3000e-004	7.3919
Medical Office Building	155520	8.4000e-004	7.6200e-003	6.4000e-003	5.0000e-005		5.8000e-004	5.8000e-004		5.8000e-004	5.8000e-004	0.0000	8.2991	8.2991	1.6000e-004	1.5000e-004	8.3485
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	19890	1.1000e-004	9.7000e-004	8.2000e-004	1.0000e-005		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	1.0614	1.0614	2.0000e-005	2.0000e-005	1.0677
Supermarket	249872	1.3500e-003	0.0123	0.0103	7.0000e-005		9.3000e-004	9.3000e-004		9.3000e-004	9.3000e-004	0.0000	13.3341	13.3341	2.6000e-004	2.4000e-004	13.4134
Total		**6.9700e-003**	**0.0612**	**0.0375**	**3.8000e-004**		**4.8100e-003**	**4.8100e-003**		**4.8100e-003**	**4.8100e-003**	**0.0000**	**68.9561**	**68.9561**	**1.3300e-003**	**1.2500e-003**	**69.3659**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	336379	31.1231	5.0400e-003	6.1000e-004	31.4308
General Office Building	145945	13.5034	2.1800e-003	2.6000e-004	13.6369
Medical Office Building	164832	15.2509	2.4700e-003	3.0000e-004	15.4017
Parking Lot	15540	1.4378	2.3000e-004	3.0000e-005	1.4520
Strip Mall	88315	8.1712	1.3200e-003	1.6000e-004	8.2520
Supermarket	454720	42.0724	6.8100e-003	8.3000e-004	42.4884
Total		**111.5588**	**0.0181**	**2.1900e-003**	**112.6619**

John Abbott Mixed Use Project - Phase 7 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	336379	31.1231	5.0400e-003	6.1000e-004	31.4308
General Office Building	145945	13.5034	2.1800e-003	2.6000e-004	13.6369
Medical Office Building	164832	15.2509	2.4700e-003	3.0000e-004	15.4017
Parking Lot	15540	1.4378	2.3000e-004	3.0000e-005	1.4520
Strip Mall	88315	8.1712	1.3200e-003	1.6000e-004	8.2520
Supermarket	454720	42.0724	6.8100e-003	8.3000e-004	42.4884
Total		**111.5588**	**0.0181**	**2.1900e-003**	**112.6619**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

John Abbott Mixed Use Project - Phase 7 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Category	tons/yr										MT/yr					
Mitigated	0.5807	0.0103	0.8967	5.0000e-005		4.9800e-003	4.9800e-003		4.9800e-003	4.9800e-003	0.0000	1.4693	1.4693	1.4100e-003	0.0000	1.5044
Unmitigated	0.5807	0.0103	0.8967	5.0000e-005		4.9800e-003	4.9800e-003		4.9800e-003	4.9800e-003	0.0000	1.4693	1.4693	1.4100e-003	0.0000	1.5044

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0791					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.4747					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0269	0.0103	0.8967	5.0000e-005		4.9800e-003	4.9800e-003		4.9800e-003	4.9800e-003	0.0000	1.4693	1.4693	1.4100e-003	0.0000	1.5044
Total	**0.5807**	**0.0103**	**0.8967**	**5.0000e-005**		**4.9800e-003**	**4.9800e-003**		**4.9800e-003**	**4.9800e-003**	**0.0000**	**1.4693**	**1.4693**	**1.4100e-003**	**0.0000**	**1.5044**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

John Abbott Mixed Use Project - Phase 7 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0791					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.4747					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0269	0.0103	0.8967	5.0000e-005		4.9800e-003	4.9800e-003		4.9800e-003	4.9800e-003	0.0000	1.4693	1.4693	1.4100e-003	0.0000	1.5044
Total	**0.5807**	**0.0103**	**0.8967**	**5.0000e-005**		**4.9800e-003**	**4.9800e-003**		**4.9800e-003**	**4.9800e-003**	**0.0000**	**1.4693**	**1.4693**	**1.4100e-003**	**0.0000**	**1.5044**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	10.1714	0.3398	8.1300e-003	21.0897
Unmitigated	10.1714	0.3398	8.1300e-003	21.0897

7.2 Water by Land Use

Unmitigated

John Abbott Mixed Use Project - Phase 7 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	5.6684 / 3.57356	5.7934	0.1854	4.4400e-003	11.7502
General Office Building	1.51074 / 0.925935	1.5355	0.0494	1.1800e-003	3.1230
Medical Office Building	1.20461 / 0.22945	1.0596	0.0394	9.4000e-004	2.3238
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Strip Mall	0.629616 / 0.385894	0.6399	0.0206	4.9000e-004	1.3015
Supermarket	1.3806 / 0.0426991	1.1430	0.0451	1.0800e-003	2.5912
Total		**10.1714**	**0.3398**	**8.1300e-003**	**21.0897**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	5.6684 / 3.57356	5.7934	0.1854	4.4400e-003	11.7502
General Office Building	1.51074 / 0.925935	1.5355	0.0494	1.1800e-003	3.1230
Medical Office Building	1.20461 / 0.22945	1.0596	0.0394	9.4000e-004	2.3238

John Abbott Mixed Use Project - Phase 7 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Strip Mall	0.629616 / 0.385894	0.6399	0.0206	4.9000e-004	1.3015
Supermarket	1.3806 / 0.0426991	1.1430	0.0451	1.0800e-003	2.5912
Total		**10.1714**	**0.3398**	**8.1300e-003**	**21.0897**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	45.4111	2.6837	0.0000	112.5041
Unmitigated	45.4111	2.6837	0.0000	112.5041

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e

John Abbott Mixed Use Project - Phase 7 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Land Use	tons	MT/yr			
Apartments Mid Rise	40.02	8.1237	0.4801	0.0000	20.1261
General Office Building	7.91	1.6057	0.0949	0.0000	3.9780
Medical Office Building	103.68	21.0461	1.2438	0.0000	52.1408
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	8.93	1.8127	0.1071	0.0000	4.4909
Supermarket	63.17	12.8229	0.7578	0.0000	31.7683
Total		**45.4111**	**2.6837**	**0.0000**	**112.5041**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	40.02	8.1237	0.4801	0.0000	20.1261
General Office Building	7.91	1.6057	0.0949	0.0000	3.9780
Medical Office Building	103.68	21.0461	1.2438	0.0000	52.1408
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	8.93	1.8127	0.1071	0.0000	4.4909
Supermarket	63.17	12.8229	0.7578	0.0000	31.7683

John Abbott Mixed Use Project - Phase 7 Construction - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Total		**45.4111**	**2.6837**	**0.0000**	**112.5041**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

-

-

584
584
584
584
584
584

-

John Street and Abbott Street Mixed Use Development Project - Phase 1

Last Updated: 7/21/2022

Compression-Ignition Engine Brake-Specific Fuel Consumption (BSFC) Factors **[1]**:

HP: 0 to 100	0.0588	HP: Greater than 100	0.0529

Values above are expressed in gallons per horsepower-hour/BSFC.

CONSTRUCTION EQUIPMENT

Construction Equipment	#	Hours per Day	Horsepower	Load Factor	Construction Phase	Fuel Used (gallons)
Concrete/Industrial Saws	1	8	81	0.73	Demolition Phase	973
Rubber Tired Dozers	1	8	247	0.4	Demolition Phase	1,462
Tractors/Loaders/Backhoes	3	8	97	0.37	Demolition Phase	1,772
Graders	1	8	187	0.41	Grading Phase	357
Tractors/Loaders/Backhoes	2	7	97	0.37	Grading Phase	325
Rubber Tired Dozers	1	8	247	0.4	Grading Phase	460
Cranes	1	8	231	0.29	Building Construction Phase	11,161
Forklifts	2	7	89	0.2	Building Construction Phase	5,770
Generator Sets	1	8	84	0.74	Building Construction Phase	11,514
Tractors/Loaders/Backhoes	1	6	97	0.37	Building Construction Phase	4,986
Welders	3	8	46	0.45	Building Construction Phase	11,502
Air Compressors	1	6	78	0.48	Architectural Coating Phase	224
Pavers	1	8	130	0.42	Paving Phase	393
Paving Equipment	1	8	132	0.36	Paving Phase	342
Tractors/Loaders/Backhoes	1	8	97	0.37	Paving Phase	287
Rollers	2	8	80	0.38	Paving Phase	486
Cement and Mortar Mixers	1	8	9	0.56	Paving Phase	40
					Total Fuel Used	**52,052**
					(Gallons)	

Construction Phase	Days of Operation
Demolition Phase	35
Grading Phase	11
Building Construction Phase	394
Paving Phase	17
Architectural Coating Phase	17
Total Days	474

WORKER TRIPS

Constuction Phase	MPG [2]	Trips	Trip Length (miles)	Fuel Used (gallons)
Demolition Phase	24.1	13	10.8	203.90
Grading Phase	24.1	10	10.8	49.29
Building Construction Phase	24.1	51	10.8	9004.78
Paving Phase	24.1	15	10.8	114.27
Architectural Coating Phase	24.1	10	10.8	76.18
		Total		**9,448.43**

HAULING AND VENDOR TRIPS

Trip Class	MPG [2]	Trips	Trip Length (miles)	Fuel Used (gallons)
HAULING TRIPS				
Demolition Phase	7.5	1300	20.0	3466.67

Grading Phase	7.5	106	20.0	282.67
Building Construction Phase	7.5	0	20.0	0.00
Paving Phase	7.5	105	20.0	280.00
Architectural Coating Phase	7.5	0	20.0	0.00
		Total		**4,029.33**
		VENDOR TRIPS		
Demolition Phase	7.5	0	7.3	0.00
Grading Phase	7.5	0	7.3	0.00
Building Construction Phase	7.5	20	7.3	7669.87
Paving Phase	7.5	0	7.3	0.00
Architectural Coating Phase	7.5	0	7.3	0.00
		Total		**7,669.87**

Total Gasoline Consumption (gallons)	**9,448**
Total Diesel Consumption (gallons)	**63,751**

Sources:

[1] United States Environmental Protection Agency. 2021. *Exhaust and Crankcase Emission Factors for Nonroad Compression-Ignition Engines in MOVES3.0.2* . September. Available at: https://www.epa.gov/system/files/documents/2021-08/420r21021.pdf.

[2] United States Department of Transportation, Bureau of Transportation Statistics. 2021. *National Transportation Statistics* . Available at: https://www.bts.gov/topics/national-transportation-statistics.

John Street and Abbott Street Mixed Use Development Project - Phase 2

Last Updated: 7/21/2022

Compression-Ignition Engine Brake-Specific Fuel Consumption (BSFC) Factors **[1]**:

HP: 0 to 100	0.0588	HP: Greater than 100	0.0529

Values above are expressed in gallons per horsepower-hour/BSFC.

CONSTRUCTION EQUIPMENT

Construction Equipment	#	Hours per Day	Horsepower	Load Factor	Construction Phase	Fuel Used (gallons)
Graders	1	8	187	0.41	Grading Phase	486
Excavators	1	8	158	0.38	Grading Phase	381
Rubber Tired Dozers	1	8	247	0.4	Grading Phase	627
Tractors/Loaders/Backhoes	3	8	97	0.37	Grading Phase	759
Cranes	1	7	231	0.29	Building Construction Phase	10,535
Forklifts	3	8	89	0.2	Building Construction Phase	10,669
Generator Sets	1	8	84	0.74	Building Construction Phase	12,419
Tractors/Loaders/Backhoes	3	7	97	0.37	Building Construction Phase	18,823
Welders	1	8	46	0.45	Building Construction Phase	4,136
Air Compressors	1	6	78	0.48	Architectural Coating Phase	238
Pavers	1	8	130	0.42	Paving Phase	416
Paving Equipment	2	6	132	0.36	Paving Phase	543
Rollers	2	6	80	0.38	Paving Phase	386
Cement and Mortar Mixers	2	6	9	0.56	Paving Phase	64
Tractors/Loaders/Backhoes	1	8	97	0.37	Paving Phase	304
					Total Fuel Used	**60,785 (Gallons)**

Construction Phase	Days of Operation
Grading Phase	15
Building Construction Phase	425
Paving Phase	18
Architectural Coating Phase	18
Total Days	476

WORKER TRIPS

Constuction Phase	MPG [2]	Trips	Trip Length (miles)	Fuel Used (gallons)
Grading Phase	24.1	15	10.8	100.83
Building Construction Phase	24.1	40	10.8	7618.26
Paving Phase	24.1	20	10.8	161.33
Architectural Coating Phase	24.1	8	10.8	64.53
			Total	**7,944.95**

HAULING AND VENDOR TRIPS

Trip Class	MPG [2]	Trips	Trip Length (miles)	Fuel Used (gallons)
HAULING TRIPS				
Grading Phase	7.5	166	20.0	442.67
Building Construction Phase	7.5	0	20.0	0.00
Paving Phase	7.5	166	20.0	442.67
Architectural Coating Phase	7.5	0	20.0	0.00
			Total	**885.33**

VENDOR TRIPS

Grading Phase	7.5	0	0.0	0.00
Building Construction Phase	7.5	12	7.3	4964.00
Paving Phase	7.5	0	0.0	0.00
Architectural Coating Phase	7.5	0	0.0	0.00
			Total	**4,964.00**

Total Gasoline Consumption (gallons)	**7,945**
Total Diesel Consumption (gallons)	**66,634**

Sources:

[1] United States Environmental Protection Agency. 2021. *Exhaust and Crankcase Emission Factors for Nonroad Compression-Ignition Engines in MOVES3.0.2* . September. Available at: https://www.epa.gov/system/files/documents/2021-08/420r21021.pdf.

[2] United States Department of Transportation, Bureau of Transportation Statistics. 2021. *National Transportation Statistics* . Available at: https://www.bts.gov/topics/national-transportation-statistics.

John Street and Abbott Street Mixed Use Development Project - Phase 3

Last Updated: 7/21/2022

Compression-Ignition Engine Brake-Specific Fuel Consumption (BSFC) Factors **[1]**:

HP: 0 to 100	0.0588		HP: Greater than 100	0.0529

Values above are expressed in gallons per horsepower-hour/BSFC.

CONSTRUCTION EQUIPMENT

Construction Equipment	#	Hours per Day	Horsepower	Load Factor	Construction Phase	Fuel Used (gallons)
Graders	1	8	187	0.41	Grading Phase	324
Excavators	1	8	158	0.38	Grading Phase	254
Rubber Tired Dozers	1	8	247	0.4	Grading Phase	418
Tractors/Loaders/Backhoes	3	8	97	0.37	Grading Phase	506
Cranes	1	7	231	0.29	Building Construction Phase	7,312
Forklifts	3	8	89	0.2	Building Construction Phase	7,406
Generator Sets	1	8	84	0.74	Building Construction Phase	8,621
Tractors/Loaders/Backhoes	3	7	97	0.37	Building Construction Phase	13,066
Welders	1	8	46	0.45	Building Construction Phase	2,871
Air Compressors	1	6	78	0.48	Architectural Coating Phase	238
Pavers	1	8	130	0.42	Paving Phase	416
Paving Equipment	2	6	132	0.36	Paving Phase	543
Cement and Mortar Mixers	2	6	9	0.56	Paving Phase	64
Rollers	2	6	80	0.38	Paving Phase	386
Tractors/Loaders/Backhoes	1	8	97	0.37	Paving Phase	304
					Total Fuel Used	**42,726 (Gallons)**

Construction Phase	Days of Operation
Grading Phase	10
Building Construction Phase	295
Paving Phase	18
Architectural Coating Phase	18
Total Days	341

WORKER TRIPS

Constuction Phase	MPG [2]	Trips	Trip Length (miles)	Fuel Used (gallons)
Grading Phase	24.1	15	10.8	67.22
Building Construction Phase	24.1	13	10.8	1718.59
Paving Phase	24.1	20	10.8	161.33
Architectural Coating Phase	24.1	3	10.8	24.20
			Total	**1,971.34**

HAULING AND VENDOR TRIPS

Trip Class	MPG [2]	Trips	Trip Length (miles)	Fuel Used (gallons)
HAULING TRIPS				
Grading Phase	7.5	166	20.0	442.67
Building Construction Phase	7.5	0	0.0	0.00
Paving Phase	7.5	166	20.0	442.67
Architectural Coating Phase	7.5	0	0.0	0.00
			Total	**885.33**

VENDOR TRIPS

Grading Phase	7.5	0	0.0	0.00
Building Construction Phase	7.5	6	7.3	1722.80
Paving Phase	7.5	0	0.0	0.00
Architectural Coating Phase	7.5	0	0.0	0.00
			Total	**1,722.80**

Total Gasoline Consumption (gallons)	**1,971**
Total Diesel Consumption (gallons)	**45,334**

Sources:

[1] United States Environmental Protection Agency. 2021. *Exhaust and Crankcase Emission Factors for Nonroad Compression-Ignition Engines in MOVES3.0.2* . September. Available at: https://www.epa.gov/system/files/documents/2021-08/420r21021.pdf.

[2] United States Department of Transportation, Bureau of Transportation Statistics. 2021. *National Transportation Statistics* . Available at: https://www.bts.gov/topics/national-transportation-statistics.

John Street and Abbott Street Mixed Use Development Project - Phase 4

Last Updated: 7/21/2022

Compression-Ignition Engine Brake-Specific Fuel Consumption (BSFC) Factors **[1]**:

HP: 0 to 100	0.0588	HP: Greater than 100	0.0529

Values above are expressed in gallons per horsepower-hour/BSFC.

CONSTRUCTION EQUIPMENT

Construction Equipment	#	Hours per Day	Horsepower	Load Factor	Construction Phase	Fuel Used (gallons)
Graders	1	6	187	0.41	Grading Phase	122
Rubber Tired Dozers	1	6	247	0.4	Grading Phase	157
Tractors/Loaders/Backhoes	1	7	97	0.37	Grading Phase	74
Cranes	1	4	231	0.29	Building Construction Phase	3,343
Forklifts	2	6	89	0.2	Building Construction Phase	2,962
Tractors/Loaders/Backhoes	2	8	97	0.37	Building Construction Phase	7,964
Air Compressors	1	6	78	0.48	Architectural Coating Phase	66
Pavers	1	7	130	0.42	Paving Phase	101
Cement and Mortar Mixers	4	6	9	0.56	Paving Phase	36
Rollers	1	7	80	0.38	Paving Phase	63
Tractors/Loaders/Backhoes	1	7	97	0.37	Paving Phase	74
					Total Fuel Used	**14,960 (Gallons)**

Construction Phase	Days of Operation
Grading Phase	5
Building Construction Phase	236
Paving Phase	5
Architectural Coating Phase	5
Total Days	251

WORKER TRIPS

Constuction Phase	MPG [2]	Trips	Trip Length (miles)	Fuel Used (gallons)
Grading Phase	24.1	8	10.8	17.93
Building Construction Phase	24.1	9	10.8	951.83
Paving Phase	24.1	18	10.8	40.33
Architectural Coating Phase	24.1	2	10.8	4.48
			Total	**1,014.57**

HAULING AND VENDOR TRIPS

Trip Class	MPG [2]	Trips	Trip Length (miles)	Fuel Used (gallons)
HAULING TRIPS				
Grading Phase	7.5	50	20.0	133.33
Building Construction Phase	7.5	0	0.0	0.00
Paving Phase	7.5	50	20.0	133.33
Architectural Coating Phase	7.5	0	0.0	0.00
			Total	**266.67**
VENDOR TRIPS				
Grading Phase	7.5	0	0.0	0.00
Building Construction Phase	7.5	4	7.3	918.83
Paving Phase	7.5	0	0.0	0.00
Architectural Coating Phase	7.5	0	0.0	0.00

Total	**918.83**

Total Gasoline Consumption (gallons)	**1,015**
Total Diesel Consumption (gallons)	**16,145**

Sources:

[1] United States Environmental Protection Agency. 2021. *Exhaust and Crankcase Emission Factors for Nonroad Compression-Ignition Engines in MOVES3.0.2* . September. Available at: https://www.epa.gov/system/files/documents/2021-08/420r21021.pdf.

[2] United States Department of Transportation, Bureau of Transportation Statistics. 2021. *National Transportation Statistics* . Available at: https://www.bts.gov/topics/national-transportation-statistics.

John Street and Abbott Street Mixed Use Development Project - Phase 5

Last Updated: 7/21/2022

Compression-Ignition Engine Brake-Specific Fuel Consumption (BSFC) Factors **[1]**:

HP: 0 to 100	0.0588	HP: Greater than 100	0.0529

Values above are expressed in gallons per horsepower-hour/BSFC.

CONSTRUCTION EQUIPMENT

Construction Equipment	#	Hours per Day	Horsepower	Load Factor	Construction Phase	Fuel Used (gallons)
Graders	1	8	187	0.41	Grading Phase	162
Rubber Tired Dozers	1	8	247	0.4	Grading Phase	209
Tractors/Loaders/Backhoes	2	7	97	0.37	Grading Phase	148
Cranes	1	6	231	0.29	Building Construction Phase	5,014
Forklifts	1	6	89	0.2	Building Construction Phase	1,481
Generator Sets	1	8	84	0.74	Building Construction Phase	6,896
Tractors/Loaders/Backhoes	1	6	97	0.37	Building Construction Phase	2,986
Welders	3	8	46	0.45	Building Construction Phase	6,890
Air Compressors	1	8	78	0.48	Architectural Coating Phase	176
Pavers	1	6	130	0.42	Paving Phase	173
Cement and Mortar Mixers	1	6	9	0.56	Paving Phase	18
Paving Equipment	1	8	132	0.36	Paving Phase	201
Rollers	1	7	80	0.38	Paving Phase	125
Tractors/Loaders/Backhoes	1	8	97	0.37	Paving Phase	169
					Total Fuel Used	**24,648 (Gallons)**

Construction Phase	Days of Operation
Grading Phase	5
Building Construction Phase	236
Paving Phase	10
Architectural Coating Phase	10
Total Days	261

WORKER TRIPS

Constuction Phase	MPG [2]	Trips	Trip Length (miles)	Fuel Used (gallons)
Grading Phase	24.1	10	10.8	22.41
Building Construction Phase	24.1	34	10.8	3595.82
Paving Phase	24.1	13	10.8	58.26
Architectural Coating Phase	24.1	7	10.8	31.37
			Total	**3,707.85**

HAULING AND VENDOR TRIPS

Trip Class	MPG [2]	Trips	Trip Length (miles)	Fuel Used (gallons)
HAULING TRIPS				
Grading Phase	7.5	66	20.0	176.00
Building Construction Phase	7.5	0	0.0	0.00
Paving Phase	7.5	66	20.0	176.00
Architectural Coating Phase	7.5	0	0.0	0.00
			Total	**352.00**
VENDOR TRIPS				
Grading Phase	7.5	0	0.0	0.00

Building Construction Phase	7.5	9	7.3	2067.36
Paving Phase	7.5	0	0.0	0.00
Architectural Coating Phase	7.5	0	0.0	0.00
			Total	**2,067.36**

Total Gasoline Consumption (gallons)	**3,708**
Total Diesel Consumption (gallons)	**27,068**

Sources:

[1] United States Environmental Protection Agency. 2021. *Exhaust and Crankcase Emission Factors for Nonroad Compression-Ignition Engines in MOVES3.0.2* . September. Available at: https://www.epa.gov/system/files/documents/2021-08/420r21021.pdf.

[2] United States Department of Transportation, Bureau of Transportation Statistics. 2021. *National Transportation Statistics* . Available at: https://www.bts.gov/topics/national-transportation-statistics.

John Street and Abbott Street Mixed Use Development Project - Phase 6

Last Updated: 7/21/2022

Compression-Ignition Engine Brake-Specific Fuel Consumption (BSFC) Factors **[1]**:

HP: 0 to 100	0.0588	HP: Greater than 100	0.0529

Values above are expressed in gallons per horsepower-hour/BSFC.

CONSTRUCTION EQUIPMENT

Construction Equipment	#	Hours per Day	Horsepower	Load Factor	Construction Phase	Fuel Used (gallons)
Graders	1	8	187	0.41	Grading Phase	486
Excavators	1	8	158	0.38	Grading Phase	381
Rubber Tired Dozers	1	8	247	0.4	Grading Phase	627
Tractors/Loaders/Backhoes	3	8	97	0.37	Grading Phase	759
Cranes	1	7	231	0.29	Building Construction Phase	10,535
Forklifts	3	8	89	0.2	Building Construction Phase	10,669
Generator Sets	1	8	84	0.74	Building Construction Phase	12,419
Tractors/Loaders/Backhoes	3	7	97	0.37	Building Construction Phase	18,823
Welders	1	8	46	0.45	Building Construction Phase	4,136
Air Compressors	1	6	78	0.48	Architectural Coating Phase	238
Pavers	1	8	130	0.42	Paving Phase	416
Paving Equipment	2	6	132	0.36	Paving Phase	543
Rollers	2	6	80	0.38	Paving Phase	386
Tractors/Loaders/Backhoes	1	8	97	0.37	Paving Phase	304
					Total Fuel Used	**60,721 (Gallons)**

Construction Phase	Days of Operation
Grading Phase	15
Building Construction Phase	425
Paving Phase	18
Architectural Coating Phase	18
Total Days	476

WORKER TRIPS

Constuction Phase	MPG [2]	Trips	Trip Length (miles)	Fuel Used (gallons)
Grading Phase	24.1	15	10.8	100.83
Building Construction Phase	24.1	137	10.8	26092.53
Paving Phase	24.1	20	10.8	161.33
Architectural Coating Phase	24.1	27	10.8	217.79
			Total	**26,572.48**

HAULING AND VENDOR TRIPS

Trip Class	MPG [2]	Trips	Trip Length (miles)	Fuel Used (gallons)
HAULING TRIPS				
Grading Phase	7.5	237	20.0	632.00
Building Construction Phase	7.5	0	0.0	0.00
Paving Phase	7.5	237	20.0	632.00
Architectural Coating Phase	7.5	0	0.0	0.00
			Total	**1,264.00**
VENDOR TRIPS				
Grading Phase	7.5	0	0.0	0.00

Building Construction Phase	7.5	38	7.3	15719.33
Paving Phase	7.5	0	0.0	0.00
Architectural Coating Phase	7.5	0	0.0	0.00
			Total	**15,719.33**

Total Gasoline Consumption (gallons)	**26,572**
Total Diesel Consumption (gallons)	**77,704**

Sources:

[1] United States Environmental Protection Agency. 2021. *Exhaust and Crankcase Emission Factors for Nonroad Compression-Ignition Engines in MOVES3.0.2* . September. Available at: https://www.epa.gov/system/files/documents/2021-08/420r21021.pdf.

[2] United States Department of Transportation, Bureau of Transportation Statistics. 2021. *National Transportation Statistics* . Available at: https://www.bts.gov/topics/national-transportation-statistics.

John Street and Abbott Street Mixed Use Development Project - Operational

Last Updated: 8/1/2022

Populate one of the following tables (Leave the other blank):

Annual VMT	OR	Daily Vehicle Trips
Annual VMT: 21,790,093		Daily Vehicle Trips:
		Average Trip Distance:

Fleet Class	Fleet Mix
Light Duty Auto (LDA)	0.550670
Light Duty Truck 1 (LDT1)	0.055397
Light Duty Truck 2 (LDT2)	0.189443
Medium Duty Vehicle (MDV)	0.129039
Light Heavy Duty 1 (LHD1)	0.021412
Light Heavy Duty 2 (LHD2)	0.005590
Medium Heavy Duty (MHD)	0.010094
Heavy Heavy Duty (HHD)	0.008865
Other Bus (OBUS)	0.001017
Urban Bus (UBUS)	0.000525
Motorcycle (MCY)	0.024397
School Bus (SBUS)	0.001050
Motorhome (MH)	0.002502

Fuel Economy (MPG) [1]	
Passenger Vehicles	24.1
Light-Med Duty Trucks	17.6
Heavy Trucks/Other	7.5
Motorcycles	44

Fleet Mix

Vehicle Type	Percent	Fuel Type	Annual VMT: VMT	Vehicle Trips: VMT	Fuel Consumption (Gallons)
Passenger Vehicles	*55.07%*	*Gasoline*	11,999,151	0.00	497,890
Light-Medium Duty Trucks	*37.39%*	*Gasoline*	8,146,858	0.00	462,890
Heavy Trucks/Other	*5.11%*	*Diesel*	1,112,493	0.00	148,332
Motorcycle	*2.44%*	*Gasoline*	531,613	0.00	12,082

Total Gasoline Consumption (gallons)	**972,862**
Total Diesel Consumption (gallons)	**148,332**

Sources:

[1] United States Department of Transportation, Bureau of Transportation Statistics. 2021. National Transportation Statistics. Available at: https://www.bts.gov/topics/national-transportation-statistics.



Hazardous Materials Technical Study

John Street & Abbott Street Mixed Use Development Project Salinas, California

prepared for

City of Salinas
Community Development Department
65 West Alisal Street, 2nd Floor
Salinas, California 93901

prepared by

Rincon Consultants, Inc.

August 2022

RINCON CONSULTANTS, INC.
Environmental Scientists | Planners | Engineers
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August 10, 2022
Project No: 21-11684

Robert Latino, Associate Planner
Community Development Department
City of Salinas
65 West Alisal Street, 2nd Floor
Salinas, California 93901
Via email: robertl@ci.salinas.ca.us

Subject: Hazardous Materials Technical Study
John Street & Abbott Street Mixed Use Development Project
Salinas, California

Dear Mr. Latino:

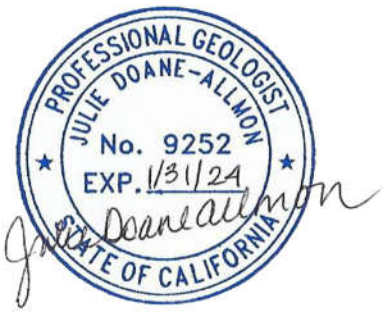
This report presents the findings of a Hazardous Materials Technical Study completed by Rincon Consultants, Inc. (Rincon) for the John Street & Abbott Street Mixed Use Development Project in Salinas, California. The Hazardous Materials Technical Study was performed in accordance with our proposal dated August 23, 2021.

Thank you for selecting Rincon for this project. If you have any questions, or if we can be of any future assistance, please contact us.

Sincerely,
Rincon Consultants, Inc.



Julie Lynne Welch
Director of Due Diligence



Julie Doane-Allmon, PG #9252
Senior Supervising Program Manager



Savanna Vrevich
Environmental Scientist

Table of Contents

Introduction 1
Methodology 1
Project Description 3
Records Review 5
Document Review 5
Historical Records 10
Landfills 10
CalGEM Records 10
NPMS Records 10
California Statewide PFAS Investigation 10
Site Reconnaissance 12
Current Use of the Project Site 12
239 Abbott Street Building 12
336 John Street Building 12
348 Abbott Street Building 12
Other Areas 13
Impact Summary 14
Construction Impacts 14
Operation Impacts 14
Recommendations 15
Mitigation Measures 15
Significance After Mitigation 19
References 20

Figures

Figure 1 Regional Location 2
Figure 2 Project Location and Adjacent Land Use 4
Figure 3 Areas of Hazardous Materials Concern 6

Appendices

Appendix A Site Photographs

Introduction

This report presents the findings of a Hazardous Materials Technical Study (HMTS) for the John Street & Abbott Street Mixed Use Development Project located in Salinas, California (project/project site; Figure 1). The HMTS was performed by Rincon Consultants, Inc. (Rincon).

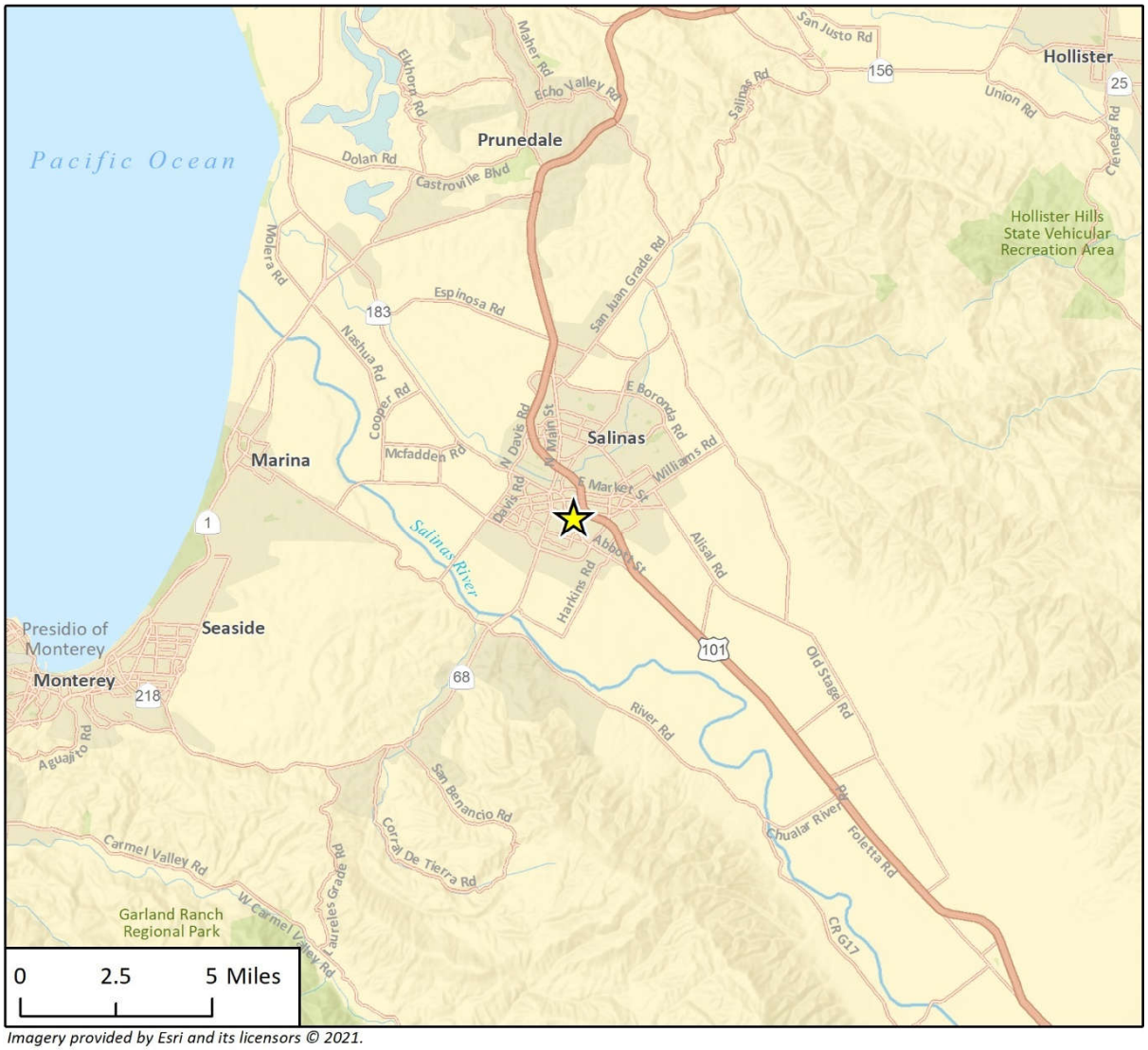
The purpose of this HMTS is to provide a preliminary evaluation of the potential for environmental effects from hazardous materials and hazardous wastes for the project as a result of past or current activities in the area. Our report documents areas of potential environmental concern within the project site, which have or may have been impacted by hazardous materials or wastes and identifies environmental concerns that have the potential to impact the operation or construction of the proposed project.

Methodology

The scope of services conducted during the HMTS is outlined below:

- Performed a reconnaissance of the project site to identify obvious indicators of the existence of hazardous materials.
- Observed adjacent or nearby properties from public thoroughfares to see if such properties are likely to use, store, generate, or dispose of hazardous materials.
- Reviewed environmental documents available online at the State Water Resources Control Board (SWRCB) GeoTracker website and the California Department of Toxic Substances Control (DTSC) EnviroStor website.
- Reviewed solid waste landfills near the project site using the California Department of Resources, Recycling, and Recovery (CalRecycle) Solid Waste Information System (SWIS) website.
- Reviewed oil and gas wells, and oil fields near the project site using the California Geologic Energy Management Division (CalGEM) website.
- Reviewed buried hazardous material pipelines near the project site using the Department of Transportation (USDOT), Pipeline and Hazardous Materials Safety Administration (PHMSA), National Pipeline Mapping System (NPMS) website.
- Reviewed per- and polyfluoroalkyl substances (PFAS) investigations near the project site using the SWRCB website.
- Reviewed reasonably ascertainable historical resources (e.g., aerial photographs, topographic maps) to assess the historical land use of the project site and adjacent properties.

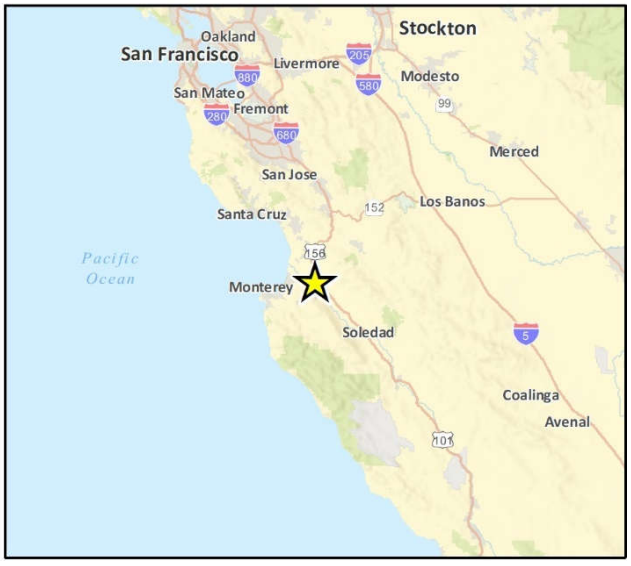
Figure 1 Regional Location



Imagery provided by Esri and its licensors © 2021.

Project Location

N



Project Description

The John Street and Abbott Street Mixed Use Development Project would involve a multi-phase, mixed-use planned unit development (PUD) within nine future parcels within a 19.7-acre site located on the southeast corner of John and Abbott Streets in Salinas, California. In the short term, Phase 1 of the PUD would include a new extended stay hotel with 111 guest rooms in four stories, with outdoor patios and an interior pool. In the long term, buildout of the PUD would include seven phases; these phases include: 242 residential dwelling units within mixed use buildings and multifamily dwellings, retail, office, a remodel of the existing Butler building, new parking, pedestrian plazas and walking paths, new streets and internal drive accesses, widening of a portion of Abbott Street, and a new signalized intersection at Abbott Street and Maple Street. At its completion, the project would provide a variety of multi-family housing options, supporting uses, and be a pedestrian-friendly community with multiple exterior plazas and walkable paths between buildings. Low impact development would be incorporated into the project, and landscaping would include a mix of native and native-style plants and trees, watered with drip irrigation.

Location

The project site is located on the southeast corner of the John Street and Abbott Street intersection in the City of Salinas, Monterey County, California. The approximately 19.7-acre project site consists of 13 existing parcels and a portion of parcel #002-481-022-000, which have the following Assessor's Parcel Numbers:

- 002-481-022-000
- 002-481-025-000
- 002-481-026-000
- 002-481-027-000
- 002-481-028-000
- 002-481-029-000
- 002-481-030-000
- 002-481-031-000
- 002-481-032-000
- 002-481-033-000
- 002-481-034-000
- 002-481-035-000
- 002-371-039-000
- 002-371-044-000

The project site is bound by John Street and California State Route 68 (SR 68) to the north, the Union Pacific Railroad tracks to the east, Spicer Street to the south, and Abbott Street to the west. Access to the project site is provided via John, Abbott, and Spicer Streets. Regional access to the project site is provided via SR 68 and the John Street exit from U.S. Highway 101 (US 101).

Figure 1 shows the location of the project site in the region, and Figure 2 shows the project site in its neighborhood context.

Setting and Surrounding Land Uses

The project site is developed and currently occupied with commercial and light industrial uses, including a produce wholesaler, packing supply store, California Department of Motor Vehicles testing site, parking lots, and vehicle storage. Historically, the project site was used for agricultural processing and cooling. As shown in Figure 2, land uses surrounding the project site include commercial industrial uses to the north and to the east, general industrial uses to the south, and mixed use and residential uses to the west.

Figure 2 Project Location and Adjacent Land Use



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Records Review

Document Review

A review of the DTSC EnviroStor database indicates that no cases or environmental documents are associated with the project site (DTSC 2022). However, the northern portion of the project site (308 and 336 John Street and 239 Abbott Street), including Lot 8 and Lot 9, is associated with an open Cleanup Program case with oversight by the Central Coast Regional Water Quality Control Board (RWQCB) (SWRCB 2022a). As part of the research effort, Rincon reviewed the six environmental documents available online for the case at the SWRCB GeoTracker website, which are discussed below. Areas of hazardous materials concern are depicted on Figure 3.

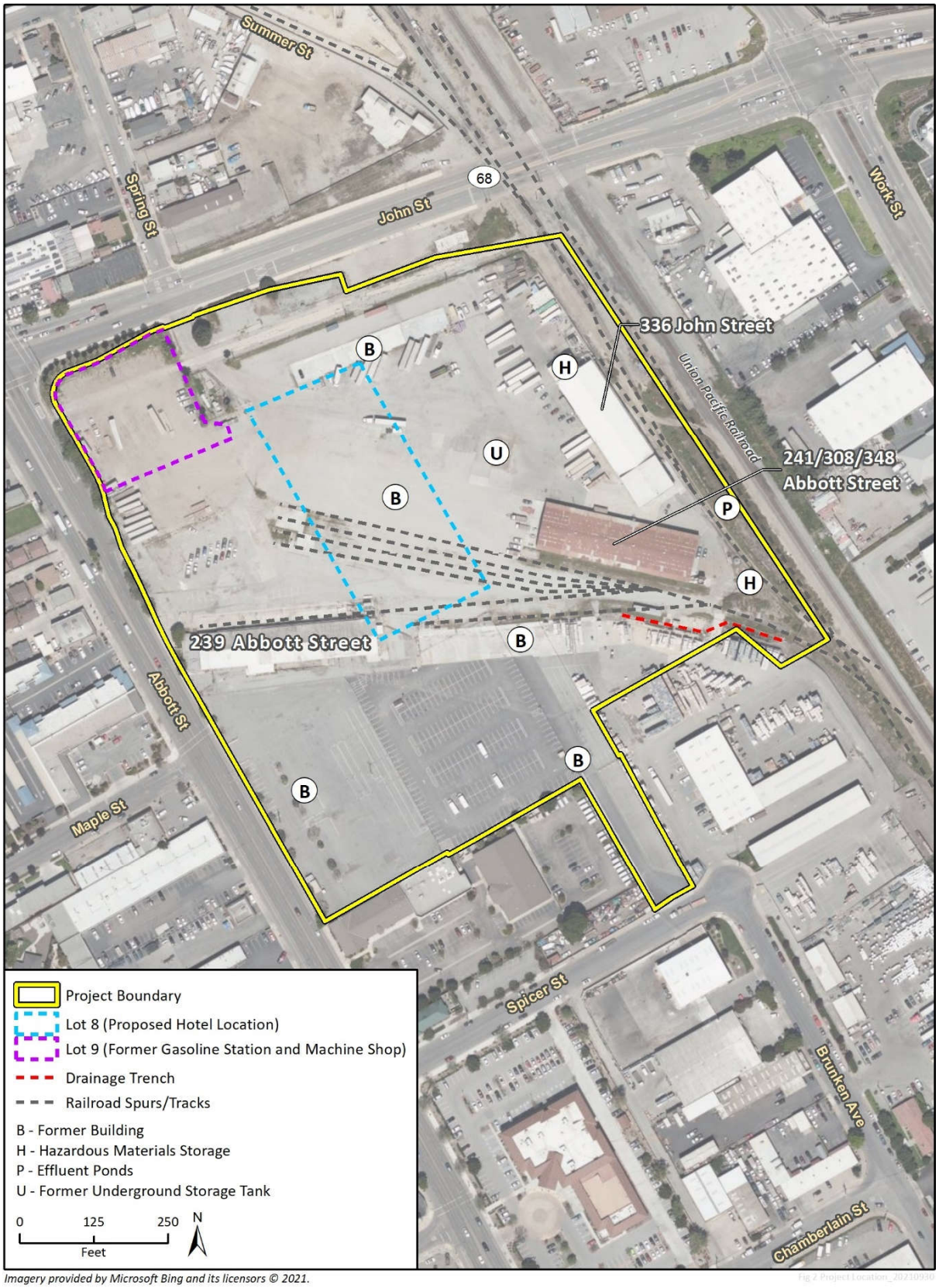
Phase I Environmental Site Assessment

The Phase I Environmental Site Assessment (ESA) prepared for an approximately 21-acre portion of the project site (308 and 336 John Street and 239 Abbott Street, the "property") indicates that the property was occupied by food processing facilities, a warehouse, and a parking lot (Geare Group Consulting 2019). The historical aerial photographs reviewed as part of the 2019 Phase I ESA depict what appears to be a gasoline service station in the northwestern corner of the property from at least 1937 to 1968; several warehouse-type structures from at least 1937 to present day (one structure was no longer depicted by 2005); and railroad spurs from at least 1937 to 1968. The historical fire insurance maps reviewed as part of the 2019 Phase I ESA depict a produce packing facility with several packing warehouses, machine shop, and an oil storage warehouse from 1944 to 1969; an oil pump house was depicted in 1944; an automotive sales building was depicted in the northwestern corner of the property in 1964; and railroad spurs were depicted from at least 1944 to 1969. Potential historical addresses associated with the northwestern corner of the property indicate that a gasoline service station may have been present in 1952.

Monterey County Environmental Health Department records reviewed as part of the 2019 Phase I ESA indicate that site history has included hazardous waste generation from produce packing operations and automotive repair operations, and a 300-gallon waste oil aboveground storage tank (AST), from at least 1991 to 2015. Previous Phase I/II ESA reports prepared for the property and reviewed in the 2019 Phase I ESA indicate that a former Signal Oil Company facility operated at the northwestern corner of the property from at least 1944 to 1969, several possible underground storage tank (UST) locations were identified throughout the property, and one UST was discovered to have been closed-in-place in the central portion of the property in 2011 due to its proximity to a transformer pad.

During the site reconnaissance performed as part of the 2019 Phase I ESA, 55-gallon drums of chemicals, including cooling tower treatment chemicals, equipment cleaning and processing chemicals, and abandoned unidentified wastes were observed; one 500-gallon ammonia AST and one 300-gallon waste oil AST were observed at the property. A drainage trench was observed to drain process rinse water from the building at 239 Abbott Street to two unlined wastewater effluent ponds along the eastern boundary of the property; the ponds were observed to be dry and the open portions of the trench were observed to contain discolored fluids at the time of the 2019 site reconnaissance.

Figure 3 Areas of Hazardous Materials Concern



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The 2019 Phase I ESA identified the following RECs for the property:

- Approximately thirty 55-gallon drums containing unidentified materials, abandoned in the 308/348 Abbott Street building
- Drainage trench with discolored fluids
- Effluent ponds (dry, but unlined)

The 2019 Phase I ESA also identified the closed-in-place 500-gallon diesel UST in the central portion of the property as a historical REC.

Other environmental issues identified in the 2019 Phase I ESA that the consultant concluded warrant further discussion included: a former gasoline service station, machine shop, and possible USTs in the northwestern corner of the property, and a hazardous materials storage shed in the southeastern corner of the property (containing a 300-gallon waste oil AST and ten 55-gallon drums with unidentified contents).

Phase II Environmental Site Assessments

Two Phase II ESAs were prepared for separate portions of the project site as follows:

Phase II ESA, 308 & 336 John Street and 239 Abbott Street – Lot 8

This report, prepared for a 3.12-acre portion of the project site ("Lot 8 property"), indicates that based on the 2019 Phase I ESA, this portion of the project site was previously developed with a former produce processing and storage building (Building 308) and a railroad spur(s) (Trinity Source Group, Inc. 2020a). The scope of the Phase II ESA included passive and active soil vapor surveys, soil sampling, and the collection of one groundwater grab sample.

The passive soil vapor survey results indicated the presence of volatile organic compounds (VOCs) and total petroleum hydrocarbons (TPH) in the gasoline and diesel ranges (TPH-g and TPH-d, respectively). Detected concentrations of benzene in soil vapor were noted to exceed the residential screening level referenced in the report.

The active soil vapor survey results indicated the presence of VOCs and TPH-g. Naphthalene was detected in one sample at a concentration exceeding the residential screening level referenced in the report.

The soil sampling results indicated that VOCs, semi-volatile organic compounds (SVOCs), and polychlorinated biphenyls (PCBs) were not detected above laboratory reporting limits. Metals were detected within background concentrations for local soil; arsenic was detected above its residential and commercial/industrial screening levels referenced in the report. Organochlorine pesticides (OCPs) were detected in one soil sample, TPH-g was detected in one soil sample, TPH-d was detected in all seven soil samples collected, and TPH in the motor oil range (TPH-o) was detected in five soil samples. The detected concentrations of OCPs and TPH were below the residential and commercial/industrial screening levels referenced in the report.

The groundwater grab sample was reported with concentrations of VOCs, TPH-g, and TPH-d. Several VOCs were detected at concentrations exceeding the residential and/or commercial/industrial screening levels referenced in the report.

The Phase II ESA report concluded that the source of VOCs in soil and soil vapor at the Lot 8 property appears to be associated with the volatilization of these compounds from groundwater. Based on the data, the consultant indicated that a release of gasoline appears to have occurred

offsite and a groundwater plume migrated beneath the site, resulting in the elevated concentrations of TPH-g and gasoline-associated VOCs in groundwater at the Lot 8 property.

Phase II ESA, 308 & 336 John Street and 239 Abbott Street – Lot 9

This report, prepared for a 1.09-acre portion of the project site ("Lot 9 property"), indicates that based on the 2019 Phase I ESA, this portion of the project site was previously developed with a former gasoline service station and machine shop (Trinity Source Group, Inc. 2020b). The scope of the Phase II ESA included passive and active soil vapor surveys, soil sampling, and the collection of one groundwater grab sample.

The passive soil vapor survey results indicate the presence of VOCs, TPH-g, and TPH-d. Detected concentrations of benzene and trichloroethene (TCE) in soil vapor were noted to exceed the residential screening level referenced in the report.

The active soil vapor survey results indicate the presence of VOCs and TPH-g. Detected concentrations of chloroform, tetrachloroethene (PCE), and TCE in soil vapor were noted to exceed the residential and/or commercial/industrial screening levels referenced in the report.

The soil sampling results indicate that TPH-g, VOCs, and PCBs were not detected above the laboratory reporting limits. Metals were detected within background concentrations for local soil; arsenic and lead were detected above their residential screening levels referenced in the report. OCPs were detected in two samples, SVOCs were detected in two samples, TPH-d was detected in all seven soil samples collected, and TPH-o was detected in five soil samples. One detected concentration of TPH-d was noted to exceed the residential screening level referenced in the report.

The groundwater grab sample did not contain TPH or VOCs above their laboratory reporting limits.

The Phase II ESA report concluded that PCE and TCE concentrations were the most widely distributed VOCs detected in soil vapor at the Lot 9 property. The Lot 9 property does not have a history of PCE or TCE use, although the consultant noted that both compounds may be used in machine shops as a degreaser. The report also indicated that PCE is more commonly used in dry cleaning and an upgradient fuel site recently received closure, but had associated PCE and TCE contamination in soil vapor; therefore, the consultant concluded in the report that the distribution of PCE and TCE throughout the local neighborhood may be associated with migration through the local City sewer network.

Other Environmental Documents

Three other case documents available on GeoTracker for a portion of the project site were reviewed and are summarized below:

Site Cleanup Program: Former Uni-Kool Facility – Lot 8; 308 and 336 John Street and 239 Abbott Street – Response to Phase II ESA Report

This letter, issued by the Central Coast RWQCB in response to the submittal and review of the June 2020 Phase II ESA prepared for the Lot 8 property, indicates that the RWQCB had no objections to the recommendation of the consultant in their Phase II ESA to install three groundwater monitoring wells at the larger former Uni-Kool facility (a portion of the project site) to assess the extent of petroleum hydrocarbon-impacted groundwater observed at the Lot 8 property and to determine the source of this contamination (Central Coast RWQCB 2020).

Groundwater Monitoring Well Installation and Groundwater Condition Report, Former Uni-Kool Facility, 308 & 336 John Street and 239 Abbott Street

This report indicates that based on the findings of a 2020 Phase II ESA performed for the Lot 8 property, Trinity Source Group Inc. installed three groundwater monitoring wells at the project site and collected soil and groundwater grab samples from the borings (Trinity Source Group Inc. 2021a). Groundwater was encountered in the wells between 64 and 72 feet below ground surface (bgs) with a reported groundwater flow direction toward the south.

The results of the soil sampling indicate that TPH-g, TPH-d, TPH-o, and VOCs were detected in six of the nine soil samples collected. TPH-g was detected in one soil sample, MW-2-64.5, at a concentration exceeding the residential, commercial/industrial, and construction worker screening levels referenced in the report. Ethylbenzene and naphthalene were detected in MW-2-64.5 at concentrations exceeding the residential and commercial/industrial screening levels referenced in the report.

Two groundwater grab samples were collected from the soil borings, and three groundwater samples were collected following development of the groundwater monitoring wells. The results of the groundwater samples indicate concentrations of TPH-g, TPH-d, and several VOCs were detected. TPH-g was detected at concentrations exceeding the screening level referenced in the report. Naphthalene, benzene, ethylbenzene, methyl tert-butyl ether (MTBE), tert-butyl alcohol (TBA), toluene, 1,2,4-trichlorobenzene, and xylenes were detected at concentrations exceeding the residential and/or commercial/industrial screening levels referenced in the report.

The report concluded that based on the results of the soil and groundwater sampling performed at the Lot 8 property, a significant surface or shallow release of petroleum does not appear to have occurred at the locations investigated, a partial source of contamination is at or near the northern portion of the property, and the extent of the petroleum hydrocarbon plume is not yet defined. Additionally, the report concluded that the shallow soil data collected as of the date of the report does not indicate that the groundwater plume is associated with the former machine shop and gasoline service station formerly located in the northwestern corner of the property; however, because up to four USTs may have existed at the property and there is an abandoned-in-place UST at the property, there may be two independent sources of petroleum hydrocarbon contamination (both TPH-g and TPH-d) at the property. A release of diesel may have occurred from the abandoned-in-place diesel UST at the property and the source of the TPH-g and MTBE release, if not located onsite during a future investigation, is likely located northeast of the property based on the groundwater flow direction.

The report recommended the following: removal of the abandoned-in-place UST and additional investigation in the vicinity of this UST, installation of two groundwater monitoring wells at upgradient locations relative to MW-2 (located near the abandoned-in-place UST), and installation of a third groundwater monitoring well in the southern portion of the property to monitor the extent of onsite contamination and gauge the concentration of petroleum hydrocarbons/MTBE that may be migrating across the property.

Underground Storage Tank Removal Report, The Uni-Kool Partners, 308 John Street

This report, prepared for a portion of the project site (former Uni-Kool facility at 308 John Street – the "property"), indicates that "during environmental due diligence" performed for the property, "the UST remaining on the property should be removed" (Trinity Source Group Inc. 2021b). The UST had been closed-in-place in 2011 because it was located under a concrete transformer pad. The

transformer was decommissioned in 2011; therefore, Trinity Source Group, Inc. removed the UST in June 2021 under permit by and in accordance with guidance and procedures of the Monterey County Health Department Environmental Health Bureau. Confirmation soil samples collected from the UST pit were determined to be non-hazardous under Monterey County Action Levels; therefore, the native soil excavated during UST removal was repurposed as backfill.

Historical Records

According to a review of online aerial photographs and topographic maps, it appears that the project site was developed with industrial buildings from at least 1948 to present day (Nationwide Environmental Title Research LLC 2022). Eight railroad spurs were formerly located on the project site from at least 1910 to 1998, and two sets of railroad tracks have been located adjacent to the east of the project site from at least 1910 to present day. Impacts to the project site associated with the former onsite railroad spurs may exist onsite and could be encountered during construction (e.g., soil disturbance, grading, excavation, earthwork). Shallow soils located along railroad tracks are commonly impacted with hazardous materials such as petroleum hydrocarbons, metals, poly-aromatic hydrocarbons, and SVOCs. Therefore, construction of the project near the former railroad tracks and spurs could create a public health and environmental hazard at the project.

Landfills

According to a review of the CalRecycle online SWIS database, there are no landfills within 2,000 feet of the project site. Therefore, landfills would have no impact on the operation or construction of the project.

CalGEM Records

According to a review of CalGEM online oil and gas well and field records, the project site is not located within an oil/gas field and there are no oil or gas wells located within 0.5 mile of the project site (CalGEM 2021). Therefore, the oil and gas wells and fields would have no impact on the operation or construction of the project.

NPMS Records

According to a review of the PHMSA online NPMS database, there are no natural gas transmission or hazardous liquid pipelines within or adjacent to the project site, or within 1,000 feet of the project site (USDOT 2022). Therefore, hazardous material pipelines would have no impact on the operation or construction of the project.

California Statewide PFAS Investigation

Beginning in 2019, the SWRCB issued letters to property owners of sites that may be potential sources of PFAS. These sites currently include select landfills, airports, chrome plating facilities, publicly owned treatment works facilities, Department of Defense sites, and bulk fuel storage terminals and refineries. The letters included a SWRCB Water Code Section 13267 Order (Investigative Order); an Investigative Order is a directive from the SWRCB to conduct on-site testing of groundwater and/or leachate. This does not mean that PFAS has been produced, used, or

discharged at these sites. According to the SWRCB, "PFAS are a large group of human-made substances that do not occur naturally in the environment and are resistant to heat, water, and oil" (SWRCB 2022b).

According to a review of the California Statewide PFAS Investigation online Public Map Viewer, there are no current airport, chrome plating, Department of Defense, landfill, or publicly owned treatment works PFAS orders at any facilities listed as located within six miles of the project site (SWRCB 2022b). According to a review of the SWRCB's March 12, 2021 Bulk Fuel Terminal/Refinery Investigative Order, the project site is not listed on the Bulk Fuel Storage Terminals and Refineries List (Attachment 1 of the Order). Furthermore, none of the Bulk Fuel Storage Terminals or Refineries on the list are located within one mile of the project site (SWRCB 2021).

According to a review of the California Statewide Drinking Water System Quarterly Testing Results online Public Map Viewer, perfluorooctanoic acid and perfluorooctanesulfonic acid (PFOA and PFOS) were analyzed for in 23 drinking water wells located within three miles of the project site and tested quarterly as part of a PFAS investigative order (SWRCB 2022c). PFOA and PFOS were not detected in these drinking water wells. Therefore, PFAS would have no impact on the operation or construction of the project.

Site Reconnaissance

Rincon performed a reconnaissance of the entirety of the project site (as shown on Figure 2) on December 9, 2021. The purpose of the reconnaissance was to observe existing project site conditions that may indicate the presence of hazardous materials onsite.

Current Use of the Project Site

The project site was observed to be a vacant commercial/industrial facility with three buildings and parking/storage areas. A sign on the northern portion of the project site indicated "GreenGate Fresh – Shipping."

Areas of concern identified during the site reconnaissance are included on Figure 3. Photographs of the project site are included in Appendix A.

239 Abbott Street Building

This vacant commercial/industrial building was observed to contain a trench drain, an air compressor, and a few pieces of equipment on wooden pallets. Dark-stained concrete flooring was observed throughout the building, including one area with additional staining and a kitty litter-type absorbent spread across it (Appendix A, Photograph 1). The concrete appeared to be in good condition (i.e., no cracks). Five plastic 55-gallon drums were observed along the northern exterior of the building, some of which were labeled "TowerShield" (cooling water treatment).

336 John Street Building

This vacant commercial/industrial building was observed to contain a forklift, a loading dock/ramp, and a trench drain. No stained flooring was observed inside the building.

An exterior hazardous materials storage area on the northern side of the 336 John Street building (as identified in the 2019 Phase I ESA) was observed to contain four 5-gallon buckets and what appeared to be a pesticide sprayer on a wooden pallet, pools of water from a recent rain event (some with an oily sheen), dark-stained asphalt with some areas of a kitty litter-type absorbent, an approximately 500-gallon AST with a faded "Ammonia" label, and six empty plastic 55-gallon drums labeled "TowerShield" (Appendix A, Photograph 2).

A fenced area of the hazardous materials storage area was observed to contain two approximately 500-gallon ASTs (one labeled "Ammonia"), three plastic 55-gallon drums (one labeled "TowerShield"), equipment, various pipes connected to equipment labeled "Ammonia," and one pipe labeled "Refrigerant Discharge" (Appendix A, Photograph 3).

348 Abbott Street Building

This vacant commercial/industrial building was observed to contain electrical panels and three possible transformers, an area of inactive equipment, two 31-pound containers of mineral spirits (with no evidence of release), one trench drain, and two empty plastic water ASTs (approximately 30 and 100 gallons) on pallets. No stained flooring was observed inside the building.

A hazardous materials storage area in the southeastern corner of the project (as identified in the 2019 Phase I ESA) was observed to contain one approximately 200-gallon AST, multiple plastic and metal 55-gallon drums, some labeled "cooling water treatment," and one labeled "Vacuum Pump Waste Oil Only," and two 5-gallon buckets with unidentified contents (Appendix A, Photograph 4).

Other Areas

The area of the former 500-gallon diesel UST in the central-eastern portion of the project site was observed to contain vegetation and soil with three concrete pads, a pile of concrete rubble, one pipe protruding from the ground, a tarp covering materials, and a groundwater monitoring well (Appendix A, Photograph 5).

Two unlined wastewater effluent ponds located along the eastern boundary of the project site (as identified in the 2019 Phase I ESA) were observed to be dry.

The open portions of a concrete trench located in the southeastern portion of the project site (as identified in the 2019 Phase I ESA) were observed to contain discolored fluids, trash, and what appeared to be pooled water from a recent rain event (Appendix A, Photograph 6).

Impact Summary

Based on the research conducted as part of this HMTS, impacts were identified at the project site as described below.

Construction Impacts

Based on the results of the Phase II ESAs conducted at portions of the project site, there are known metals, TPH (gasoline, diesel, and motor oil), VOCs, SVOCs, and OCPs in onsite soil and/or soil vapor. These impacts will likely be encountered during grading and construction-related work onsite.

Benzene, naphthalene, PCE, and TCE were detected in soil vapor at the project site at concentrations exceeding the residential and/or commercial/industrial ESLs. TPH-d was detected in soil at the project site at a concentration exceeding the residential ESL. Additionally, a concrete trench is present in the southeastern portion of the project site and railroad spurs were formerly located on the project site from at least 1910 to 1998. Stained concrete flooring was also observed within and/or next to onsite buildings. Therefore, there is a potential for construction workers to be exposed to contaminants via dust, soil, and/or soil vapor on the project. Additionally, if offsite disposal of soils would occur during project construction, the soil may require special handling or disposal as a waste. Construction activities are not expected to encounter groundwater, which is anticipated to be approximately 60 to 70 feet bgs.

Hazardous materials identified at the project site during Rincon's December 2021 reconnaissance include drums, ASTs, and other containers. Offsite disposal of these materials during project construction may also require special handling or disposal as a waste.

Consequently, potentially significant impacts exist at this known release site (similar to a hazardous material site compiled pursuant to Government Code Section 65962.5) and, as a result, would potentially create a significant hazard to the public or the environment during grading/construction. Implementation of Mitigation Measures HAZ-1 through HAZ-4 will reduce construction hazardous material impacts to less than significant.

Operation Impacts

Based on the results of the Phase II ESAs conducted at portions of the project site, there are known metals, TPH (gasoline, diesel, and motor oil), VOCs, SVOCs, and OCPs in onsite soil and/or soil vapor. Additionally, a concrete trench is present in the southeastern portion of the project site, stained concrete flooring was observed within and/or next to onsite buildings, and railroad spurs were formerly located on the project site from at least 1910 to 1998. Therefore, there is a potential for:

- Maintenance workers to be exposed to contaminants via dust, soil, and/or soil vapor on the project
- Building occupants to be exposed to contaminants via soil vapor on the project

Therefore, operation of the project could create a public health and environmental hazard at the project and would be considered a potentially significant impact. Implementation of Mitigation Measures HAZ-1 through HAZ-5 would reduce operational hazardous material impacts to less than significant.

Recommendations

The northern portion (~21 acres) of the project site is listed as an open RWQCB Cleanup Program Site (open case). The open case includes the development areas encompassed by Lots 1, 2, 3, 7, 8, and 9. The Central Coast RWQCB (cleanup oversight agency) will continue to be provide agency oversight of assessment and remediation of the open case through case closure by RWQCB.

However, this HMTS has identified known metals, TPH (gasoline, diesel, and motor oil), VOCs, SVOCs, and OCPs in onsite soil and/or soil vapor and suspect sources of impacts, including but not limited to:

- Stained asphalt and concrete flooring
- Drainage trench with unlined effluent ponds and discolored fluids
- Onsite hazardous materials storage and abandoned unidentified wastes
- Onsite ASTs (waste oil and ammonia)
- Former onsite USTs
- Former onsite auto repair, machine shop, and gasoline station
- Former (potentially remaining onsite) railroad tracks and spurs
- Former oil storage warehouse

These potential impacts will likely be encountered during grading and construction-related work onsite. Construction activities at the project are not expected to encounter groundwater, which is anticipated to be approximately 60 to 70 feet bgs. There is also the potential for building occupants to be exposed to contaminants via soil vapor at the project.

Implementation of mitigation measures HAZ-1 through HAZ-5 would identify hazards onsite and reduce potential hazardous material construction and operational impacts at the project to less than significant, as discussed below.

Mitigation Measures

HAZ-1 RWQCB Regulatory Agency Submittal

Prior to issuance of a grading permit, the project applicant shall retain a qualified environmental professional (EP), as defined by the American Society of Testing and Materials (ASTM) E-1527, to prepare a Phase I ESA in accordance with standard ASTM methodologies to assess the project site (including development Lots 4, 5, and 6). The project applicant shall submit the Phase I ESA to the Central Coast RWQCB project manager of the open Cleanup Program Site case. Additionally, the project applicant shall submit the following documents to the Central Coast RWQCB Cleanup project manager:

- Current development plan and any modifications to the development plan for Lots 1-9
- All environmental documents completed for the project (Lots 1-9), including this HMTS
- All future environmental documents completed for the project (Lots 1-9)

Upon submittal of the information above, the Central Coast RWQCB may require actions such as: development of subsurface investigation workplans; completion of soil, soil vapor, and/or

groundwater subsurface investigations; installation of soil vapor or groundwater monitoring wells; soil excavation and offsite disposal; completion of human health risk assessments; and/or completion of remediation reports or case closure documents. Subsurface soil, soil vapor, and groundwater investigations, if required, shall be conducted in accordance with a sampling plan that shall be reviewed and approved by the Central Coast RWQCB.

The Central Coast RWQCB closure and agency approval documents shall be submitted and reviewed by the City prior to issuance of grading permits.

It should also be noted that the Central Coast RWQCB may determine that Monterey County Hazardous Materials Management Services (HMMS) or the DTSC may be best suited to perform the cleanup oversight agency duties for the assessment and/or remediation of this project. Should the cleanup oversight agency be transferred from the RWQCB to the Monterey County HMMS or the DTSC, this and other mitigation measures will still apply.

HAZ-2 Subsurface Investigation

The project applicant shall retain a qualified environmental consultant (Professional Geologist [PG] or Professional Engineer [PE]) to prepare subsurface investigations, as required by the Central Coast RWQCB, prior to construction. The subsurface investigations may include sampling of the following suspect release areas:

- Stained asphalt and concrete flooring
- Drainage trench with unlined effluent ponds and discolored fluids
- Onsite hazardous materials storage and abandoned unidentified wastes
- Onsite ASTs (waste oil and ammonia)
- Former onsite USTs
- Former onsite auto repair, machine shop, and gasoline station
- Former (potentially remaining onsite) railroad tracks and spurs
- Former oil storage warehouse

Additionally, these subsurface investigations may include, but are not limited to, completion of:

- Geophysical surveys
- Soil, soil vapor, and/or groundwater sampling assessments
- Laboratory analysis for TPH, VOCs, SVOCs, OCPs, and metals

The subsurface investigations shall provide recommendations to address identified hazards and indicate when to apply those recommended actions in relation to proposed project activities. As part of the subsurface investigation, analytical results shall be screened against the San Francisco Bay RWQCB environmental screening levels (ESLs). These ESLs are risk-based screening levels for direct exposure of a construction worker under various depth and land use scenarios.

Appropriate steps shall be undertaken to protect site workers during project construction and if necessary, the public during project operation. This would include the preparation of a Soil and Soil Vapor Management Plan (see Mitigation Measure HAZ-3).

If contaminants are detected at concentrations exceeding hazardous waste screening thresholds for contaminants in soil (California Code of Regulations [CCR] Title 22, Section 66261.24), appropriate

steps shall be undertaken to protect site workers during project construction and if necessary, the public during project operation (see Mitigation Measures HAZ-3, HAZ-4, and HAZ-5).

HAZ-3 Soil and Soil Vapor Management Plan

The project applicant shall retain a qualified environmental consultant (PG or PE) to prepare a Soil and Soil Vapor Management Plan (SSVMP) prior to construction. Where groundwater impacts are identified during implementation of Mitigation Measure HAZ-2, a groundwater management section shall be added to the SSVMP. The SSVMP, or equivalent document, shall be prepared to address onsite handling and management of impacted soils, soil vapor, or other impacted wastes, and reduce hazards to construction workers and offsite receptors during construction. The plan must establish remedial measures and/or soil management practices to ensure construction worker safety, the health of future workers and visitors, and the offsite migration of contaminants from the site. These measures and practices may include, but are not limited to:

- Stockpile management including stormwater pollution prevention and the installation of Best Management Practices (BMPs)
- Proper disposal procedures of contaminated materials
- Monitoring and reporting
- A health and safety plan for contractors working at the site that addresses the safety and health hazards of each phase of site construction activities with the requirements and procedures for employee protection
- The health and safety plan will also outline proper soil handling procedures and health and safety requirements to minimize worker and public exposure to hazardous materials during construction.

Prior to demolition and grading (construction), the City shall confirm the Central Coast RWQCB's approval of the SSVMP. The project applicant shall review and implement the SSVMP prior to construction.

If odorous or visually stained soils, other indications of hydrocarbon piping or equipment, or debris are encountered during ground-disturbing activities, work in the immediate area shall be halted and a qualified environmental consultant shall be contacted immediately to evaluate the situation. Work may continue on other parts of the project while impacted soil investigation and/or remediation takes place.

HAZ-4 Remediation

Where soil is known to be impacted, or is identified during implementation of mitigation measure HAZ-2 (subsurface investigation) to be present, within the construction envelope at chemical concentrations exceeding hazardous waste screening thresholds for contaminants in soil (CCR Title 22, Section 66261.24), the project applicant shall retain a qualified environmental consultant (PG or PE), to conduct additional analytical testing and recommend soil disposal recommendations, or consider other remedial engineering controls, as necessary.

The qualified environmental consultant shall utilize the development site analytical results for waste characterization purposes prior to offsite transportation or disposal of potentially impacted soils or other impacted wastes. The qualified environmental consultant shall provide disposal recommendations and arrange for proper disposal of the waste soils or other impacted wastes (as necessary), and/or provide recommendations for remedial engineering controls, if appropriate.

Remediation of impacted soils and/or implementation of remedial engineering controls may require additional delineation of impacts; additional analytical testing per landfill or recycling facility requirements; soil excavation; and offsite disposal or recycling.

The City shall confirm the Central Coast RWQCB's approval of the development site disposal recommendations. The project applicant shall review and implement the disposal recommendations prior to transportation of waste soils offsite and review and implement the remedial engineering controls prior to construction.

HAZ-5 Vapor Mitigation System

Where soil vapor is known (or is identified during implementation of Mitigation Measures HAZ-2, HAZ-3, or HAZ-4) to be present at chemical concentrations exceeding the ESLs for sub-slab/soil gas (vapor) intrusion, the project applicant shall retain a qualified environmental consultant (PG or PE) or other qualified person to prepare a vapor mitigation system design for the proposed project.

The plan shall include, but is not limited to:

- Design specifications
- Material specifications
- Installation requirements
- Monitoring requirements

The project applicant shall design and implement engineering measures or institutional controls (e.g., soil vapor barrier) to prevent potential soil vapor intrusion into new residences or businesses in accordance with the measures included in the DTSC's Vapor Intrusion Guidance Document – Final (October 2011) and Vapor Intrusion Mitigation Advisory, Revision 1 (October 2011).

Engineering measures or institutional controls shall be submitted to the City's Building Division and Planning Division prior to the issuance of any grading or building permits. Said engineering measures and institutional controls shall be peer reviewed by a qualified third-party contractor hired by the City at the project applicant's expense to confirm such measures and controls comply with applicable regulations. Consultation with the DTSC or a local cleanup agency may be required to confirm the appropriateness of the measures and controls.

The project applicant and/or contractor shall retain a qualified professional to certify that the accepted measures and controls are properly constructed and functioning at each residence. Written verification shall be submitted to the City.

The efficacy of the measures and controls shall be confirmed and certified by a qualified professional pursuant to the construction quality assurance/quality control testing guidance of the DTSC's Vapor Intrusion Guidance Document – Final (October 2011).

The project applicant and contractor shall incorporate a sub-slab vapor barrier during construction, the implementation of which would prevent the potential for soil gas VOCs from migrating to indoor air.

The City shall confirm the Central Coast RWQCB's approval of the Vapor Mitigation System Design prior to construction. The project applicant shall review the Vapor Mitigation System Design and install the system during construction.

Significance After Mitigation

Implementation of Mitigation Measures HAZ-1 through HAZ-5 during project construction and operation would reduce potential hazardous material impacts to less than significant by ensuring additional investigation and remedial measures, transportation of impacted materials, and/or soil management practices ensure construction worker safety and the health of future workers and visitors.

References

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Appendix A

Site Photographs



Photograph 1. View of the interior of the 239 Abbott Street building. Stained concrete and absorbent materials are visible.



Photograph 2. View of the exterior hazardous materials storage area on the northern side of the 336 John Street building, with stained concrete and drums.



Photograph 3. View of the fenced area of the exterior hazardous materials storage area on the northern side of the 336 John Street building.



Photograph 4. View of a hazardous materials storage area in the southeastern corner of the project site (near the 348 Abbott Street building) with an aboveground storage tank (AST), drums, and buckets.



Photograph 5. View of the area of the former diesel underground storage tank (UST) in the central-eastern portion of the project site. A groundwater monitoring well is visible.



Photograph 6. View of an open portion of an industrial trench in the southeastern portion of the project site.

- Freq Weight : A
- Time Weight : SLOW
- Level Range : 40-100
- Max dB : 69.3 - 2021/11/24 09:26:12
- Level Range : 40-100
- SEL : 87.8
- Leq : 58.3
-

No.s	Date Time	(dB)				
1	2021/11/24 09:18:38	56.3	56.1	55.3	54.2	54.9
6	2021/11/24 09:18:53	53.9	56.1	57.6	58.9	58.3
11	2021/11/24 09:19:08	57.4	55.8	57.2	57.6	59.6
16	2021/11/24 09:19:23	61.8	59.5	58.1	58.3	57.5
21	2021/11/24 09:19:38	58.6	57.7	57.7	57.1	58.3
26	2021/11/24 09:19:53	58.9	58.0	57.8	57.4	56.7
31	2021/11/24 09:20:08	56.6	57.9	58.0	58.0	56.3
36	2021/11/24 09:20:23	55.8	55.7	56.5	56.9	58.1
41	2021/11/24 09:20:38	59.3	58.1	56.9	57.0	56.7
46	2021/11/24 09:20:53	55.7	55.3	56.2	57.6	57.5
51	2021/11/24 09:21:08	57.3	57.8	58.1	57.8	58.5
56	2021/11/24 09:21:23	57.8	58.0	58.8	58.0	56.2
61	2021/11/24 09:21:38	55.3	55.5	55.5	56.9	57.5
66	2021/11/24 09:21:53	62.0	63.2	58.6	58.8	59.7
71	2021/11/24 09:22:08	61.0	61.7	60.5	61.4	59.0
76	2021/11/24 09:22:23	57.9	59.1	58.7	58.9	59.1
81	2021/11/24 09:22:38	58.6	57.6	58.3	58.4	56.9
86	2021/11/24 09:22:53	57.3	57.2	58.0	57.6	57.2
91	2021/11/24 09:23:08	57.7	57.1	57.4	55.7	55.0
96	2021/11/24 09:23:23	55.9	55.5	56.3	56.3	56.4
101	2021/11/24 09:23:38	55.8	56.6	56.8	57.6	58.6
106	2021/11/24 09:23:53	58.3	58.0	56.8	55.4	56.2
111	2021/11/24 09:24:08	58.9	59.3	57.8	59.6	62.0
116	2021/11/24 09:24:23	61.3	61.3	61.5	59.5	58.2
121	2021/11/24 09:24:38	58.4	57.4	56.4	56.7	56.3
126	2021/11/24 09:24:53	56.4	56.0	56.5	57.6	57.6
131	2021/11/24 09:25:08	58.2	57.4	56.7	56.9	57.7
136	2021/11/24 09:25:23	58.8	59.9	62.0	64.7	66.2
141	2021/11/24 09:25:38	66.5	65.8	64.2	62.9	61.2
146	2021/11/24 09:25:53	60.0	58.6	63.0	60.6	63.8
151	2021/11/24 09:26:08	68.0	64.9	59.3	59.5	60.8
156	2021/11/24 09:26:23	58.5	55.7	55.8	56.4	57.1
161	2021/11/24 09:26:38	57.1	56.7	56.2	56.2	55.8
166	2021/11/24 09:26:53	55.8	56.1	56.2	57.6	58.1
171	2021/11/24 09:27:08	59.0	57.6	58.6	59.4	57.3
176	2021/11/24 09:27:23	55.7	55.6	56.7	56.3	55.7
181	2021/11/24 09:27:38	55.2	55.2	57.0	57.6	57.2
186	2021/11/24 09:27:53	57.7	57.5	57.1	58.3	59.2
191	2021/11/24 09:28:08	58.1	57.1	56.1	55.7	55.5
196	2021/11/24 09:28:23	54.5	54.4	56.4	55.6	54.8
201	2021/11/24 09:28:38	57.1	56.7	57.9	58.6	58.5
206	2021/11/24 09:28:53	59.3	59.1	57.6	56.0	55.7
211	2021/11/24 09:29:08	56.1	55.8	59.3	61.0	61.5
216	2021/11/24 09:29:23	59.1	57.3	56.8	58.8	58.4
221	2021/11/24 09:29:38	56.3	55.2	55.8	56.0	55.2
226	2021/11/24 09:29:53	57.2	58.1	58.3	57.2	56.4
231	2021/11/24 09:30:08	57.1	57.8	56.8	56.6	57.3
236	2021/11/24 09:30:23	56.8	55.1	53.3	56.9	55.9
241	2021/11/24 09:30:38	57.9	60.7	55.8	55.3	54.6
246	2021/11/24 09:30:53	55.4	54.7	54.9	55.5	56.8
251	2021/11/24 09:31:08	56.3	55.1	54.4	54.1	54.6
256	2021/11/24 09:31:23	56.7	55.4	57.2	57.2	58.1
261	2021/11/24 09:31:38	57.2	56.1	54.9	54.9	54.6
266	2021/11/24 09:31:53	53.9	53.4	53.3	56.3	55.7
271	2021/11/24 09:32:08	55.6	56.2	56.3	55.7	55.9
276	2021/11/24 09:32:23	57.6	57.6	57.0	58.0	59.7
281	2021/11/24 09:32:38	59.3	60.2	60.9	61.2	59.9
286	2021/11/24 09:32:53	55.9	55.2	56.8	58.2	59.6
291	2021/11/24 09:33:08	56.7	54.5	54.8	57.1	56.7
296	2021/11/24 09:33:23	55.0	55.6	56.3	55.0	54.5

- Freq Weight : A
- Time Weight : SLOW
- Level Range : 40-100
- Max dB : 92.5 - 2021/12/09 13:19:01
- Level Range : 40-100
- SEL : 99.5
- Leq : 70.0
-

No.s	Date Time	(dB)				
1	2021/12/09 13:11:40	65.4	64.1	74.9	68.9	58.6
6	2021/12/09 13:11:55	58.1	66.6	72.2	73.4	69.4
11	2021/12/09 13:12:10	72.9	65.8	59.1	60.6	63.5
16	2021/12/09 13:12:25	66.5	66.8	60.3	56.8	56.5
21	2021/12/09 13:12:40	56.1	55.1	56.6	63.1	67.5
26	2021/12/09 13:12:55	63.1	67.8	73.1	69.8	63.9
31	2021/12/09 13:13:10	66.2	71.7	67.7	62.8	61.9
36	2021/12/09 13:13:25	62.3	63.4	69.7	69.1	69.5
41	2021/12/09 13:13:40	71.5	69.4	70.3	73.1	69.1
46	2021/12/09 13:13:55	64.5	61.0	61.9	60.3	61.5
51	2021/12/09 13:14:10	61.6	59.8	61.2	71.1	72.2
56	2021/12/09 13:14:25	67.5	63.3	62.7	62.2	61.2
61	2021/12/09 13:14:40	58.2	58.1	62.7	71.7	74.4
66	2021/12/09 13:14:55	74.5	74.2	69.9	64.9	60.5
71	2021/12/09 13:15:10	60.7	59.2	60.8	63.4	70.5
76	2021/12/09 13:15:25	69.6	72.3	73.8	71.8	71.3
81	2021/12/09 13:15:40	72.6	70.2	70.1	72.2	72.3
86	2021/12/09 13:15:55	71.0	65.7	65.6	65.2	58.2
91	2021/12/09 13:16:10	56.3	58.9	61.9	60.5	56.7
96	2021/12/09 13:16:25	57.7	62.6	60.1	55.9	53.7
101	2021/12/09 13:16:40	52.6	56.4	65.7	60.8	62.5
106	2021/12/09 13:16:55	66.0	72.1	72.2	72.8	70.5
111	2021/12/09 13:17:10	68.9	71.8	70.7	67.8	64.3
116	2021/12/09 13:17:25	61.6	61.4	70.1	71.7	70.2
121	2021/12/09 13:17:40	68.2	70.7	71.0	74.0	73.3
126	2021/12/09 13:17:55	69.8	74.1	69.8	62.8	59.4
131	2021/12/09 13:18:10	61.0	59.7	57.5	59.8	70.0
136	2021/12/09 13:18:25	68.0	61.4	69.4	69.2	71.3
141	2021/12/09 13:18:40	66.3	61.6	61.7	63.7	66.4
146	2021/12/09 13:18:55	71.7	86.8	86.0	77.1	73.6
151	2021/12/09 13:19:10	71.5	68.6	66.0	62.6	61.4
156	2021/12/09 13:19:25	61.9	65.1	64.9	65.7	69.8
161	2021/12/09 13:19:40	70.7	70.4	71.2	70.4	72.9
166	2021/12/09 13:19:55	73.8	72.9	70.4	73.5	73.5
171	2021/12/09 13:20:10	72.4	72.7	71.3	71.5	65.7
176	2021/12/09 13:20:25	58.7	57.1	56.3	56.1	58.1
181	2021/12/09 13:20:40	61.0	70.6	72.5	73.8	75.0
186	2021/12/09 13:20:55	67.6	69.1	63.6	59.6	60.6
191	2021/12/09 13:21:10	63.6	63.4	62.6	63.6	71.2
196	2021/12/09 13:21:25	74.2	72.2	70.8	67.0	63.4
201	2021/12/09 13:21:40	61.6	60.8	58.1	60.4	57.5
206	2021/12/09 13:21:55	61.3	63.5	68.4	67.6	67.0
211	2021/12/09 13:22:10	70.8	70.6	70.6	70.9	69.8
216	2021/12/09 13:22:25	72.2	79.9	79.8	74.4	70.0
221	2021/12/09 13:22:40	66.0	63.9	63.9	66.5	63.0
226	2021/12/09 13:22:55	69.3	69.2	64.2	68.9	67.1
231	2021/12/09 13:23:10	62.2	58.2	57.8	57.5	59.1
236	2021/12/09 13:23:25	61.1	65.1	64.6	69.9	72.8
241	2021/12/09 13:23:40	72.5	69.9	66.9	70.2	74.4
246	2021/12/09 13:23:55	77.7	74.9	71.1	64.0	63.1
251	2021/12/09 13:24:10	68.0	74.4	74.0	74.0	71.1
256	2021/12/09 13:24:25	69.9	71.8	71.0	68.3	69.0
261	2021/12/09 13:24:40	68.6	63.9	59.6	62.4	59.0
266	2021/12/09 13:24:55	53.5	53.4	55.0	62.5	70.1
271	2021/12/09 13:25:10	74.8	71.4	68.4	62.5	60.9
276	2021/12/09 13:25:25	61.5	64.2	70.6	65.1	63.8
281	2021/12/09 13:25:40	63.4	64.6	60.1	57.1	58.2
286	2021/12/09 13:25:55	59.6	61.8	61.5	66.5	70.7
291	2021/12/09 13:26:10	68.7	70.3	68.8	68.5	62.4
296	2021/12/09 13:26:25	56.9	55.9	55.5	56.3	56.9

- Freq Weight : A
- Time Weight : SLOW
- Level Range : 40-100
- Max dB : 69.3 - 2021/11/24 09:26:12
- Level Range : 40-100
- SEL : 87.8
- Leq : 58.3
-

No.s	Date Time	(dB)
1	2021/11/24 09:18:38	56.3
2	2021/11/24 09:18:41	56.1
3	2021/11/24 09:18:44	55.3
4	2021/11/24 09:18:47	54.2
5	2021/11/24 09:18:50	54.9
6	2021/11/24 09:18:53	53.9
7	2021/11/24 09:18:56	56.1
8	2021/11/24 09:18:59	57.6
9	2021/11/24 09:19:02	58.9
10	2021/11/24 09:19:05	58.3
11	2021/11/24 09:19:08	57.4
12	2021/11/24 09:19:11	55.8
13	2021/11/24 09:19:14	57.2
14	2021/11/24 09:19:17	57.6
15	2021/11/24 09:19:20	59.6
16	2021/11/24 09:19:23	61.8
17	2021/11/24 09:19:26	59.5
18	2021/11/24 09:19:29	58.1
19	2021/11/24 09:19:32	58.3
20	2021/11/24 09:19:35	57.5
21	2021/11/24 09:19:38	58.6
22	2021/11/24 09:19:41	57.7
23	2021/11/24 09:19:44	57.7
24	2021/11/24 09:19:47	57.1
25	2021/11/24 09:19:50	58.3
26	2021/11/24 09:19:53	58.9
27	2021/11/24 09:19:56	58.0
28	2021/11/24 09:19:59	57.8
29	2021/11/24 09:20:02	57.4
30	2021/11/24 09:20:05	56.7
31	2021/11/24 09:20:08	56.6
32	2021/11/24 09:20:11	57.9
33	2021/11/24 09:20:14	58.0
34	2021/11/24 09:20:17	58.0
35	2021/11/24 09:20:20	56.3
36	2021/11/24 09:20:23	55.8
37	2021/11/24 09:20:26	55.7
38	2021/11/24 09:20:29	56.5
39	2021/11/24 09:20:32	56.9
40	2021/11/24 09:20:35	58.1
41	2021/11/24 09:20:38	59.3
42	2021/11/24 09:20:41	58.1
43	2021/11/24 09:20:44	56.9
44	2021/11/24 09:20:47	57.0
45	2021/11/24 09:20:50	56.7
46	2021/11/24 09:20:53	55.7
47	2021/11/24 09:20:56	55.3
48	2021/11/24 09:20:59	56.2
49	2021/11/24 09:21:02	57.6
50	2021/11/24 09:21:05	57.5
51	2021/11/24 09:21:08	57.3
52	2021/11/24 09:21:11	57.8
53	2021/11/24 09:21:14	58.1
54	2021/11/24 09:21:17	57.8
55	2021/11/24 09:21:20	58.5
56	2021/11/24 09:21:23	57.8
57	2021/11/24 09:21:26	58.0
58	2021/11/24 09:21:29	58.8
59	2021/11/24 09:21:32	58.0
60	2021/11/24 09:21:35	56.2
61	2021/11/24 09:21:38	55.3
62	2021/11/24 09:21:41	55.5
63	2021/11/24 09:21:44	55.5
64	2021/11/24 09:21:47	56.9
65	2021/11/24 09:21:50	57.5
66	2021/11/24 09:21:53	62.0
67	2021/11/24 09:21:56	63.2
68	2021/11/24 09:21:59	58.6
69	2021/11/24 09:22:02	58.8
70	2021/11/24 09:22:05	59.7
71	2021/11/24 09:22:08	61.0
72	2021/11/24 09:22:11	61.7
73	2021/11/24 09:22:14	60.5
74	2021/11/24 09:22:17	61.4
75	2021/11/24 09:22:20	59.0
76	2021/11/24 09:22:23	57.9
77	2021/11/24 09:22:26	59.1
78	2021/11/24 09:22:29	58.7
79	2021/11/24 09:22:32	58.9
80	2021/11/24 09:22:35	59.1
81	2021/11/24 09:22:38	58.6
82	2021/11/24 09:22:41	57.6
83	2021/11/24 09:22:44	58.3
84	2021/11/24 09:22:47	58.4

85	2021/11/24	09:22:50	56.9
86	2021/11/24	09:22:53	57.3
87	2021/11/24	09:22:56	57.2
88	2021/11/24	09:22:59	58.0
89	2021/11/24	09:23:02	57.6
90	2021/11/24	09:23:05	57.2
91	2021/11/24	09:23:08	57.7
92	2021/11/24	09:23:11	57.1
93	2021/11/24	09:23:14	57.4
94	2021/11/24	09:23:17	55.7
95	2021/11/24	09:23:20	55.0
96	2021/11/24	09:23:23	55.9
97	2021/11/24	09:23:26	55.5
98	2021/11/24	09:23:29	56.3
99	2021/11/24	09:23:32	56.3
100	2021/11/24	09:23:35	56.4
101	2021/11/24	09:23:38	55.8
102	2021/11/24	09:23:41	56.6
103	2021/11/24	09:23:44	56.8
104	2021/11/24	09:23:47	57.6
105	2021/11/24	09:23:50	58.6
106	2021/11/24	09:23:53	58.3
107	2021/11/24	09:23:56	58.0
108	2021/11/24	09:23:59	56.8
109	2021/11/24	09:24:02	55.4
110	2021/11/24	09:24:05	56.2
111	2021/11/24	09:24:08	58.9
112	2021/11/24	09:24:11	59.3
113	2021/11/24	09:24:14	57.8
114	2021/11/24	09:24:17	59.6
115	2021/11/24	09:24:20	62.0
116	2021/11/24	09:24:23	61.3
117	2021/11/24	09:24:26	61.3
118	2021/11/24	09:24:29	61.5
119	2021/11/24	09:24:32	59.5
120	2021/11/24	09:24:35	58.2
121	2021/11/24	09:24:38	58.4
122	2021/11/24	09:24:41	57.4
123	2021/11/24	09:24:44	56.4
124	2021/11/24	09:24:47	56.7
125	2021/11/24	09:24:50	56.3
126	2021/11/24	09:24:53	56.4
127	2021/11/24	09:24:56	56.0
128	2021/11/24	09:24:59	56.5
129	2021/11/24	09:25:02	57.6
130	2021/11/24	09:25:05	57.6
131	2021/11/24	09:25:08	58.2
132	2021/11/24	09:25:11	57.4
133	2021/11/24	09:25:14	56.7
134	2021/11/24	09:25:17	56.9
135	2021/11/24	09:25:20	57.7
136	2021/11/24	09:25:23	58.8
137	2021/11/24	09:25:26	59.9
138	2021/11/24	09:25:29	62.0
139	2021/11/24	09:25:32	64.7
140	2021/11/24	09:25:35	66.2
141	2021/11/24	09:25:38	66.5
142	2021/11/24	09:25:41	65.8
143	2021/11/24	09:25:44	64.2
144	2021/11/24	09:25:47	62.9
145	2021/11/24	09:25:50	61.2
146	2021/11/24	09:25:53	60.0
147	2021/11/24	09:25:56	58.6
148	2021/11/24	09:25:59	63.0
149	2021/11/24	09:26:02	60.6
150	2021/11/24	09:26:05	63.8
151	2021/11/24	09:26:08	68.0
152	2021/11/24	09:26:11	64.9
153	2021/11/24	09:26:14	59.3
154	2021/11/24	09:26:17	59.5
155	2021/11/24	09:26:20	60.8
156	2021/11/24	09:26:23	58.5
157	2021/11/24	09:26:26	55.7
158	2021/11/24	09:26:29	55.8
159	2021/11/24	09:26:32	56.4
160	2021/11/24	09:26:35	57.1
161	2021/11/24	09:26:38	57.1
162	2021/11/24	09:26:41	56.7
163	2021/11/24	09:26:44	56.2
164	2021/11/24	09:26:47	56.2
165	2021/11/24	09:26:50	55.8
166	2021/11/24	09:26:53	55.8
167	2021/11/24	09:26:56	56.1
168	2021/11/24	09:26:59	56.2
169	2021/11/24	09:27:02	57.6
170	2021/11/24	09:27:05	58.1
171	2021/11/24	09:27:08	59.0
172	2021/11/24	09:27:11	57.6
173	2021/11/24	09:27:14	58.6
174	2021/11/24	09:27:17	59.4
175	2021/11/24	09:27:20	57.3
176	2021/11/24	09:27:23	55.7
177	2021/11/24	09:27:26	55.6
178	2021/11/24	09:27:29	56.7
179	2021/11/24	09:27:32	56.3
180	2021/11/24	09:27:35	55.7
181	2021/11/24	09:27:38	55.2
182	2021/11/24	09:27:41	55.2

183	2021/11/24	09:27:44	57.0
184	2021/11/24	09:27:47	57.6
185	2021/11/24	09:27:50	57.2
186	2021/11/24	09:27:53	57.7
187	2021/11/24	09:27:56	57.5
188	2021/11/24	09:27:59	57.1
189	2021/11/24	09:28:02	58.3
190	2021/11/24	09:28:05	59.2
191	2021/11/24	09:28:08	58.1
192	2021/11/24	09:28:11	57.1
193	2021/11/24	09:28:14	56.1
194	2021/11/24	09:28:17	55.7
195	2021/11/24	09:28:20	55.5
196	2021/11/24	09:28:23	54.5
197	2021/11/24	09:28:26	54.4
198	2021/11/24	09:28:29	56.4
199	2021/11/24	09:28:32	55.6
200	2021/11/24	09:28:35	54.8
201	2021/11/24	09:28:38	57.1
202	2021/11/24	09:28:41	56.7
203	2021/11/24	09:28:44	57.9
204	2021/11/24	09:28:47	58.6
205	2021/11/24	09:28:50	58.5
206	2021/11/24	09:28:53	59.3
207	2021/11/24	09:28:56	59.1
208	2021/11/24	09:28:59	57.6
209	2021/11/24	09:29:02	56.0
210	2021/11/24	09:29:05	55.7
211	2021/11/24	09:29:08	56.1
212	2021/11/24	09:29:11	55.8
213	2021/11/24	09:29:14	59.3
214	2021/11/24	09:29:17	61.0
215	2021/11/24	09:29:20	61.5
216	2021/11/24	09:29:23	59.1
217	2021/11/24	09:29:26	57.3
218	2021/11/24	09:29:29	56.8
219	2021/11/24	09:29:32	58.8
220	2021/11/24	09:29:35	58.4
221	2021/11/24	09:29:38	56.3
222	2021/11/24	09:29:41	55.2
223	2021/11/24	09:29:44	55.8
224	2021/11/24	09:29:47	56.0
225	2021/11/24	09:29:50	55.2
226	2021/11/24	09:29:53	57.2
227	2021/11/24	09:29:56	58.1
228	2021/11/24	09:29:59	58.3
229	2021/11/24	09:30:02	57.2
230	2021/11/24	09:30:05	56.4
231	2021/11/24	09:30:08	57.1
232	2021/11/24	09:30:11	57.8
233	2021/11/24	09:30:14	56.8
234	2021/11/24	09:30:17	56.6
235	2021/11/24	09:30:20	57.3
236	2021/11/24	09:30:23	56.8
237	2021/11/24	09:30:26	55.1
238	2021/11/24	09:30:29	53.3
239	2021/11/24	09:30:32	56.9
240	2021/11/24	09:30:35	55.9
241	2021/11/24	09:30:38	57.9
242	2021/11/24	09:30:41	60.7
243	2021/11/24	09:30:44	55.8
244	2021/11/24	09:30:47	55.3
245	2021/11/24	09:30:50	54.6
246	2021/11/24	09:30:53	55.4
247	2021/11/24	09:30:56	54.7
248	2021/11/24	09:30:59	54.9
249	2021/11/24	09:31:02	55.5
250	2021/11/24	09:31:05	56.8
251	2021/11/24	09:31:08	56.3
252	2021/11/24	09:31:11	55.1
253	2021/11/24	09:31:14	54.4
254	2021/11/24	09:31:17	54.1
255	2021/11/24	09:31:20	54.6
256	2021/11/24	09:31:23	56.7
257	2021/11/24	09:31:26	55.4
258	2021/11/24	09:31:29	57.2
259	2021/11/24	09:31:32	57.2
260	2021/11/24	09:31:35	58.1
261	2021/11/24	09:31:38	57.2
262	2021/11/24	09:31:41	56.1
263	2021/11/24	09:31:44	54.9
264	2021/11/24	09:31:47	54.9
265	2021/11/24	09:31:50	54.6
266	2021/11/24	09:31:53	53.9
267	2021/11/24	09:31:56	53.4
268	2021/11/24	09:31:59	53.3
269	2021/11/24	09:32:02	56.3
270	2021/11/24	09:32:05	55.7
271	2021/11/24	09:32:08	55.6
272	2021/11/24	09:32:11	56.2
273	2021/11/24	09:32:14	56.3
274	2021/11/24	09:32:17	55.7
275	2021/11/24	09:32:20	55.9
276	2021/11/24	09:32:23	57.6
277	2021/11/24	09:32:26	57.6
278	2021/11/24	09:32:29	57.0
279	2021/11/24	09:32:32	58.0
280	2021/11/24	09:32:35	59.7

281	2021/11/24	09:32:38	59.3
282	2021/11/24	09:32:41	60.2
283	2021/11/24	09:32:44	60.9
284	2021/11/24	09:32:47	61.2
285	2021/11/24	09:32:50	59.9
286	2021/11/24	09:32:53	55.9
287	2021/11/24	09:32:56	55.2
288	2021/11/24	09:32:59	56.8
289	2021/11/24	09:33:02	58.2
290	2021/11/24	09:33:05	59.6
291	2021/11/24	09:33:08	56.7
292	2021/11/24	09:33:11	54.5
293	2021/11/24	09:33:14	54.8
294	2021/11/24	09:33:17	57.1
295	2021/11/24	09:33:20	56.7
296	2021/11/24	09:33:23	55.0
297	2021/11/24	09:33:26	55.6
298	2021/11/24	09:33:29	56.3
299	2021/11/24	09:33:32	55.0
300	2021/11/24	09:33:35	54.5

- Freq Weight : A
- Time Weight : SLOW
- Level Range : 40-100
- Max dB : 76.3 - 2021/12/09 13:57:30
- Level Range : 40-100
- SEL : 88.2
- Leq : 58.7
-

No.s	Date Time	(dB)				
1	2021/12/09 13:50:44	53.7	53.4	54.1	55.8	55.9
6	2021/12/09 13:50:59	56.2	56.0	55.9	54.8	55.9
11	2021/12/09 13:51:14	51.3	48.5	48.5	49.5	51.5
16	2021/12/09 13:51:29	53.1	54.0	55.5	53.3	53.0
21	2021/12/09 13:51:44	54.0	55.5	54.1	54.6	54.0
26	2021/12/09 13:51:59	54.0	53.8	54.0	55.7	55.3
31	2021/12/09 13:52:14	55.0	53.7	53.0	55.1	54.9
36	2021/12/09 13:52:29	52.1	50.6	49.9	52.6	53.4
41	2021/12/09 13:52:44	53.2	52.0	53.4	53.3	54.7
46	2021/12/09 13:52:59	55.3	55.4	57.4	57.0	55.4
51	2021/12/09 13:53:14	53.9	53.5	54.3	52.4	55.6
56	2021/12/09 13:53:29	55.1	56.1	56.1	56.3	61.0
61	2021/12/09 13:53:44	60.2	58.7	57.3	57.8	57.8
66	2021/12/09 13:53:59	56.2	57.2	55.7	54.8	57.1
71	2021/12/09 13:54:14	56.9	55.6	54.7	56.6	56.3
76	2021/12/09 13:54:29	54.4	52.1	53.4	55.2	56.6
81	2021/12/09 13:54:44	55.3	54.3	53.0	51.8	53.9
86	2021/12/09 13:54:59	56.8	58.4	56.8	58.1	58.1
91	2021/12/09 13:55:14	55.6	55.7	56.7	54.9	53.2
96	2021/12/09 13:55:29	55.7	54.0	50.9	52.2	53.8
101	2021/12/09 13:55:44	56.4	56.3	56.0	56.3	56.8
106	2021/12/09 13:55:59	55.4	54.3	52.9	51.9	52.1
111	2021/12/09 13:56:14	51.0	52.9	53.1	52.7	54.7
116	2021/12/09 13:56:29	54.7	56.1	58.3	57.2	61.8
121	2021/12/09 13:56:44	65.9	62.3	60.7	59.6	58.3
126	2021/12/09 13:56:59	58.8	59.3	59.7	61.1	58.9
131	2021/12/09 13:57:14	62.6	65.2	67.8	74.3	74.3
136	2021/12/09 13:57:29	74.7	70.3	65.6	58.5	56.6
141	2021/12/09 13:57:44	57.0	56.3	56.6	54.8	54.0
146	2021/12/09 13:57:59	54.5	54.2	54.9	53.9	51.8
151	2021/12/09 13:58:14	51.7	53.2	53.0	52.1	51.2
156	2021/12/09 13:58:29	52.7	53.6	54.0	54.6	52.9
161	2021/12/09 13:58:44	53.2	55.0	57.1	62.1	58.3
166	2021/12/09 13:58:59	57.2	56.8	56.3	56.5	54.7
171	2021/12/09 13:59:14	53.7	54.2	53.7	54.8	55.7
176	2021/12/09 13:59:29	55.2	54.1	54.5	54.9	56.9
181	2021/12/09 13:59:44	56.1	55.6	54.4	54.4	54.9
186	2021/12/09 13:59:59	54.3	54.7	57.4	64.2	60.0
191	2021/12/09 14:00:14	55.7	54.3	53.4	52.0	50.4
196	2021/12/09 14:00:29	49.6	48.5	49.6	50.8	51.1
201	2021/12/09 14:00:44	52.1	55.1	56.5	56.3	55.1
206	2021/12/09 14:00:59	53.6	53.4	51.2	50.6	51.6
211	2021/12/09 14:01:14	52.5	52.6	52.6	51.5	53.1
216	2021/12/09 14:01:29	52.5	52.2	51.6	51.4	52.3
221	2021/12/09 14:01:44	54.0	54.0	54.1	54.7	54.9
226	2021/12/09 14:01:59	53.0	53.3	54.1	53.2	55.5
231	2021/12/09 14:02:14	56.2	55.2	55.6	53.8	54.3
236	2021/12/09 14:02:29	53.6	52.2	52.2	51.3	51.5
241	2021/12/09 14:02:44	52.5	54.7	56.0	54.3	54.8
246	2021/12/09 14:02:59	55.4	55.5	54.5	53.9	55.1
251	2021/12/09 14:03:14	55.8	54.3	54.4	57.8	55.7
256	2021/12/09 14:03:29	53.7	53.1	52.5	51.7	50.7
261	2021/12/09 14:03:44	50.5	52.3	51.7	51.9	50.9
266	2021/12/09 14:03:59	51.7	53.4	55.7	57.1	57.4
271	2021/12/09 14:04:14	57.4	58.7	53.9	52.4	53.4
276	2021/12/09 14:04:29	53.2	52.8	54.6	56.3	54.9
281	2021/12/09 14:04:44	54.3	54.1	54.2	54.4	55.0
286	2021/12/09 14:04:59	56.1	55.6	54.9	53.6	54.1
291	2021/12/09 14:05:14	59.5	53.7	51.8	52.3	53.6
296	2021/12/09 14:05:29	53.1	53.0	51.3	51.1	52.5

- Freq Weight : A
- Time Weight : SLOW
- Level Range : 40-100
- Max dB : 96.9 - 2021/12/09 19:37:10
- Level Range : 40-100
- SEL : 119.3
- Leq : 70.0
-

No.s	Date Time	(dB)				
1	2021/12/09 14:30:05	69.8	53.5	51.0	49.5	55.5
6	2021/12/09 14:50:05	55.8	56.7	49.1	48.2	49.0
11	2021/12/09 15:10:05	48.3	51.0	47.1	49.1	48.9
16	2021/12/09 15:30:05	49.4	50.1	48.8	48.4	57.5
21	2021/12/09 15:50:05	48.3	51.1	54.4	60.3	50.1
26	2021/12/09 16:10:05	49.6	50.1	47.3	47.8	45.6
31	2021/12/09 16:30:05	49.8	45.9	53.8	49.3	47.6
36	2021/12/09 16:50:05	47.5	50.6	51.6	54.1	52.0
41	2021/12/09 17:10:05	49.7	51.9	46.8	47.5	47.6
46	2021/12/09 17:30:05	48.8	52.0	49.1	49.9	47.0
51	2021/12/09 17:50:05	48.0	49.2	48.4	50.0	59.2
56	2021/12/09 18:10:05	48.4	53.4	48.6	49.2	48.5
61	2021/12/09 18:30:05	47.5	47.6	47.6	47.3	45.9
66	2021/12/09 18:50:05	48.2	47.4	47.2	49.8	49.7
71	2021/12/09 19:10:05	49.7	47.1	47.2	48.3	48.4
76	2021/12/09 19:30:05	55.3	50.1	47.4	47.7	48.3
81	2021/12/09 19:50:05	49.9	47.5	48.3	48.4	47.3
86	2021/12/09 20:10:05	48.9	47.8	46.4	48.8	48.7
91	2021/12/09 20:30:05	49.9	49.1	47.4	48.3	46.8
96	2021/12/09 20:50:05	48.8	54.1	47.8	50.3	48.2
101	2021/12/09 21:10:05	49.2	49.3	48.0	49.1	52.2
106	2021/12/09 21:30:05	47.3	46.6	49.8	48.1	47.8
111	2021/12/09 21:50:05	47.1	48.1	47.1	47.4	46.7
116	2021/12/09 22:10:05	47.7	49.0	49.4	47.8	48.5
121	2021/12/09 22:30:05	47.0	48.3	49.4	46.7	50.1
126	2021/12/09 22:50:05	45.9	45.1	46.4	47.5	50.4
131	2021/12/09 23:10:05	44.7	44.4	45.1	49.2	45.6
136	2021/12/09 23:30:05	47.4	46.6	45.7	45.7	46.1
141	2021/12/09 23:50:05	44.6	45.5	46.3	46.1	46.4
146	2021/12/10 00:10:05	45.5	47.5	45.1	44.1	47.2
151	2021/12/10 00:30:05	44.5	44.7	43.4	42.2	43.4
156	2021/12/10 00:50:05	45.5	45.3	46.1	51.2	48.2
161	2021/12/10 01:10:05	48.9	47.2	46.7	46.5	50.8
166	2021/12/10 01:30:05	47.2	46.9	45.0	44.0	41.8
171	2021/12/10 01:50:05	44.0	42.2	44.2	44.3	47.4
176	2021/12/10 02:10:05	46.2	47.3	47.2	50.5	46.3
181	2021/12/10 02:30:05	48.9	49.3	48.3	46.4	47.8
186	2021/12/10 02:50:05	48.0	48.9	52.5	51.3	55.6
191	2021/12/10 03:10:05	50.7	49.6	47.0	49.6	49.0
196	2021/12/10 03:30:05	51.5	50.7	50.7	53.0	51.0
201	2021/12/10 03:50:05	47.8	48.8	49.5	50.5	50.8
206	2021/12/10 04:10:05	50.1	51.1	53.0	52.8	52.6
211	2021/12/10 04:30:05	53.1	54.0	53.1	53.5	53.1
216	2021/12/10 04:50:05	53.7	56.6	56.6	53.3	53.5
221	2021/12/10 05:10:05	52.8	52.7	54.3	55.0	54.7
226	2021/12/10 05:30:05	54.1	56.8	56.6	55.4	58.1
231	2021/12/10 05:50:05	58.2	54.2	55.5	54.4	54.7
236	2021/12/10 06:10:05	54.6	56.1	54.7	54.9	55.6
241	2021/12/10 06:30:05	54.2	56.9	56.4	57.3	57.0
246	2021/12/10 06:50:05	59.5	56.1	57.0	56.7	58.2
251	2021/12/10 07:10:05	56.5	57.2	57.6	56.8	56.5
256	2021/12/10 07:30:05	58.3	57.7	57.2	57.2	58.2
261	2021/12/10 07:50:05	58.5	57.2	56.7	61.6	55.2
266	2021/12/10 08:10:05	55.2	55.9	56.3	56.0	55.5
271	2021/12/10 08:30:05	55.0	55.1	54.0	54.8	55.7
276	2021/12/10 08:50:05	53.4	54.9	54.3	53.0	53.9
281	2021/12/10 09:10:05	51.1	51.8	50.0	50.3	50.0
286	2021/12/10 09:30:05	49.0	49.4	50.0	48.3	51.9
291	2021/12/10 09:50:05	53.9	48.3	48.0	48.7	47.4
296	2021/12/10 10:10:05	46.4	48.0	46.0	46.3	47.7
301	2021/12/10 10:30:05	48.4	48.6	47.1	48.8	46.6
306	2021/12/10 10:50:05	52.6	46.8	46.7	48.1	48.5
311	2021/12/10 11:10:05	48.7	48.8	49.6	52.9	51.0
316	2021/12/10 11:30:05	54.2	50.2	50.2	49.7	48.7
321	2021/12/10 11:50:05	49.5	48.4	48.9	49.8	52.0
326	2021/12/10 12:10:05	49.2	48.8	47.7	47.5	47.1
331	2021/12/10 12:30:05	55.1	48.4	50.6	50.1	49.8
336	2021/12/10 12:50:05	49.6	47.8	48.9	47.8	50.6
341	2021/12/10 13:10:05	51.4	48.9	50.2	53.1	57.7
346	2021/12/10 13:30:05	50.0	52.1	48.6	48.5	50.5
351	2021/12/10 13:50:05	50.5	49.3	52.4	50.3	51.8
356	2021/12/10 14:10:05	51.5	48.1	51.1	50.0	51.5

Keith Higgins

Traffic Engineer

JOHN/ABBOTT MASTER PLAN

TRANSPORTATION IMPACT ANALYSIS

ADMINISTRATIVE DRAFT REPORT (REVISED)

SALINAS, CALIFORNIA

Prepared for
Uni-Kool Partners
395 W. Market Street
Salinas, California

Prepared by
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February 14, 2022



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TABLE OF CONTENTS

1 INTRODUCTION 1

1.1 Scope of Work 1

1.2 Study Network 1

1.3 Analysis Scenarios 2

1.4 Traffic Operation Evaluation Methodologies 2

1.5 Level of Service Standards - Study Network 2

1.6 Significance Criteria 2

1.6.1 Environmental (CEQA) 3

1.6.2 City of Salinas (Local) 3

1.6.3 Caltrans (local) 3

1.7 Impact Fees 4

1.7.1 Transportation Agency for Monterey County 4

1.7.2 Salinas Traffic Improvement Program 4

2 EXISTING TRAFFIC CONDITIONS 7

2.1 Existing Traffic Network 7

2.2 Existing Pedestrian Network 9

2.3 Existing Bicycle Network 9

2.4 Existing Transit Service 10

2.5 Existing Conditions Traffic Circulation 11

2.5.1 Intersection Operations 11

2.5.2 Pedestrian Circulation 12

2.5.3 Bicycle Circulation 12

3 EXISTING PLUS PROJECT CONDITIONS 13

3.1 Project Description 13

3.2 Project Trip Generation 13

3.3 Project Trip Distribution and Assignment 16

3.4 Existing Plus Project Condition Traffic Circulation 16

3.4.1 Intersection Operations 16

3.4.2 Pedestrian Circulation 19

3.4.3 Bicycle Circulation 19
3.4.4 Transit Circulation 19
3.5 Impact Fees 19
4 CUMULATIVE WITHOUT PROJECT CONDITIONS 20
4.1 Derivation of Cumulative Without Project Condition Volumes 20
4.2 Network Modifications under Cumulative Conditions 20
4.3 Cumulative Without Project Traffic Conditions 21
4.3.1 Intersection Operations 21
4.3.2 Pedestrian Circulation 23
4.3.3 Bicycle Circulation 23
4.3.4 Transit Circulation 24
5 CUMULATIVE PLUS PROJECT CONDITIONS 25
5.1 Derivation of Cumulative Plus Project Condition Traffic Volumes 25
5.2 Cumulative Plus Project Traffic Conditions 25
5.2.1 Intersection Operations 25
5.2.2 Pedestrian Circulation 29
5.2.3 Bicycle Circulation 29
5.2.4 Transit Circulation 29
6 SITE ACCESS AND INTERNAL CIRCULATION 30
6.1 Vehicle Circulation 30
6.1.1 Vehicle Site Access 30
6.1.2 Vehicle Internal Circulation 30
6.2 Pedestrian Circulation 30
6.3 Bicycle Circulation 31
7 VEHICLE MILES TRAVELED ANALYSIS 32
7.1 City of Salinas VMT Policy 32
7.2 City of Salinas VMT Policy 32
7.3 Project VMT Analysis 33
7.3.1 Project Land Use VMT Analysis 33
7.3.2 Project Off-Site Transportation Improvements VMT Analysis 34

8 SUMMARY OF RECOMMENDED IMPROVEMENTS 36

8.1 Project Responsibilities 36

9 REFERENCES 38

9.1 List of References 38

9.2 List of Contacts 39

LIST OF EXHIBITS

1. Project Location Map and Study Area

2A. Project Site Plan (Layout)

2B. Project Site Plan (Phasing)

3. Existing Conditions (Off Season) – AM and PM Peak Hour Volumes

4. Seasonal Adjustments – AM and PM Peak Hour Volumes

5. Existing Peak Season Conditions – AM and PM Peak Hour Volumes

6A. Intersection Levels of Service

6B. Recommended Intersection Improvements

7. Project Trip Generation

8. Project Trip Distribution

9. Project Trip Assignment – AM and PM Peak Hour Peak Hour Volumes

10. Existing Plus Project Conditions – AM and PM Peak Hour Peak Hour Volumes

11. Cumulative Without Project Conditions – AM and PM Peak Hour Volumes

12. Cumulative Plus Project Conditions – AM and PM Peak Hour Volumes

13. Internal Project Driveways at Project Buildout (Cumulative Plus Project Conditions) – AM and PM Peak Hour Volumes

14. Internal Intersection Levels of Service

LIST OF APPENDICES

A. Level of Service Descriptions

B. Existing and Proposed Bicycle Facilities near Project Site

C. Intersection Traffic Volume Counts

D. Seasonal Growth Rate Calculations

E. Intersection Level of Service Calculations – Existing Conditions

F. Intersection Level of Service Calculations – Existing Plus Project Conditions

G. Intersection Level of Service Calculations – Cumulative Without Project Conditions

H. Intersection Level of Service Calculations – Cumulative Plus Project Conditions

I. Warrant Worksheets

1 INTRODUCTION

The Salinas Mixed Use Master Plan project is being proposed to be located at the southeast corner of the John Street (State Route 68, i.e., SR 68) / Abbott Street intersection in Salinas, California. The Project site covers approximately 21 acres and will be composed of residential, commercial, office land uses and a hotel on multiple parcels. It is currently occupied by a variety of agricultural industrial developments.

The locations of the Project site and study area are indicated in **Exhibit 1**. The Project site plan is shown in **Exhibit 2A.** The project phasing is shown in **Exhibit 2B.**

This report summarizes the analysis of potential traffic operations and adverse effects associated with the proposed Project as well as cumulative effects. Existing and Cumulative conditions are analyzed with and without the Project. Vehicular, pedestrian, bicycle and transit circulation are evaluated at the Project site and the immediate surrounding street network.

A Vehicle Miles Traveled (VMT) analysis is also included to comply with current California Environmental Quality Act (CEQA) requirements.

1.1 Scope of Work

This report addresses the following topics:

1. Existing vehicular, pedestrian and bicycle circulation on the surrounding street network.
2. Assessment of potential adverse effects to vehicular, pedestrian, bicycle, and transit circulation due to the Project, and recommendations to minimize or alleviate those effects.
3. Assessment of potential cumulative traffic effects.
4. Site access and on-site circulation assessment.
5. VMT analysis.

1.2 Study Network

The AM and PM peak periods were analyzed at the following 19 intersections. The agency having jurisdiction over each intersection is indicated in parentheses. Their locations are indicated on **Exhibit 1**.

1. Intersection 1 – E Market Street–Sherwood Drive / Market Way–E Market Street (City of Salinas)
2. Intersection 2 – Front Street / E Alisal Street (City of Salinas)
3. Intersection 3 – Abbott Street / John Street (SR 68) (Caltrans)
4. Intersection 4 – Spring Street / John Street (SR 68) (Caltrans)
5. Intersection 5 – S Sanborn Road / John Street (City of Salinas)
6. Intersection 6 – Abbott Street / Maple Street (City of Salinas)
7. Intersection 7 – Abbott Street / Spicer Street (City of Salinas)
8. Intersection 8 – Abbott Street / Alameda Avenue (City of Salinas)
9. Intersection 9 – Abbott Street / Los Palos Drive – Malarin Street (City of Salinas)
10. Intersection 10 – Abbott Street / E Romie Lane – Abbott Place (City of Salinas)
11. Intersection 11 – E Blanco Road – S Sanborn Road / Abbott Street (City of Salinas)

1.3 Analysis Scenarios

Traffic operations for the following analysis scenarios were analyzed:

1. Existing Conditions
2. Existing Plus Project Conditions
3. Cumulative Without Project Conditions
4. Cumulative Plus Project Conditions

Improvements recommended to offset adverse effects for each development scenario are recommended where warranted.

1.4 Traffic Operation Evaluation Methodologies

Intersection traffic operations were evaluated based upon the level of service (LOS) concept. LOS is a qualitative description of an intersection's operations, ranging from LOS A to LOS F. Level of Service "A" represents free flow uncongested traffic conditions. Level of Service "F" represents highly congested traffic conditions with unacceptable delay to vehicles at intersections. The intermediate levels of service represent incremental levels of congestion and delay between these two extremes. LOS descriptions for each type of existing traffic control at the study intersections (i.e., signal, all-way stop and one-/two-way stop) are included as **Appendix A**.

Intersection traffic operations were evaluated using the Synchro© traffic analysis software (Version 10) using both the 2010 and 2000 Highway Capacity Manual (HCM) methodologies. The average delay is then correlated to a level of service. For two-way stop-controlled intersections, only the vehicle delay for side street traffic is analyzed. LOS for each side street movement is based on the distribution of gaps in the major street traffic stream and driver judgment in selecting gaps. When using the HCM 2010 and 2000 methods for the analysis of signalized and all-way stop-controlled intersections, the overall intersection delay is used to determine LOS.

1.5 Level of Service Standards - Study Network

This study assesses operations at intersections located in two different jurisdictions – City of Salinas and Caltrans. The City of Salinas has an overall level of service (LOS) standard of Level of Service (LOS) D. The overall Caltrans level of service standard is the transition between LOS C and LOS D, abbreviated herein as LOS C-D.

As noted in Section 1.4, the Highway Capacity Manual does not provide overall levels of service for one-way stop-controlled intersections; rather, it only provides side-street operations for this type of traffic control. Side-street operations represent delay for the entire stop-controlled approach, regardless of the number of lanes. Also, side street traffic volumes are typically much lower than volumes on the major street and only represent a small portion of the overall intersection operations.

1.6 Significance Criteria

Two different criteria have been used to assess the impacts and adverse effects of this Project – one for environmental impacts and one for local adverse effects. The environmental impacts refer to impacts assessed per California Environmental Quality Act (CEQA) guidelines. Local adverse

effects are assessed relative to the City of Salinas General Plan and Caltrans level of service standards. The following criteria and thresholds have been used in this study:

1.6.1 Environmental (CEQA)

Effective as of July 2020, Senate Bill (SB) 743 requires that transportation impacts for projects per the California Environmental Quality Act (CEQA) be based on a project's Vehicle Miles Traveled (VMT), rather than level of service. The publication *Technical Advisory on Evaluating Transportation Impacts in CEQA,* State of California Governor's Office of Planning and Research, December 2018, suggests that a significant environmental (CEQA) VMT threshold for various land use categories. The *Senate Bill 743 Vehicle Miles Traveled Implementation Policy - City of Salinas, Final Interim Policy*, October 13, 2020, is the basis for the evaluation of the Project's VMT impact significance.

1.6.2 City of Salinas (Local)

For the purposes of this analysis, an adverse effect would occur at any study intersection under the jurisdiction of the City of Salinas under the following circumstances:

Signalized or All-Way Stop-Controlled Intersection (Intersections 1-3, 5, and 9-11):

- An adverse effect would occur if an intersection operating at LOS A, B, C, or D pre-Project degrades to E or F with the addition of Project traffic.
- For intersections already operating at unacceptable level E or F pre-Project, any increase (one vehicle) in traffic is considered to be an adverse effect.

One- or Two-Way Stop-Controlled Intersection (Intersections 6-8):

- An adverse effect would occur if the side-street at an intersection operating at LOS A, B, C or D pre-Project degrades to LOS E or F with Project traffic AND if any traffic signal warrant is met with the addition of Project traffic; or
- For side-streets already operating at LOS E or F pre-Project, an adverse effect would occur with the addition of any Project traffic during the deficient peak hour AND if any traffic signal warrant is met with the addition of Project traffic.

1.6.3 Caltrans (local)

For the purposes of this analysis, an adverse effect would occur at any intersection under the jurisdictions of Caltrans under the following circumstances:

One- or Two-Way Stop-Controlled Intersection (Intersection 4,12):

- An adverse effect would occur if the side-street at an intersection operating at LOS A, B or C pre-Project degrades to LOS D, E or F with Project traffic; or
- For side-streets already operating at LOS D, E or F pre-Project, the addition of any Project traffic during the deficient peak hour would be considered an adverse effect, regardless of its effects on delay.

1.7 Impact Fees

The Project will be assessed the following two transportation impact fees.

1.7.1 Transportation Agency for Monterey County

The Transportation Agency for Monterey County (TAMC) and its member jurisdictions have adopted a county-wide, regional development impact fee to cover the costs for studies and construction of many roadway improvements throughout Monterey County. This impact fee, which went into effect on August 27, 2008, is applied to new development within Monterey County. The governing document for the fee is the *Regional Impact Fee Nexus Study Update* (March 26, 2008) prepared by Kimley-Horn Associates, Inc. *The Regional Impact Fee Nexus Study Update* was updated in October 2018 by Wood Rodgers.

TAMC, Monterey County and Caltrans have agreed that the payment of the TAMC fee satisfies the Project's fair share contribution to improvements that alleviate cumulative adverse effects throughout the regional highway system. This includes highways that will operate deficiently but no capital improvement project is currently programmed to correct the deficiency. Projects partially funded by the TAMC fee in North Monterey County and the vicinity of Salinas are listed below.

1. TAMC Improvement 2 – SR 156 Widening from US 101 to Castroville Boulevard
2. TAMC Improvement 4 - Davis Road North from Blanco Road to Market Street (SR183)
3. TAMC Improvement 5 – Davis Road South from Blanco Road to Reservation Road, including replacement of bridge over Salinas River
4. TAMC Improvements 7 - US-101 - South County Phase 1 (Frontage Roads - Salinas to Chualar)
5. TAMC Improvement 8 – US-101 South County Phase 2 (Harris Road)
6. TAMC Improvement 10 – US 101 Widening from Airport Boulevard to Boronda Road

Additional funding will be provided by Measure X, the Transportation Sales Tax measure. These local funding sources are anticipated to leverage State and federal funding sources to fully fund the improvements. Toll roads are also being considered as a funding source.

1.7.2 Salinas Traffic Improvement Program

The City of Salinas Traffic Improvement Program – 2010 Update, Wood Rodgers, March 2010, is the technical document used to establish the Salinas Traffic Fee Ordinance (TFO), which is the primary funding source for transportation improvements to offset adverse effects of cumulative development as the City builds out its current General Plan.

Improvements included in the Traffic Improvement Program that are located in the vicinity of the Project site are listed below along with their individual TFO project number.

1. TFO 30 – Rossi Street Widening. Widen W Rossi Street to four lanes between N Main Street and Sherwood Drive.
2. TFO 32 – Widen US 101. Widen US 101 to six lanes between Sala Road and Harris Road.

3. TFO 37A, 37B and 37C – Sanborn Road Improvements. Construct the following:
    a. Widen Sanborn Road to six lanes between John Street and Abbott Street;
    b. Signalize the S Sanborn Road / US 101 Northbound Off-Ramp – Fairview Avenue intersection. This improvement was completed in 2017;
    c. Widen Fairview Avenue to three lanes between S Sanborn Road and US 101 Northbound Ramps; and
    d. Construct Elvee Drive extension between Work Street and 925 feet east of Work Street, including a new bridge over an existing drainage ditch, plus disconnect Elvee Drive at S Sanborn Road.
4. TFO 38 – Airport Boulevard / US 101 Interchange Upgrade. Implement the previously approved Caltrans Project Study Report (PSR) improvements to the US 101 Southbound ramps at Airport Boulevard.
5. TFO 39 – Harris Road / US 101 Interchange. Construct a full interchange on US 101 at Harris Road, replacing the existing partial interchange at Abbott Street.
6. TFO 41 – Blanco Road Widening. Widen W Blanco Road to four lanes between Reservation Road near Marina and W Alisal Street in Salinas.
7. TFO 42 – Abbott Street Widening – John Street to Romie Lane. Add left turn channelization along Abbott Street by widening Abbott Street where feasible and eliminating on-street parking in both directions between John Street and Romie Lane.
8. TFO 43 – Alisal Street Improvements. Add left turn channelization at major intersections between Monterey Street and Front Street.
9. TFO 44 – John Street Improvements. Add left turn channelization and eliminate street parking between Abbott Street and Alisal Street.
10. TFO 59 – Main Street (RTE 68) / Blanco Road Intersection. Construct various improvements at the S Main Street (SR 68) / E Blanco Road intersection.
11. TFO 64 – Romie Lane (Pajaro to Alameda). Widen E Romie Lane to four lanes between Pajaro Street and California Street.
12. TFO 65 – John Street at US 101 (Overpass). Widen the existing John Street overpass of US 101 to four lanes.
13. TFO 66 – Elvee Drive (Work Street to Reclamation Ditch). Included in TFO 37B – Construct Elvee Drive extension between Work Street and 925 feet east of Work Street.
14. TFO 67 – Work Street / Terven Avenue / Sanborn Road Intersection. Construct various intersection improvements at the S Sanborn Road / Work Street – Terven Avenue intersection.
15. TFO 68 – Abbott Street / E. Blanco Road / Sanborn Road Intersection. Construct various intersection improvements at the E Blanco Road – S Sanborn Road / Abbott Street intersection.

16. TFO 69 – Hansen Street / Airport Boulevard Intersection. Construct various intersection improvements at the Hansen Street / Airport Boulevard intersection.
17. TFO 70 – Hansen Street / Harkins Road Intersection. Construct various intersection improvements at the Hansen Street / Harkins Road intersection.
18. TFO 71 – Abbott Street / Harkins Road Intersection. Construct various intersection improvements at the Abbott Street / Harkins Road intersection.
19. TFO 72 – Abbott Street / Merrill Street Intersection. Construct various intersection improvements at the Abbott Street / Merrill Street intersection.
20. TFO 73 – Davis Road / Blanco Road Intersection. Construct various intersection improvements at the S Davis Road / W Blanco Road intersection.
21. TFO 74 – Abbott Street Widening – Harkins Road to Harris Road. Widen and reconstruct the northeast frontage of Abbott Street between Harkins Road and Harris Road.
22. TFO 75 – Airport Boulevard / US 101 Southbound Off-Ramp Widening. Widen the existing US 101 southbound offramp at Airport Boulevard to two lanes. This is part of TFO 38 – Airport Boulevard / US 101 Interchange Upgrade.

2 EXISTING TRAFFIC CONDITIONS

This chapter evaluates Existing traffic conditions and includes a description of the Project setting.

2.1 Existing Traffic Network

The Project is located at the southeast corner of Abbott Street and John Street (SR 68) in the City of Salinas. It is approximately a half-mile southeast of downtown Salinas and one-third mile west of US 101.

The key roadways in the vicinity of the Project include US 101, Abbott Street, John Street (SR 68), E Market Street, Sherwood Drive, Front Street, E Alisal Street, S Sanborn Road, E Romie Lane and E Blanco Road. Other roadways in the study area include Market Way, Spring Street, Maple Street, Spicer Street, Alameda Avenue, Los Palos Drive, Malarin Street, and Abbott Place. These facilities are described below, in alphabetical order:

Abbott Place is a two-lane local street providing access to various industrial and ag industrial facilities that is a frontage street immediately east of Abbott Street near East Romie Lane. Its unposted speed limit is 25 miles per hour (mph).

Abbott Street is a four-lane major arterial street providing access to residential neighborhoods, commercial uses, and industrial and ag industrial facilities west of the Union Pacific railroad tracks. Its posted speed limit is 35 mph.

Alameda Avenue is a two-lane residential collector street providing access to neighborhoods west of Abbott Street and north and south of E Romie Lane. It also provides access to commercial properties near its intersection with Abbott Street and medical offices near its intersection with E Romie Lane. Its presumed speed limit is 25 mph.

East Alisal Street is a two- to four-lane major arterial street providing access to residential neighborhoods and commercial properties east and west of downtown Salinas. It also provides access into the heart of downtown Salinas. Its posted speed limit is 35 mph east of Front Street and 25 mph west of Front Street.

East Blanco Road is a three- to four-lane major arterial street in southern Salinas, connecting the industrial and ag industrial facilities in southern Salinas with Marina and the greater Monterey Peninsula. The posted speed limit on Blanco Road in the study area is 45 mph.

Front Street is a two- to four-lane street in Salinas. North of Abbott Street, Front Street is a four-lane major arterial street providing access to residential and commercial properties. South of Abbott Street, Front Street is a two-lane local street that also provides access to residential neighborhoods and commercial properties. The posted speed limit on Front Street is 35 mph between East Alisal Street and Abbott Street and 25 mph north of East Alisal Street. The presumed speed limit on Front Street south of Abbott Street is 25 mph.

John Street is a two- to four-lane major arterial south of downtown Salinas. It provides access to residential neighborhoods, commercial uses and industrial and ag industrial facilities. Between S Main Street and S Wood Street, John Street is also SR 68, which connects Salinas and Monterey via Spreckels and Toro Park. The posted speed limit on John Street is 30 mph west of Abbott Street and 35 mph east of Abbott Street.

Los Palos Drive is a two-lane collector street providing access to residential neighborhoods and medical offices near Salinas Valley Memorial Hospital (SVMH). It also provides access to the emergency room at SVMH via its connection to San Jose Street. Its speed limit is 25 mph.

Malarin Street is a two-lane collector street providing access to medical offices, industrial and ag industrial facilities east of Abbott Street near Los Palos Drive. Its speed limit is 25 mph.

Maple Street is a two-lane primarily residential collector street, providing access to residential neighborhoods south of John Street (SR 68) between South Main Street (SR 68) and Abbott Street. It also provides access to various commercial uses near its intersections with South Main Street and Abbott Street. The presumed speed limit on Maple Street is 25 mph.

East Market Street is a two- to four-lane major arterial street through central Salinas. West of downtown Salinas, it provides access to various commercial and industrial areas, as well as the Salinas Amtrak train station. East of downtown Salinas, it provides access to commercial and industrial areas and residential neighborhoods, including the Alisal district of eastern Salinas. In addition, Market Street west of Salinas Street is also State Route 183 (SR 183), which provides direct access to the unincorporated community of Castroville and connections to Monterey and Santa Cruz. The posted speed limit on East Market Street is 25 mph west of Sherwood Drive and 35 mph east of Sherwood Drive.

Market Way is a two-lane local street serving the Chinatown district of Salinas. The presumed speed limit is 25 mph.

East Romie Lane is a two- to four-lane street extending between Abbott Street and west of South Main Street (SR 68). It is a minor arterial between S Main Street (SR 68) and Abbott Street, and a collector street west of S Main Street (SR 68). East Romie Lane is four lanes wide east of Alameda Avenue and two lanes wide west of Alameda Avenue. East Romie Lane provides access to residential neighborhoods north and south of it, SVMH and the various medical offices near the hospital, and commercial properties. The posted speed limit on East Romie Lane in the study area is 35 mph east of California Street and 25 mph west of California Street.

South Sanborn Road is a four- to five-lane major arterial street provides the primary access to the Boronda area from North Davis Road. It is a two-lane east-west arterial that extends from the Davis Road/Laurel Drive intersection to Boronda Road. The posted speed limit on South Sanborn Road is 45 mph.

Sherwood Drive is a four-lane major arterial street connecting northern and downtown Salinas. At East Bernal Drive, its name changes to **Natividad Road**. It provides access to residential neighborhoods and commercial uses. In the vicinity of the study area, the posted speed limit on Sherwood Drive is 35 mph.

Spicer Street is a two-lane collector street providing access to commercial, industrial, and ag industrial facilities east of Abbott Street and south of John Street (SR 68). The presumed speed limit on Spicer Street is 25 miles per hour (mph).

Spring Street is a two-lane local street providing access to its fronting residential, commercial, and industrial properties. The presumed speed limit is 25 mph.

US 101 is a regional north-south facility through the City of Salinas. It is currently a four-lane roadway with interchanges in the city. The posted speed limit through the city is 65 mph. The nearest and most direct interchange access point to the Project from US 101 is the John Street (SR 68) interchange.

2.2 Existing Pedestrian Network

Sidewalks are nearly continuous throughout the entire study area. There is an approximately 5-foot sidewalk along the Project frontages of both Abbott and John Streets (SR 68). These sidewalks connect to nearly all of the other sidewalks in the study area. The only gaps in sidewalks in the study are as follows:

1. John Street (SR 68) at the at-grade Union Pacific railroad crossing (both directions)

Crosswalks are striped at all signalized study intersections and some unsignalized study intersections. Near the Project site, crosswalks are striped across all approaches at the Abbott Street / John Street (SR 68), as well as at the following unsignalized intersections:

1. Spring Street / John Street (SR 68) – only across north leg of Spring Street;
2. Front Street / John Street (SR 68) – only across north and south legs of Front Street;
3. Abbott Street / Maple Street – across Maple Street and only across north leg of Abbott Street;
4. Abbott Street / Alameda Avenue – across west leg of Alameda Avenue and only across north leg of Abbott Street .

2.3 Existing Bicycle Network

There are four types of bicycle facilities defined by Caltrans. Each type is described below:

1. Bike path (Class I) – A separate right-of-way designed for the exclusive use of bicycle and pedestrian traffic with crossflow minimized.
2. Bike lane (Class II) – A striped lane for one-way bike travel on a street or highway, typically including signs placed along the street segment.
3. Bike route (Class III) – Provides a shared use with pedestrian or motor vehicle traffic. Typically, these facilities are city streets with signage designating the segment for Bike Route without additional striping or facilities.
4. Separated Bikeways (Class IV) – A bikeway for the exclusive use of bicycles and includes a separation between the bikeway and the through vehicular traffic. The separation may include, but is not limited to, grade separation, flexible posts, inflexible posts, inflexible barriers, or on-street parking.

A bicycle network map for Monterey County is included in **Appendix B**. This map is cited from *Transportation Agency for Monterey County Bicycle and Pedestrian Master Plan,* Alta Planning + Design, December 2011 (“TAMC Bicycle and Pedestrian Master Plan”).

Bicycle facilities are provided along the following roadways in the study network:

- Bike Lane (Class II):

a. Abbott Street, between Harkins Road and Front Street (both directions). This includes the Project frontage.
b. John Street, generally between Wood Street and S Sanborn Road as well as between the Union Pacific Railroad (UPRR) tracks and Work Street.
c. Front Street, between Abbott Street and E Alisal Street.
d. E Alisal Street, between Front Street and Griffin Street (both directions).
e. Sherwood Drive, between E Market Street and E Bernal Drive.

- Bike Route (Class III):
  a. Maple Street, between Abbott Street and S Main Street (SR 68) (both directions).
  b. All of SR 68 in Salinas is also designated as a Caltrans bike route. This includes John Street between Main Street and the UPRR tracks, which includes the Project's John Street frontage. However, there are no physical bicycle facilities or signs on either John Street indicating this designation.

Pavement delineation of the signed Class II bike lanes in the study area is poor or non-existent in some parts of the study area. This includes southbound Abbott Street between John Street (SR 68) and Maple Street, where there is no bike lane striping at all, despite the "Bike Lane" sign just south of John Street (SR 68).

2.4 Existing Transit Service

Monterey-Salinas Transit (MST) provides fixed-route bus service in Monterey County and Peninsula cities. Three MST bus lines provides service near the study Project site:

c. Line 23 (Salinas – King City). This line provides weekday and weekend service roughly every 30-120 minutes between roughly 4:00 AM – 10:30 PM.
d. Line 82 (Fort Hunter Liggett – Salinas Express). This line provides weekday service via just five runs (two AM runs and three PM runs) and weekend service via just three runs (one AM run and two PM runs).
e. Line 86 (King City – San Jose/SJ Airport). This line provides weekday service via just four runs (two AM runs and two PM runs) and weekend service via just eight runs (four AM runs and four PM runs).

There are three bus stops in the vicinity of the Project – all are on Abbott Street, and all are only serviced by Line 23. These bus stops locations are as follows:

f. Abbott Street northbound, just north of Maple Street. This is adjacent to the Project site.
g. Abbott Street southbound, just south of John Street (SR 68). This is located directly across the street from the Project site.
h. Abbott Street northbound, just north of Summer Street. This is located about 700 feet north of the Project site, or a less than a 5-minute walk from the Project site.

2.5 Existing Conditions Traffic Circulation

2.5.1 Intersection Operations

Traffic volumes were counted at the study intersections during the AM (7:00 – 9:00 AM) and PM (4:00 – 6:00) 2-hour peak periods on Thursday, November 21, 2019. Traffic data was collected for cars, trucks, buses, bicyclists, and pedestrians. From these counts, the AM and PM peak hour volumes were derived. Traffic volumes at immediately adjacent study intersections were also balanced as necessary. **Exhibit 3** depicts the peak turning movement volumes for the study intersections under Existing Conditions. **Appendix C** contains the traffic count data collected at these study intersections.

The traffic counts at the study intersections were collected in November 2019, outside of the peak agricultural harvest season of the summer months. The high number of agricultural processing and distribution facilities in and near the study network increases traffic in and through the area during the peak season, principally along Abbott Street, Sanborn Road and Blanco Road. To account for this, seasonal adjustments were applied to the study network volumes. These adjustments were developed based on recent and historical peak-season traffic counts at study intersections that were collected for other traffic studies and by the City of Salinas. In addition, review of the Existing condition (Off Season) volumes (**Exhibit 3**) and Caltrans ramp volumes indicate that many vehicles to and from the agricultural industrial corridors on Abbott Street and Sanborn Road use the John Street ramps at US 101 rather than the Sanborn Road or Airport Boulevard ramps, likely to avoid existing congestion at those other ramps. In total, these adjustments represent an average volume increase of approximately 10.7% over non-seasonal volumes. As a comparison, a review of the volumes in *Salinas Ag-Industrial Center Traffic Impact Analysis,* Higgins Associates, September 2, 2008, indicates that peak season volumes were approximately 9% higher than the off-peak volumes in that analysis. Seasonal growth calculations are included in **Appendix D**.

Exhibit 4 contains the resulting seasonal volume adjustments at each of the study intersections. These were added to the Existing volumes (Off Season) to estimate the Existing Peak Season condition volumes depicted in **Exhibit 5**. All analysis scenarios in this report are based on the peak season adjustment volumes in **Exhibit 5**. The warrant worksheet evaluations (**Appendix I**) also use the intersection volumes with the peak season adjustments.

Existing Peak Season intersection lane configurations, traffic controls and levels of service at the study intersections are summarized in **Exhibit 6A**. Recommended intersection improvements are summarized in **Exhibit 6B**. The LOS calculation sheets for Existing Peak Season conditions can be found in **Appendix E**.

Most of the study intersections currently operate at or better than their level of service standards. However, the following four intersections currently operate below their respective standards:

1. Intersection 3 – Abbott Street / John Street (SR 68) – LOS D (AM), LOS E (PM).
2. Intersection 4 – Spring Street / John Street (SR 68) – Side-Street LOS D (AM), LOS F (PM).
3. Intersection 6 – Abbott Street / Maple Street – Side-Street LOS F (AM), LOS E (PM).

4. Intersection 8 – Abbott Street / Alameda Avenue – Side-Street LOS E (AM, PM)

The recommended improvements at these four intersections are as follows. With these improvements all study intersections would operate at acceptable levels of service.

1. Intersection 3 – Abbott Street / John Street (SR 68):
    a. Add second westbound John left turn lane; and
2. Intersection 4 – Spring Street / John Street (SR 68) – Modify John Street median to:
    a. Prevent eastbound John left turn movement;
    b. Prevent northbound Spring left and through movements; and
    c. Prevent southbound Spring left and through movements.
3. Intersection 13 – Abbott Street / Maple Street – Project Driveway:
    a. Add eastbound Maple right turn lane. This improvement can be implemented by prohibiting on-street parking along approximately 75 feet of Maple Street near the intersection;
    b. Add northbound Abbott left turn lane (Salinas TFO 42); and
    c. Add southbound Abbott left turn lane (Salinas TFO 42).
4. Intersection 15 – Abbott Street / Alameda Avenue:

    No improvements required.

2.5.2 Pedestrian Circulation

There is a moderate level of pedestrian activity at many of the study intersections. The study intersections average about 19 pedestrian crossings during both the AM and PM peak hours. The highest overall crossing activity occurs near schools (e.g., S Sanborn Road / John Street – 57 crossings (AM) and 104 crossings (PM)). Nearer to the Project, pedestrian activity is much lower (e.g., Abbott Street / Maple Street – 14 crossings (AM and PM)).

2.5.3 Bicycle Circulation

There is little to no bicycle traffic at any of the study intersections. On average, only two bicyclists traveled through each of the study intersections during the AM and PM peak hours. The highest amount of bicycle traffic during the peak hours was four bicyclists, which occurred at Front Street / E Alisal Street (AM and PM peak hours), Abbott Street / Spicer Street (PM peak hour) and Abbott Street / Alameda Avenue (PM peak hour).

3 EXISTING PLUS PROJECT CONDITIONS

3.1 Project Description

The Project will include residential, commercial, restaurant, general office, medical office, and hotel uses. The quantities of each of the land uses are as follows.

1. 242 apartments
2. 118,400 square feet of general commercial space
3. 30,900 square feet of office space
4. 111-room hotel

The Project is proposed to be developed in 7 phases. A future phase may include the redevelopment of a parcel at the corner of Spicer Street and Brunken Avenue. The land use, size and timing of this phase has not been determined. In addition, this potential future development area is currently fully occupied by an active industrial use. It is likely that there will not be an increase in traffic if this site is redeveloped in the future. It is assumed to remain with its current use in this analysis. **Exhibit 2B** depicts the Project site plan by Project phase. The following section summarizes the trip generation and Project access for each of these phases.

The specific commercial and office land uses within each building are not defined for many of the proposed Project buildings. Where uses are defined (e.g., bank, market), trip generation for that specific use is incorporated into the Project trip generation. Otherwise, for the purpose of estimating the Project trip generation, the generic commercial and office uses are split between Variety Store, Fast Food Restaurant without Drive-Through, Quality Restaurant, General Office, and Medical Office.

The Project proposes two access points as described below.

1. West Access: Addition of a Project Driveway that would expand the existing driveway, which is the fourth leg at the existing Abbott Street / Maple Street intersection.
2. North Access: Existing Spring Street south of John Street (SR 68), which will be limited to right turns in and out.

The Project does not propose any full-access connections to Spicer Street near Brunken Avenue. An emergency vehicle access or pedestrian/bicycle access to Spicer Street is possible. This would not affect traffic operations in the study area. No Spicer Street connection is included in this analysis.

3.2 Project Trip Generation

The following discussion describes each of the seven phases of the Project and its corresponding trip generation. The associated traffic generation for each phase and at full buildout is tabulated on **Exhibit 7.** Sheet 1 of **Exhibit 7** provides trip generation rates for each land use referenced from *Trip Generation Manual,* 10th Edition, Institute of Transportation Engineers (ITE), 2018, unless otherwise noted in the discussions of each Project phase. Sheet 1 also provides an incremental estimate of total Project trips with the addition of each Project phase. Sheet 2 of **Exhibit 7** provides a breakdown of trip generation by land use for each individual phase. Project access for each phase is also discussed below.

1. Phase 1 – Home 2 Suites Hotel

Phase 1 of the Project will include the 111-room Hilton Home 2 Suites Hotel, an extended-stay hotel. It is expected to generate about 693 daily trips with 53 during the AM peak hour and 58 during the PM peak hour, based on the ITE All Suites Hotel (ITE Land Use Category 311) trip generation rate. This assumes a worst case 100% occupancy. In comparison, average occupancy, and corresponding hotel trip generation, will be about 74% of this amount, per ITE.

Project access for Phase 1 will be primarily via a new driveway that will create the east (fourth) leg of the existing Abbott Street / Maple Street intersection. The existing driveway that is the fourth leg of the existing John Street (SR68) / Spring Street intersection is proposed to remain as a full-access driveway.

2. Phase 2 – Buildings 1F, 1H and 1J

Phase 2 of the Project will include:

a. Building 1F (7,900 square feet of variety store and 14 apartments)
b. Building 1H (6,000 square feet of variety store and 6 apartments)
c. Building 1J (7,500 square feet of variety store and 8 apartments)

They are expected to generate a total of about 1,563 daily trips with 81 during the AM peak hour and 161 during the PM peak hour. This will be added to Phase 1. The net trip generation total for Phases 1 and 2, assuming 5% internal trips, is expected to be about 2,143 daily trips with 127 during the AM peak hour and 208 during the PM peak hour.

Project access for Phases 1 and 2 is proposed to be the same as Phase 1.

3. Phase 3 – Buildings 1G and 1I

Phase 3 of the Project will include:

a. Building 1G (12,800 square feet total, envisioned to include 3,200 square feet of variety store, 3,200 square foot fast food restaurant without drive-through, 4,480 square feet of general office and 1,920 square feet of medical office)
b. Building 1I (12,800 square feet total, envisioned to include 3,200 square feet of variety store, 3,200 square foot quality restaurant, 4,480 square feet of general office and 1,920 square feet of medical office)

They are expected to generate a total of about 2,004 daily trips with 122 during the AM peak hour and 184 during the PM peak hour. This will be added to Phases 1 and 2. The net trip generation total for Phases 1 through 3, assuming 10% internal trips, is expected to be about 3,834 daily trips with 230 during the AM peak hour and 362 during the PM peak hour.

Project access for Phases 1 through 3 is proposed to be the same as Phase 1.

4. Phase 4 – Buildings 1D and 1E

Phase 4 of the Project will include:

a. Building 1D (8,500 square feet total, envisioned to include a 4,250 square feet of variety store and 4,250 square foot fast food restaurant without drive-through)
b. Building 1E (5,500 square feet total, envisioned to include a 2,750 square feet of variety store and 2,750 square foot quality restaurant)

They are expected to generate a total of about 2,147 daily trips with 132 during the AM peak hour and 189 during the PM peak hour. This will be added to Phases 1 through 3. The net trip

generation total for Phases 1 through 4, assuming 10% internal trips, is expected to be about 5,766 daily trips with 349 during the AM peak hour and 533 during the PM peak hour.

Project access for Phase 4 will be the same as for Phases 1 through 3 plus the conversion of the Project's existing Spring Street driveway of John Street (SR 68) into a right-in / right-out driveway for the Project.

5. Phase 5 – Buildings 1B and 1C

Phase 5 of the project will include:

a. Building 1B (5,500 square feet total, envisioned to include 2,750 square feet of variety store and 2,750 square foot fast food restaurant without drive-through)
b. Building 1C (5,000 square feet total, envisioned to include 2,500 square feet of variety store and 2,500 square foot quality restaurant)

They are expected to generate a total of about 1,496 daily trips with 88 during the AM peak hour and 134 during the PM peak hour. This will be added to Phases 1 through 4. The net trip generation total for Phases 1 through 5, assuming 10% internal trips, is expected to be about 7,121 daily trips with 432 during the AM peak hour and 657 during the PM peak hour.

Project access for Phase 5 will be the same as for Phases 1 through 4.

6. Phase 6 – Buildings 3A, 3B, 3C, 3D, Butler Building, 3E, 3F and 4

Phase 6 of the Project will include:

a. Building 3A (4,800 square feet of variety store and 4 apartments)
b. Building 3B (5,400 square feet of variety store and 18 apartments)
c. Building 3C (6,000 square feet of variety store and 6 apartments)
d. Building 3D (13,000 square feet of variety store and 36 apartments)
e. Butler Building (covered parking area)
f. Building 3E (7,000 square feet of variety store and 16 apartments)
g. Building 3F (3,800 square foot bank and 4 apartments)
h. Building 4 (50 apartments)

They are expected to generate a total of about 3,659 daily trips with 222 during the AM peak hour and 422 during the PM peak hour. This will be added to Phases 1 through 5. The net trip generation total, assuming 10% internal trips, is expected to be about 10,405 daily trips with 628 during the AM peak hour and 1,033 during the PM peak hour.

Project access for Phase 6 will be the same as for Phases 1 through 5.

7. Phase 7 – Buildings

Phase 7 of the Project will include:

a. Building 2A (80 apartments)
b. Building 2B (17,000 square feet total, with 8,500 square feet of variety store and 8,500 square feet of general office
c. Building 2C (20,800 square feet total, with 11,200 square foot market and 9,600 square feet of medical office)

They are expected to generate a total of about 2,738 daily trips with 144 during the AM peak hour and 249 during the PM peak hour. This will be added to Phases 1 through 6 and will result in Project buildout. The net trip generation total for the entire Project (Phases 1-7), assuming

10% internal trips, is expected to be about 12,870 daily trips with 758 during the AM peak hour and 1,257 during the PM peak hour.

Project access for Phase 7 is proposed to be the same as Phases 1-6.

Note: The operational analysis in this report uses a slightly higher project trip generation, which is based on a prior and now superseded project definition. The net analyzed trip generation total for the entire Project (Phases 1-7), assuming 10% internal trips, is 13,029 daily trips with 776 during the AM peak hour and 1,280 during the PM peak hour. Therefore, the analysis represents a slightly more conservative analysis.

3.3 Project Trip Distribution and Assignment

Exhibit 8 depicts the trip distribution for the Project at full buildout. The trip distribution was combined with the Project trip generation to derive the Project trip assignment depicted in **Exhibit 9**.

3.4 Existing Plus Project Condition Traffic Circulation

3.4.1 Intersection Operations

The Project trip assignment (**Exhibit 9**) was added to the Existing Peak Season traffic volumes in **Exhibit 5** to estimate the Existing Plus Project volumes on **Exhibit 10**.

Existing Plus Project condition intersection levels of service are summarized on **Exhibit 4A**. Recommended intersection improvements are summarized on **Exhibit 4B**. The LOS calculation sheets for Existing Plus Project conditions can be found in **Appendix F**.

Most of the study intersections will operate at or better than their level of service standards. However, the following nine intersections will operate below their respective standards:

1. Intersection 3 – Abbott Street / John Street (SR 68) – LOS E (AM, PM)
2. Intersection 4 – Spring Street / John Street (SR 68) – Side-Street LOS F (PM)
3. Intersection 6 – Abbott Street / Maple Street – Side-Street LOS F (AM, PM)
4. Intersection 8 – Abbott Street / Alameda Avenue – Side-Street LOS F (AM, PM)

Below is a discussion of the recommended improvements needed to improve operations to an acceptable or better level of service under Existing Plus Project conditions.

1. Intersection 3 – Abbott Street / John Street (SR 68):

   The overall level of service under Existing Plus Project conditions would be LOS E (AM, PM), compared to LOS D (AM) and LOS E (PM) without the Project. Per the criteria in Section 1.6, the Project would result in an adverse effect at this intersection.

   - Recommendation:
     a. Add a second westbound John left turn lane; and
     b. Add a second northbound Abbott right turn lane.

- Operations after implementation of Improvement: LOS D (PM). Although the resulting LOS with improvement is still deficient per Caltrans standards, delay is better than pre-project conditions and meets City of Salinas standards.
- Responsibility for Improvement: The Project will be responsible for implementation of this improvement.
- Just a single northbound right turn lane (Alternative 1) would only achieve LOS E during PM peak hour, hence a second right turn lane (Alternative 2) is recommended. A single northbound right turn lane with a right turn overlap (right turn green arrow current with the westbound John left turn lane) could be considered. However, westbound to eastbound U-turns would need to be prohibited. This will be an important movement to minimize the southbound Abbott left turn volume at the Project's Maple Street entrance.

2. Intersection 4 – Spring Street / John Street (SR 68):

   The side-street (Spring Street) level of service under Existing Plus Project conditions would be LOS LOS F (PM), compared to LOS D (AM) and LOS F (PM) without the Project. The Caltrans peak hour signal warrant will not be met at this intersection as indicated in **Appendix I**. Per the criteria in Section 1.6, the Project would result in an adverse effect at this intersection.

   - Recommendation:
     a. Fully Close the John Street Median to:
        i. Prevent the eastbound John left turn movement;
        ii. Eliminate the existing westbound John left turn movement;
        iii. Prevent the northbound Spring left and through movements; and
        iv. Prevent the southbound Spring left and through movements.
   - Operations after implementation of Improvement: LOS C (PM), LOS F near E (PM).
   - Responsibility for Improvement: The Project will be responsible for implementation of this improvement.

3. Intersection 6 – Abbott Street / Maple Street – Project Driveway:

   The side-street level of service under Existing Plus Project conditions would be LOS F (AM, PM), compared to LOS F (AM) and LOS E (PM) without the Project. The Caltrans peak hour signal warrant will be met at this intersection as indicated in **Appendix I**. Per the criteria in Section 1.6, the Project would result in an adverse effect at this intersection.

- Recommendation:
  a. Add eastbound Maple right turn lane. This improvement can be implemented by prohibiting on-street parking along approximately 75 feet of Maple Street near the intersection, which includes the 7-11 convenience store driveway and one parallel parking space west of the driveway. Parking is already prohibited between the 7-11 driveway and Abbott at the existing fire hydrant.
  b. Add northbound Abbott left turn lane (included in Salinas TFO 42);
  c. Add southbound Abbott left turn lane (included in Salinas TFO 42);
  d. Provide separate westbound Maple (Project Exit) left/through and right turn lanes;
  e. Signalize Intersection; and
  f. Add westbound right turn overlap signal phase.
- Operations after Implementation of Improvement: LOS B (AM), LOS D (PM).
- Responsibility for Improvement: The Project will be responsible for implementation of this improvement. The Project would also be eligible for a reduction in its applicable TFO fee through implementation of recommended TFO improvements, if not already implemented by the City of Salinas.
- Signalization, along with the other improvements, is the preferred option for improving operations not only under the Existing Plus Project scenario but also under Cumulative Without Project conditions. The existing Abbott / John (SR 68) intersection will create some additional gaps in traffic that would accommodate some traffic to and from Maple, but not enough gaps to adequately reduce delays on its own. Eastbound and westbound left-turn prohibitions are not recommended due to a lack of desirable alternative routes for these movements. For example, northbound Abbott at John (SR 68) currently prohibits U-turns, precluding this as an alternative for existing northbound Abbott left turns at Maple.

4. Intersection 8 – Abbott Street / Alameda Avenue:

   The level of service under Existing Plus Project conditions would be LOS E/F (AM) and LOS F (PM), compared to LOS E (AM, PM) without the Project. The Caltrans Peak Hour signal warrant will not be met at this intersection as indicated in **Appendix I**. The calculations also do not consider that gaps in northbound and southbound Abbott Street traffic will be provided by the existing traffic signals at John Street (1,700 feet to the north) and Los Palos Drive (1,300 feet to the south). In addition, more distinct gaps will be provided by the proposed traffic signal that will be implemented by the Project at the Maple Street intersection (900 feet to the north). This will at least partially offset the additional delay at this intersection resulting from the Project.

   Per the criteria in Section 1.6, because the intersection will not warrant a traffic signal with Project traffic, the Project would not result in an adverse effect at this intersection. However, the Project will be responsible for the payment of Salinas TFO fees which

will be the funding source for the following (or some equivalent) improvements by the City of Salinas

a. Add a northbound left turn lane (Salinas TFO 42); and

b. Add a northbound Abbott median acceleration lane north of the intersection. This could also be in the form of a two-way left turn if preferred by the City of Salinas (Salinas TFO 42).

c. Consider adding an eastbound Alameda right turn lane. This improvement can be implemented by prohibiting on-street parking along approximately 75 feet of both sides of Alameda Avenue near the intersection. Most on-street parking in this area is already prohibited in this area.

3.4.2 Pedestrian Circulation

Pedestrian activity is anticipated to increase in the Project vicinity due to the Project. This will include students living on the Project site who will walk to nearby schools. The existing signal at the Abbott Street / John Street (SR 68) intersection and the recommended signal at the Abbott Street / Maple Street intersection will facilitate pedestrians to cross both Abbott Street and John Street (SR 68). The existing sidewalks along the project frontage will also provide adequate pedestrian circulation to the Project site. Therefore, the Project would not represent an adverse effect to pedestrian circulation.

3.4.3 Bicycle Circulation

The Project is anticipated to generate a minor amount of bicycle traffic. Bike lanes are present on Abbott Street along the project frontage, continuing north and south of the Project site. Maple Street is currently designated as a bike route. This facilitates bicycle traffic between the Project site and nearby schools. John Street, as SR 68, is also designated as a Caltrans bike route, although there are no physical bicycle facilities or signs on this street along the Project frontage. These facilities and designations are consistent with the bike and pedestrian master plans discussed in **Section 2.3 - Existing Bicycle Network** earlier in the report. The existing facilities will accommodate the increase in bicycle traffic generated by the Project. Therefore, the Project would not represent an adverse effect to bicycle circulation.

3.4.4 Transit Circulation

The Project is anticipated to generate minimal transit demand. The existing transit service and bus stops in the vicinity of the Project site can accommodate this additional demand. Therefore, the Project would not represent an adverse effect to transit service.

3.5 Impact Fees

The Project will be required to pay its applicable City of Salinas Traffic Fee Ordinance (Salinas TFO) and Transportation Agency for Monterey County Regional Development Impact Fee (TAMC RDIF) transportation impact fees. Part of the recommended intersection improvements are funded improvements by the Salinas TFO. Therefore, if the Project implements any TFO improvements, the Project would be eligible for corresponding credits toward its TFO fees.

4 CUMULATIVE WITHOUT PROJECT CONDITIONS

This section describes anticipated Cumulative Without Project traffic conditions, which is based on forecasted traffic conditions at buildout of the City of Salinas and Monterey County General Plans. This scenario does not include trips from the study Project. This condition represents conditions in approximately the Year 2045 during the peak season.

4.1 Derivation of Cumulative Without Project Condition Volumes

Traffic volumes under Cumulative Without Project conditions were estimated using volume forecasts from the following four traffic studies that analyzed the study network:

1. *The Draft West Area Specific Plan Transportation Impact Analysis,* Fehr & Peers, June 2018.
2. *Rodeo Property Traffic Impact Analysis,* Mott MacDonald, June 12, 2019.
3. *Salinas Travel Center Draft Traffic Impact Analysis,* Hexagon Transportation Consultants, November 7, 2017.
4. *City of Salinas General Plan Circulation Element and Environmental Impact Report Traffic Study,* Higgins Associates, June 11, 2002.

The Cumulative Without Project scenario also includes vehicle traffic from redevelopment of the Chapin Property, located north of John Street directly across from the study Project. It is anticipated that this property will redevelop with similar uses to the proposed study Project, proportional to its size, which is about 5 acres.

Overall, the Cumulative Plus Project volumes represent an average of 25% growth over the Existing (seasonal) volumes.

The Cumulative Without Project traffic volumes are depicted on **Exhibit 11.**

4.2 Network Modifications under Cumulative Conditions

Cumulative Without Project and Cumulative Plus Project conditions include multiple street network modifications near the study network, which are listed in Section 1.7.2 Salinas Traffic Improvement Program (TFO). The following TFO improvements will divert traffic away from the study network resulting in a beneficial effect on traffic operations in the study area. Nevertheless, General Plan Buildout traffic volumes are ultimately expected to be higher than existing volumes in the study network.

The network modifications are:

1. TFO 30 – Rossi Street Widening. Widen W Rossi Street to four lanes between N Main Street and Sherwood Drive.
2. TFO 32 – Widen US 101. Widen US 101 to six lanes between Sala Road and Harris Road.
3. TFO 37A, 37B and 37C – Sanborn Road Improvements. Construct the following:
    a. Widen Sanborn Road to six lanes between John Street and Abbott Street;

b. Widen Fairview Avenue to three lanes between S Sanborn Road and US 101 Northbound Ramps; and

c. Construct Elvee Drive extension between Work Street and 925 feet east of Work Street, including a new bridge over an existing drainage ditch, plus disconnect Elvee Drive at S Sanborn Road. This improvement is currently under construction.

4. TFO 38 – Airport Boulevard / US 101 Interchange Upgrade. Implement the approved Caltrans Project Study Report improvements to the US 101 Southbound ramps at Airport Boulevard.
5. TFO 39 – Harris Road / US 101 Interchange. Construct a full interchange on US 101 at Harris Road, replacing the existing partial interchange at Abbott Street.
6. TFO 41 – Blanco Road Widening. Widen W Blanco Road to four lanes between Reservation Road near Marina and W Alisal Street in Salinas.
7. TFO 43 – Alisal Street Improvements. Add left turn channelization at major intersections between Monterey Street and Front Street.
8. TFO 64 – Romie Lane (Pajaro to Alameda). Widen E Romie Lane to four lanes between Pajaro Street and California Street.
9. TFO 66 – Elvee Drive (Work Street to Reclamation Ditch). This improvement is part of TFO 37B – Construct Elvee Drive extension between Work Street and 925 feet east of Work Street.
10. TFO 74 – Abbott Street Widening – Harkins Road to Harris Road. Widen and reconstruct the northeast frontage of Abbott Street between Harkins Road and Harris Road.
11. TFO 75 – Airport Boulevard / US 101 Southbound Off-Ramp Widening. Widen the existing US 101 southbound offramp at Airport Boulevard to two lanes. This is part of TFO 38 – Airport Boulevard / US 101 Interchange Upgrade.

The Cumulative Without Project and Cumulative Plus Project traffic forecasts reflect the traffic diversions that would occur due to these network modifications.

4.3 Cumulative Without Project Traffic Conditions

4.3.1 Intersection Operations

Cumulative Without Project intersection levels of service are summarized in **Exhibit 4A**. Recommended intersection improvements are summarized in **Exhibit 4B**. The LOS calculation sheets for Cumulative Without Project traffic conditions can be found in **Appendix G**.

Some of the study intersections are expected to operate at or better than their level of service standards. However, the following nine intersections are expected to operate below their respective standards:

1. Intersection 1 – E Market Street – Sherwood Drive / Market Way – E Market Street – LOS E (PM)
2. Intersection 2 – Front Street / E Alisal Street – LOS E (PM)

3. Intersection 3 – Abbott Street / John Street (SR 68) – LOS F (AM, PM)
4. Intersection 4 – Spring Street / John Street (SR 68) – Side-Street LOS F (AM, PM)
5. Intersection 5 – S Sanborn Road / John Street – LOS F (PM)
6. Intersection 6 – Abbott Street / Maple Street – Side-Street LOS F (AM, PM)
7. Intersection 7 – Abbott Street / Spicer Street – Side-Street LOS F (PM)
8. Intersection 8 – Abbott Street / Alameda Avenue – Side-Street LOS F (AM, PM)
9. Intersection 11 – E Blanco Road – S Sanborn Road / Abbott Street – LOS E (AM)

The recommended improvements at the above intersections are as follows.

1. Intersection 1 – E Market Street – Sherwood Drive / Market Way – E Market Street – Add a westbound E Market right turn overlap signal phase.
2. Intersection 2 – Front Street / E Alisal Street – Add an eastbound E Alisal right turn overlap signal phase.
3. Intersection 3 – Abbott Street / John Street (SR 68):
    i. Add a second westbound John left turn lane; and
    ii. Add a second northbound Abbott right turn lane.

    Abbott Street / John Street intersection would operate at LOS D (AM and PM) with improvements, which is below the Caltrans threshold of LOS C/D. However, this LOS would be acceptable based on City of Salinas standards.

    Just a single northbound right turn lane (Alternative 1) would only achieve LOS E during PM peak hour, hence a second right turn lane (Alternative 2) is necessary.
4. Intersection 4 – Spring Street / John Street (SR 68) – Modify John median to:
    a. Prevent eastbound and westbound John left turn movements;
    b. Prevent northbound Spring left turn and through movements; and
    c. Prevent southbound Spring left turn and through movements.
5. Intersection 5 – S Sanborn Road / John Street – Add a northbound S Sanborn right turn overlap signal phase
6. Intersection 6 – Abbott Street / Maple Street:
    a. Add eastbound Maple right turn lane. This improvement can be implemented by prohibiting on-street parking along approximately 75 feet of northbound Front Street near the intersection;
    b. Add a northbound Abbott left turn lane (Salinas TFO 42);
    c. Add a southbound Abbott left turn lane (Salinas TFO 42); and
    d. Signalize Intersection.

Signalization, along with the other improvements, is the preferred option for improving operations not only under the Existing Plus Project scenario but also under Cumulative Without Project conditions. The existing Abbott / John (SR 68) intersection will create some additional gaps in traffic that would accommodate some traffic to and from Maple, but not enough gaps to adequately reduce delays on its own. Eastbound and westbound left-turn prohibitions are not recommended due to a lack of desirable alternative routes for these movements. For example, northbound Abbott at John (SR 68) currently prohibits U-turns, precluding this as an alternative for existing northbound Abbott left turns at Maple.

7. Intersection 7 – Abbott Street / Spicer Street:

   No improvements required.

8. Intersection 8 – Abbott Street / Alameda Avenue:

   a. Add a northbound left turn lane (Salinas TFO 42); and

   b. Add a northbound Abbott median acceleration lane north of the intersection. This could also be in the form of a two-way left turn if preferred by the City of Salinas (Salinas TFO 42).

   c. Consider adding an eastbound Alameda right turn lane. This improvement can be implemented by prohibiting on-street parking along approximately 75 feet of both sides of Alameda Avenue near the intersection. Most on-street parking in this area is already prohibited. Although the side-street operations are still below the City of Salinas standard, the existing Abbott / Los Palos – Malarin and Abbott / John (SR 68) signals will provide breaks in traffic that will be sufficient to result in acceptable delays for eastbound Alameda left turns onto northbound Abbott Street.

9. Intersection 11 – E Blanco Road – S Sanborn Road / Abbott Street – Implement Salinas TFO 68 improvements:

   a. Add a second eastbound Abbott left turn lane;

   b. Add a second westbound Abbott left turn lane; and

   c. Convert eastbound and westbound Abbott left turn signal phasing to Protected phasing.

4.3.2 Pedestrian Circulation

There are no planned pedestrian improvements in the study area under Cumulative Without Project conditions.

4.3.3 Bicycle Circulation

The TAMC Bicycle and Pedestrian Master Plan proposes the following future bicycle improvements in the study area.

1. Bike Lane (Class II):
   a. E Blanco Road: between Abbott Street and S Davis Road (both directions)

2. Bike Route (Class III):
    a. Los Palos Drive: between Abbott Street and E Romie Lane (both directions)

4.3.4 Transit Circulation

There are no anticipated transit improvements in the study area.

5 CUMULATIVE PLUS PROJECT CONDITIONS

This section describes the analysis results under Cumulative Plus Project traffic conditions, which combines the Cumulative Without Project volumes with trips from the study Project.

5.1 Derivation of Cumulative Plus Project Condition Traffic Volumes

The Project trip assignment (**Exhibit 9**) was added to the Cumulative Without Project volumes (**Exhibit 11**) to create the Cumulative Plus Project traffic volumes depicted on **Exhibit 12.**

5.2 Cumulative Plus Project Traffic Conditions

5.2.1 Intersection Operations

Cumulative Plus Project AM and PM intersection levels of service are summarized in **Exhibit 6A**. Recommended intersection improvements are summarized in **Exhibit 6B**. The LOS calculation sheets for Cumulative Plus Project traffic conditions can be found in **Appendix H**.

Some of the study intersections currently operate at or better than their level of service standards. However, the following ten intersections currently operate below their respective standards:

1. Intersection 1 – E Market Street – Sherwood Drive / Market Way – E Market Street – LOS E (PM)
2. Intersection 2 – Front Street / E Alisal Street – LOS F (AM), LOS E (PM)
3. Intersection 3 – Abbot Street / John Street (SR 68) – LOS F (PM)
4. Intersection 4 – Spring Street / John Street (SR 68) – Side-Street LOS F (PM)
5. Intersection 5 – S Sanborn Road / John Street – LOS F (PM)
6. Intersection 6 – Abbott Street / Maple Street – Side-Street LOS F (AM, PM)
7. Intersection 7 – Abbott Street / Spicer Street – Side-Street LOS F (PM)
8. Intersection 8 – Abbott Street / Alameda Avenue – Side-Street LOS F (AM, PM)
9. Intersection 11 – E Blanco Road – S Sanborn Road / Abbott Street – LOS E (AM, PM)

Below is a discussion of the recommended improvements under Cumulative Plus Project conditions.

1. Intersection 1 – E Market Street – Sherwood Drive / Market Way – E Market Street:

   The overall level of service under Cumulative Plus Project conditions would be LOS E (PM), compared to LOS E (PM) without the Project. Per the criteria in Section 1.6, the Project would result in an adverse effect at this intersection.

   - Recommendation:
     a. Add a westbound E Market right turn overlap signal phase. This is the same recommendation as Cumulative without Project.
   - Operations after Implementation of Improvement: LOS C (AM, PM).

- Responsibility for Improvement: The Project will be responsible for a fair-share contribution towards this improvement.

2. Intersection 2 – Front Street / E Alisal Street:

   The overall level of service under Cumulative Plus Project conditions would be LOS F (AM) and LOS E (PM), compared to LOS E (PM) without the Project. Per the criteria in Section 1.6, the Project would result in an adverse effect at this intersection.

   - Recommendation:
     a. Add an eastbound E Alisal right turn overlap signal phase. This is the same recommendation as Cumulative without Project.
   - Operations after Implementation of Improvement: LOS D (AM, PM).
   - Responsibility for Improvement: The Project will be responsible for a fair-share contribution towards this improvement.

3. Intersection 3 – Abbott Street / John Street (SR 68):

   The overall level of service under Cumulative Plus Project conditions would be LOS F (AM, PM), compared to LOS F (AM, PM) without the Project. Per the criteria in Section 1.6, the Project would result in an adverse effect at this intersection.

   - Recommendation:
     i. Add second westbound John left turn lane; and
     ii. Add second northbound Abbott right turn lane.
   - Operations after Implementation of Improvement: LOS D (AM), LOS E (PM). (Although LOS with improvement is still deficient during the PM peak hour, delay is better than pre-project conditions.)
   - Responsibility for Improvement: The Project will be responsible for implementation of this improvement.
   - Just a single northbound right turn lane (Alternative 1) would only achieve LOS F with a reduced volume during PM peak hour, hence a second right turn lane (Alternative 2) is necessary.

4. Intersection 4 – Spring Street / John Street (SR 68):

   The side-street level of service under Cumulative Plus Project conditions would be LOS F (PM), compared to LOS F (PM) without the Project. The Caltrans Peak Hour signal warrant was not found to be met at this intersection – see **Appendix I** for the warrant. Per the criteria in Section 1.6, the Project would result in an adverse effect at this intersection.

   - Recommendation:
     a. Fully close John median to:

i. Prevent eastbound and westbound John left turn movement; and

ii. Prevent northbound and southbound Spring left and through movements.

- Operations after Implementation of Improvement: Side Street LOS C (AM) and LOS F (PM). Operations during PM are improved compared to without project condition. The LOS F does not account for gaps created by the Abbott /John traffic signal.
- Responsibility for Improvement: The Project will be responsible for implementation of this improvement.

5. Intersection 5 – S Sanborn Road / John Street:

   The side-street level of service under Cumulative Plus Project conditions would be LOS F (PM), compared to LOS F (PM) without the Project. Per the criteria in Section 1.6, the Project would result in an adverse effect at this intersection.

   - Recommendation:
     a. Add a northbound S Sanborn right turn overlap signal phase. This is the same recommendation as Cumulative without Project.
   - Operations after Implementation of Improvement: LOS C (AM), LOS D (PM).
   - Responsibility for Improvement: The Project will be responsible for a fair-share contribution towards this improvement.

6. Intersection 6 – Abbott Street / Maple Street:

   The side-street level of service under Cumulative Plus Project conditions would be LOS F (AM, PM), compared to LOS F (AM, PM) without the Project. The Caltrans Peak Hour signal warrant was found to be met at this intersection – see **Appendix I** for the warrant. Per the criteria in Section 1.6, the Project would result in an adverse effect at this intersection.

   - Recommendation:
     a. Add eastbound Maple right turn lane. This improvement can be implemented by prohibiting on-street parking along approximately 75 feet of Maple Street near the intersection;
     b. Add northbound Abbott left turn lane (Salinas TFO 42);
     c. Add southbound Abbott left turn lane (Salinas TFO 42);
     d. Add westbound Maple right turn lane; and
     e. Signalize Intersection.
   - Operations after Implementation of Improvement: LOS C (AM), LOS D (PM).
   - Responsibility for Improvement: The Project will be responsible for implementation of this improvement. The Project would also be eligible for a reduction in its

applicable TFO fee through implementation of recommended TFO improvements that are included in this improvement.

7. Intersection 7 – Abbott Street / Spicer Street:

   The level of service under Cumulative Plus Project conditions would be LOS F (PM), compared to LOS F (PM) without the Project. The Caltrans Peak Hour signal warrant was not found to be met at this intersection – see **Appendix I** for the warrant. Per the criteria in Section 1.6, the Project would not result in an adverse effect at this intersection. No improvement would be required at this intersection.

   The City of Salinas is considering the addition of a median closure at this intersection. This improvement will reduce side-street delays at this intersection, although it would also likely divert traffic to other intersections along Abbott Street.

8. Intersection 8 – Abbott Street / Alameda Avenue:

   The level of service under Cumulative Plus Project conditions would be LOS F (AM, PM), compared to LOS F (AM, PM) without the Project. The Caltrans Peak Hour signal warrant was found to be met at this intersection – see **Appendix I** for the warrant. Per the criteria in Section 1.6, the Project would result in an adverse effect at this intersection.

   - Recommendations, which are the same recommendations as Cumulative without Project:

     a. Add eastbound Alameda right turn lane. This improvement can be implemented by prohibiting on-street parking along approximately 75 feet of Maple Street near the intersection;

     b. Add northbound Abbott left turn lane (Salinas TFO 42); and

     c. Add a northbound Abbott median acceleration lane north of the intersection. This could also be in the form of a two-way left turn if preferred by the City of Salinas.

   - Operations after Implementation of Improvement: LOS E (AM), LOS F (PM). Although the side-street operations are still below the City of Salinas standard, the existing Abbott / Los Palos – Malarin and future Abbott / Maple signals will provide breaks in traffic that will provide additional breaks in traffic sufficient to result in acceptable delay for Alameda approach traffic to turn left onto northbound Abbott Street.

   - Responsibility for Improvement: The Project will be responsible for contributing its TFO fee which will represent its contribution towards the recommended TFO improvements.

9. Intersection 11 – E Blanco Road – S Sanborn Road / Abbott Street:

   The level of service under Cumulative Plus Project conditions would be LOS E (AM, PM), compared to LOS E (AM) and LOS D (PM) without the Project. Per the criteria in Section 1.6, the Project would result in an adverse effect at this intersection.

   - Recommendation:
     a. Implement Salinas TFO 68 improvements, which are the same recommendations as Cumulative without Project conditions:
        i. Add second eastbound Abbott left turn lane;
        ii. Add second westbound Abbott left turn lane; and
        iii. Convert eastbound and westbound Abbott left turn signal phasing to Protected phasing.
   - Operations after Implementation of Improvement: LOS D (AM, PM).
   - Responsibility for Improvement: Payment of the Project's applicable TFO fee will constitute its share of the cost to implement this improvement.

5.2.2 Pedestrian Circulation

Pedestrian activity would moderately increase under Cumulative Plus Project conditions as compared to Cumulative Without Project conditions, similar to increases between Existing and Existing Plus Project conditions. Pedestrian circulation can be accommodated with implementation of the proposed and recommended pedestrian improvements under Existing Plus Project conditions. Therefore, the Project would not represent an adverse effect to pedestrian circulation under Cumulative Plus Project conditions.

5.2.3 Bicycle Circulation

Bicycle activity is not anticipated to increase significantly under Cumulative Plus Project conditions as compared to Cumulative Without Project conditions. Therefore, the Project would not represent an adverse effect to bicycle circulation under Cumulative Plus Project conditions.

5.2.4 Transit Circulation

Transit demand from the Project is not anticipated to increase significantly under Cumulative Plus Project conditions. As such, the Project would not represent a cumulative adverse effect to transit circulation.

6 SITE ACCESS AND INTERNAL CIRCULATION

This section summarizes the site access and internal circulation analysis, including Project driveway operations. Reference **Exhibit 2A** for the Project site plan.

6.1 Vehicle Circulation

6.1.1 Vehicle Site Access

The Project driveway at Maple Street will serve as the backbone for Project access and internal circulation. All parking areas on the Project site connect to that street. The right-in/right-out driveway on John Street (SR 68) across from the existing Spring Street will serve as a secondary access to the Project site.

Exhibit 6A summarizes the operations of the Project access points with the surrounding street network. With the recommended improvements stated on **Exhibit 6B**, both access points would operate acceptably.

6.1.2 Vehicle Internal Circulation

The internal street network provides primary and secondary access to all of the Project buildings. The proposed traffic circle or mini roundabout near Buildings 3F and 4 will carry low volumes and operate with little or no delay. Care will need to be taken to provide acceptable geometrics such as corner radii to accommodate trucks. Traffic control at this and other onsite intersections, such as the location of stop signs, will be determined during final design.

Exhibit 13 depicts the volumes at Project buildout at the major internal intersections closest to the public street access points. The first is the Spring Street driveway intersection with the cross aisle about 180 feet south of John Street. This is proposed to have a raised crosswalk, raised intersection (which will result in very low approach speeds) or all-way stop control. The second is the Maple Street driveway intersection with the "Internal Private Driveway," about 350 feet east of Abbott Street.

Exhibit 14 summarizes the operations at the two on-site study intersections. **Appendix H** contains the level of service calculations. Both intersections will operate acceptably at Project buildout as proposed.

The site plan indicates that the Maple Street driveway will include three travel lanes between the "Internal Private Driveway" and Abbott Street. The middle lane can be striped as an eastbound left turn lane. The intersection will have four-way stop control, which eliminates the need to provide transitions on the east side of this intersection. The warrant criterion is based on a random arrival rate, which would result in a relatively uniform traffic flow during the peak hour. However, this first cross aisle intersection on the Maple Street extension is 350 feet away from Abbott Street. This distance will minimize any queuing effects at the internal intersection on traffic entering the site via Maple Street.

6.2 Pedestrian Circulation

Sidewalks are proposed along both sides of the Abbott Street driveway within the Project site. Sidewalks and open plazas, patios and other pedestrian-oriented open spaces are proposed

around most Project buildings. These will connect to the existing sidewalks surrounding the Project site on Abbott Street and John Street (SR 68). There will be a continuous connection between the offsite and onsite pedestrian network, enabling pedestrians to seamlessly travel to and from the Project site as well as within the Project site. The recommended traffic signal at the Abbott Street / Maple Street intersection will also facilitate easy pedestrian crossings between the Project site and the adjacent neighborhoods.

6.3 Bicycle Circulation

The Project site plan does not indicate locations of any bicycle racks or other bicycle storage facilities on the Project site, either inside or outside of any of the Project buildings. The number of required bicycle parking spaces – per City of Salinas Municipal Code Section 37-50.400 (b) – is 10% of the required automobile parking spaces, not to exceed 50 spaces. Per the Project site plan, this would be 50 bicycle spaces.

7 VEHICLE MILES TRAVELED ANALYSIS

7.1 City of Salinas VMT Policy

SB 743, which was signed into law in 2013 and codified in Public Resources Code 21099, tasked the State Office of Planning and Research (OPR) with establishing new criteria for determining the significance of transportation impacts under CEQA. SB 743 requires the new criteria to "promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses." SB 743 changes the way that public agencies evaluate the transportation impacts of projects under CEQA, recognizing that roadway congestion, while an inconvenience to drivers, is not itself an environmental impact (see Pub. Resource Code, § 21099, subdivision (b)(2)).

In addition to new exemptions for projects that are consistent with specific plans, SB 743 led to changes in that state CEQA guidelines, released in December 2018 and described in new Section 15064.3 of the CEQA Guidelines that apply statewide as of July 1, 2020. The new CEQA guidelines replaces congestion-based metrics, such as auto delay and level of service, with Vehicle Miles Traveled (VMT) as the basis for determining significant impacts, unless the guidelines provide specific exceptions.

7.2 City of Salinas VMT Policy

The Project is now required to perform a VMT evaluation, but no longer required to perform a LOS analysis under CEQA. However, the City of Salinas, like most other local agencies, continues to require LOS analyses to determine consistency with General Plan policies for infrastructure planning purposes. The LOS analysis no longer falls under the guidelines and policies of CEQA.

The City of Salinas adopted "Senate Bill 743 Vehicle Miles Traveled Implementation Policy – City of Salinas – Final Interim Policy," October 13, 2020 (Salinas VMT Guidelines) as its current tool to implement SB 743. The Salinas VMT Guidelines requires the following elements in a Project VMT analysis.

1. Two distinct analysis approaches, those that relate to land use projects (Salinas VMT Guidelines Section 3.0) and those that relate to transportation improvement projects (Salinas VMT Guidelines Section 4.0). If a project includes both land use and transportation improvement elements, analyses are to be carried out for both.

2. Mixed Use Projects – If there are multiple distinct land uses within the project (residential, office, retail, etc.), they are required to be analyzed separately unless they are determined to be insignificant to the total VMT. Mixed use projects are permitted to account for internal capture which, depending on the methodology, may require a distinct approach not covered in the Salinas VMT Guidelines. This analysis would be the responsibility of the applicant and must be prepared by a qualified transportation professional and approved by the City of Salinas.

3. Redevelopment Projects – As described under the Non-Significant Screening Criteria section, redevelopment projects which have lower VMT than the existing on-site use can be

determined to have a non-significant impact. In other words, VMT generated by the existing land uses at the site can be deducted to determine the net increase in VMT that will result from the proposed project.

7.3 Project VMT Analysis

The John/Abbott Master Plan is a mixed-use project that requires a VMT analysis for each land use within the Project. It also will be responsible for constructing off-site improvements which also require a VMT analysis in accordance with City of Salinas VMT Policy as discussed above. These analyses are described below.

7.3.1 Project Land Use VMT Analysis

Exhibit 1 tabulates the VMT analysis criteria for each Project land use type, including the screening criteria and screening threshold, compared with the corresponding Project land use characteristic. This comparison is used as a basis for determining whether the Project has a significant VMT impact. If the specific land use has a significant impact, mitigation is recommended.

The Project retail and medical office buildings are all under the city's 50,000 square-foot threshold. The Project's Medical Office, Restaurants and Retail buildings are all well under 50,000 square feet in size. They are considered by the City to be local serving and will not generate a significant VMT impact. The Project's General Office buildings all will generate below the threshold of 110 daily trips and will therefore have a less-than-significant VMT impact. The Project is located in an area indicated on the "Residential VMT per Capita Map" on page 24 of the Salinas VMT Guidelines to have residential VMT per capita that is at or below the County Threshold. The Project's Residential components will therefore have a less-than-significant VMT impact.

The Project Hotel is a land use that does not have a specific land use designation in the Salinas VMT Guidelines. The Project Hotel will not have conference facilities other than small meeting rooms and will only provide meals to guests. It is most similar to All Suites Hotels (ITE Land Use Category 311) and Business Hotels (ITE Land Use Category 312) as described "Trip Generation Manual," Institute of Transportation Engineers, 10th Edition, September 2017 (ITE Trip Manual). Trips generated by the Hotel would fall into the following four categories.

1. Guest arrivals and departures – These include hotel guests arriving from or departing to their points of origin, which could involve long road trips or travel to and from nearby airports. Their trip purpose could be business or personal. Some guests could stay as they pass through Salinas on the way to a primary destination.
2. Hotel-based trips during the stay at the hotel – These could be for business meetings or for day trips to attractions in the greater Salinas area.
3. Deliveries – The proposed hotel will have minimal meal service and only incidental deliveries associated with hotel room service will have limited delivery and service vehicle traffic.
4. Employee trips – These would include travel to and from work and occasional personal business or meals similar to blue collar employees at any other business.

Trips associated with hotel guests are rarely new trips on the local street network. This is because hotels are not a destination in themselves but provide lodging while in the hotel vicinity for some primary reason such as business meetings, tourism, visiting family or friends or passing through Salinas. The hotel could reduce VMT associated with hotel guests by providing a more convenient place of lodging to their destination. Employee and delivery trips are the only hotel trip purpose with typical VMT trip lengths and the only trip purpose that is new trips on the network. Based on ratios derived from the ITE Trip Manual, business hotels have an average of about one employee for every eight hotel rooms. The Project Hotel is proposed to have a total of 111 rooms, which computes to about 14 employees. To be conservative, it is assumed that the Project Hotel will have about 20 employees. The average trip generation per employee at employment centers for all traffic including employee trips as well as deliveries and visitors is estimated to be about 3.5 trip ends per day for a total of about 70 daily employee trips. This is well below the 110 trip-per-day threshold of significance. The Project Hotel therefore will likely result in net trip generation that is less than significant.

In summary, all of the Project land uses will have an insignificant VMT impact. No further VMT analysis is required.

Although the Project will have an insignificant VMT impact, the project will implement 19 Transportation Demand Management (TDM) strategies listed in the Salinas VMT Guidelines. These improvements are listed on **Exhibit 1.**

7.3.2 Project Off-Site Transportation Improvements VMT Analysis

The Project will implement or contribute financially toward off-site traffic operations improvements at the following locations.

1. Intersection 1 – E Market Street – Sherwood Drive / Market Way – E Market Street (City of Salinas)
2. Intersection 2 – Front Street / E Alisal Street (City of Salinas)
3. Intersection 3 – Abbott Street / John Street (SR 68) (Caltrans)
4. Intersection 4 – Spring Street / John Street (SR 68) (Caltrans)
5. Intersection 5 – S Sanborn Road / John Street (City of Salinas)
6. Intersection 6 – Abbott Street / Maple Street (City of Salinas)
7. Intersection 7 – Abbott Street / Spicer Street (City of Salinas)
8. Intersection 8 – Abbott Street / Alameda Avenue (City of Salinas)
9. Intersection 11 – E Blanco Road – S Sanborn Road / Abbott Street (City of Salinas)

The Salinas VMT Guidelines require that these be screened regarding whether they could result VMT impacts by altering trip patterns, trip lengths, or trip generation, which is commonly referred to as “induced demand.” The above improvements include adding turn lanes, modifying traffic signal phasing, and installing new traffic signals. According to the Salinas VMT Guidelines, page

12, all of these are presumed to result in a non-significant impact. No further study is necessary of transportation improvements that will be required to be implemented by the Project.

8 SUMMARY OF RECOMMENDED IMPROVEMENTS

8.1 Project Responsibilities

The following is a summary of the Project responsibilities regarding traffic issues, impacts and adverse effects, based upon the recommendations discussed earlier in this report.

1. Pay the TAMC Regional Development Impact Fee (RDIF) and the City of Salinas Traffic Fee Ordinance (TFO) fee. City of Salinas staff will quantify the applicable fees to the Project at the time of development. The Project would be eligible for reductions to its applicable TFO fee through implementation of or fair-share contributions towards TFO improvements to address the project's contributions to cumulative adverse effects throughout the study street network, as described in many of the recommended improvements below.
2. The Project would be responsible for implementation of the following improvements:
    a. Intersection 3 – Abbott Street / John Street (SR 68): This would be required to be implemented prior to constructing the fourth phase of the Project.
        i. Add second westbound John left turn lane; and
        ii. Add a second northbound Abbott right turn lane.
    b. Intersection 4 – Spring Street / John Street (SR 68): This would be required to be implemented prior to constructing the fourth phase of the Project.
        i. Fully close the John Street median opening to:
            1. Prevent the eastbound and westbound John left turn movements; and
            2. Prevent southbound and northbound Spring left and through movements.
    c. Intersection 6 – Abbott Street / Maple Street: This will be required to be implemented with the first phase of the Project.
        i. Add an eastbound Maple right turn lane. This improvement can be implemented by prohibiting on-street parking along approximately 75 feet of Maple Street near the intersection.
        ii. Add a northbound Abbott left turn lane (Salinas TFO 42);
        iii. Add a southbound Abbott left turn lane (Salinas TFO 42);
        iv. Add a westbound Maple right turn lane; and
        v. Signalize Intersection.
3. The Project would be responsible for fair-share contributions towards the following improvements:
    a. Intersection 1 – E Market Street – Sherwood Drive / Market Way – E Market Street:
        i. Add a westbound E Market right turn overlap signal phase.

b. Intersection 2 – Front Street / E Alisal Street:

   i. Add an eastbound E Alisal right turn overlap signal phase.

c. Intersection 5 – South Sanborn Road / John Street:

   i. Add a northbound South Sanborn right turn overlap signal phase.

intersection.

4. The Project's payment of the City of Salinas TFO would constitute its contribution towards the cost of the recommended improvements at the following intersections:

   a. Intersection 8 – Abbott Street / Alameda Avenue: Add northbound and southbound Abbott left turn lanes or two-way left turn lane (Salinas TFO 42) and associated parking prohibitions on Alameda Avenue;

   b. Intersection 11 – E Blanco Road – S Sanborn Road / Abbott Street (Salinas TFO 68).

5. The Project should include the following on-site improvements as discussed in the "Project Access and Internal Circulation" section of this report.

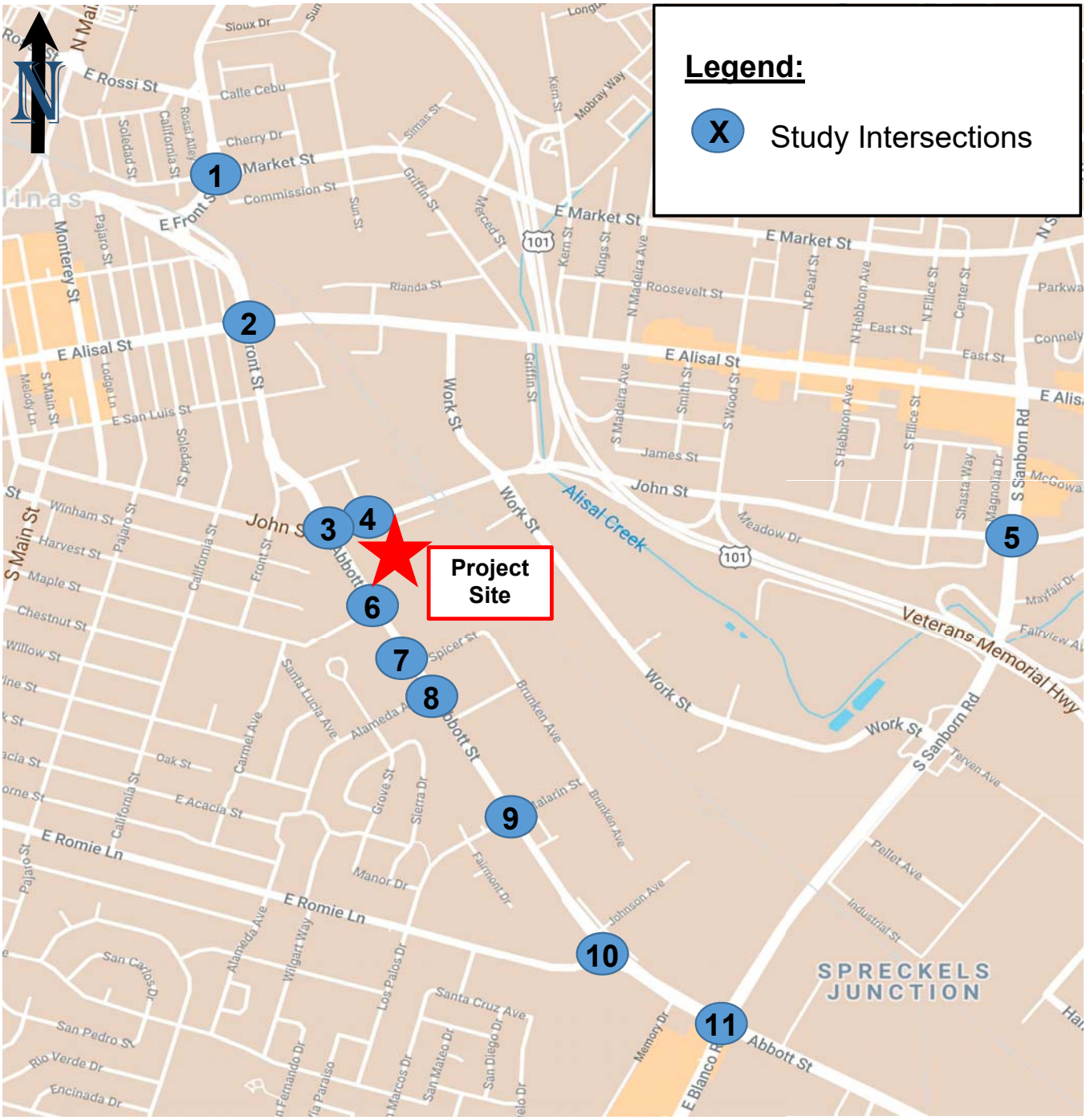
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18. *Senate Bill 742 Vehicle Miles Traveled Implementation Policy,* Final Interim Policy, City of Salinas, October 13, 2020.

9.2 List of Contacts

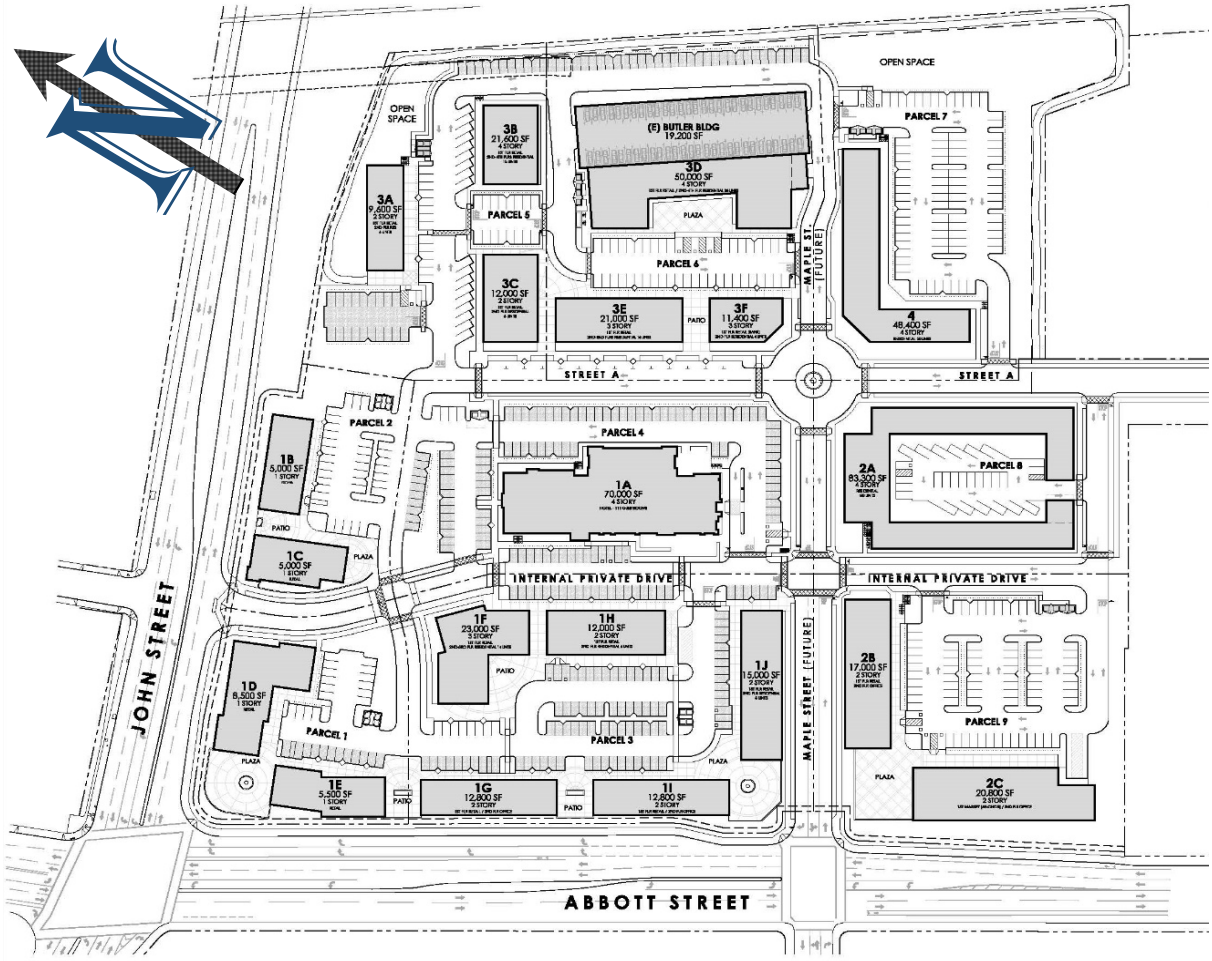
1. Carl Sanders, Videre Development, LLC, Salem, Oregon.
2. Greg Allen, Cadius Partners, Bozeman, Montana.
3. Steve Rigor, Arris Studio Architects, San Luis Obispo, California.
4. Chris Stout, L&S Engineering and Surveying, Monterey, California.
5. Jeff Lorentz, L&S Engineering and Surveying, Monterey, California.
6. Andrew Easterling, City of Salinas Public Works Department, Salinas, California.
7. John Olejnik, Senior Transportation Planner, Caltrans District 5, San Luis Obispo, California.
8. Chris Bjornstad, Associate Transportation Planner, Caltrans District 5, San Luis Obispo, California.
9. Roger Barnes, Senior Transportation Engineer, Traffic Operations Branch Chief, Caltrans District 5, San Luis Obispo, California.
10. Bhupendra Patel, Ph.D., Director of Modeling, Association of Monterey Bay Area Governments (AMBAG), Marina, California.



Basemap Source: Google Maps, 2019.

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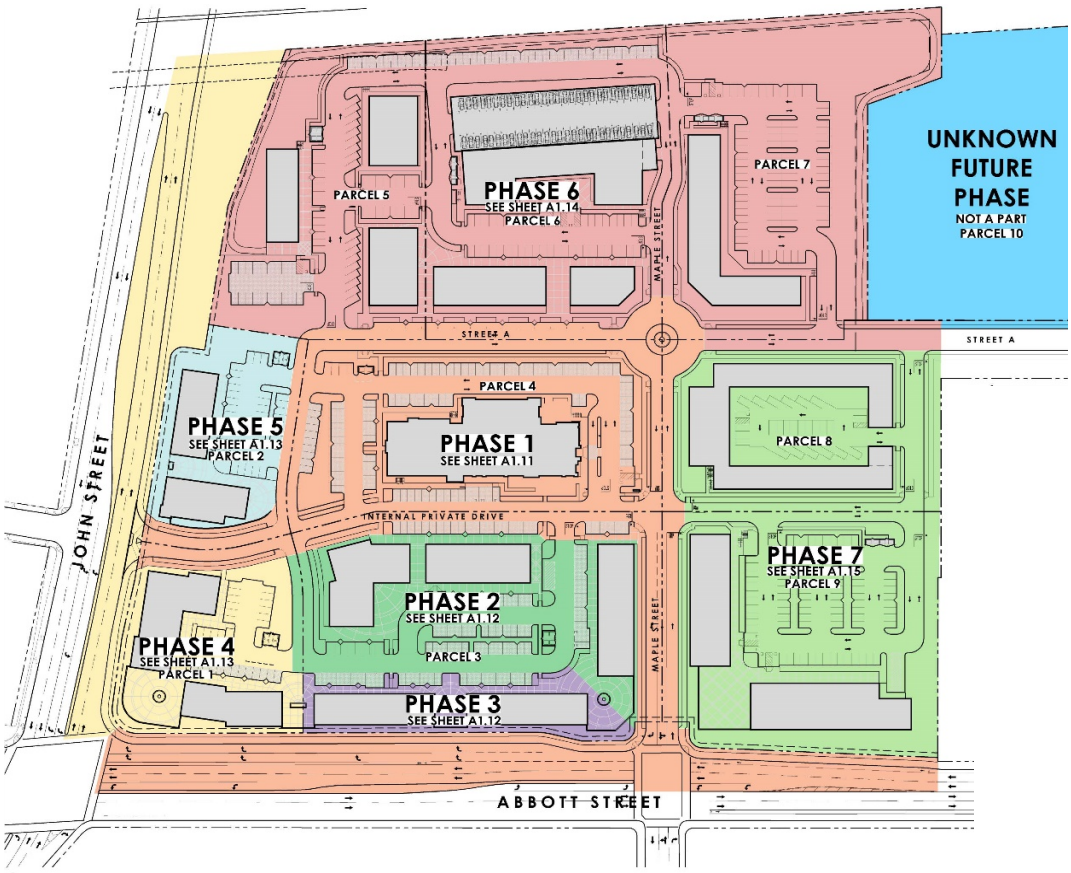
Exhibit 1
Project Location Map and Study Area



Source: Arris Studio Architects, February 2022.

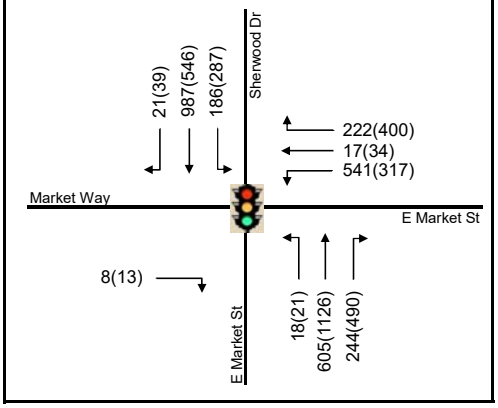
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Exhibit 2A
Project Site Plan
(Layout)

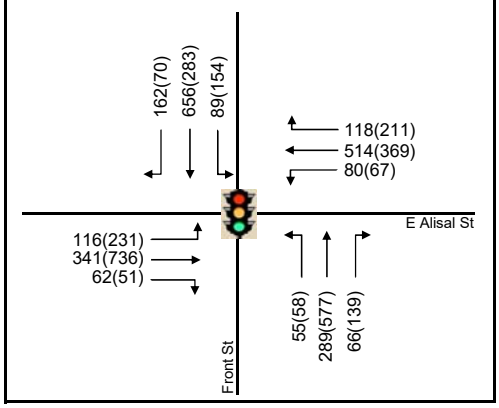


Source: Arris Studio Architects, February 2022.

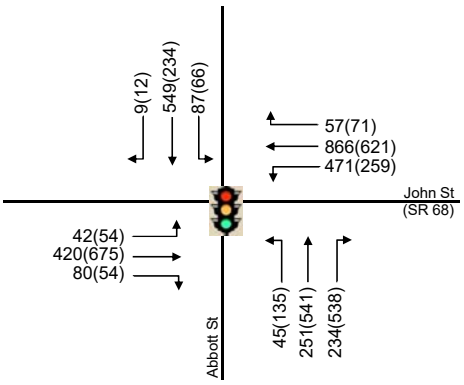
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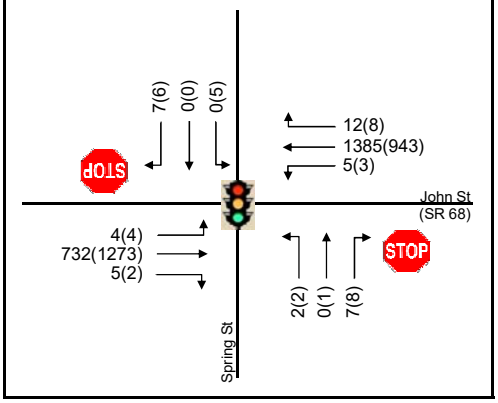
2. Front Street / E Alisal Street



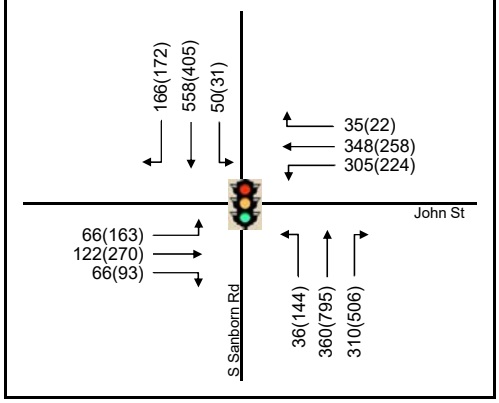
3. Abbott Street / John Street (SR 68)



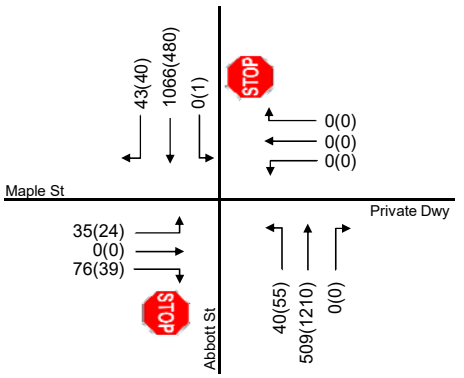
4. Spring Street / John Street (SR 68)



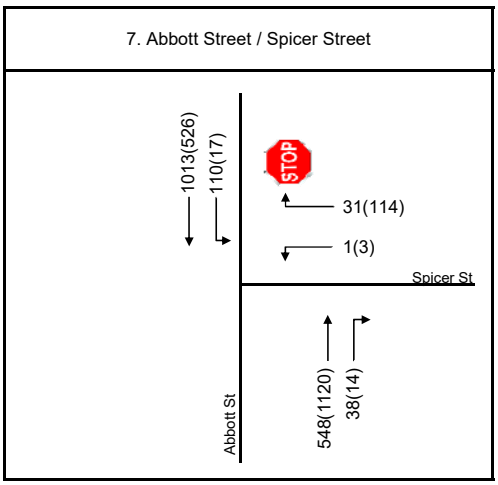
5. S Sanborn Road / John Street



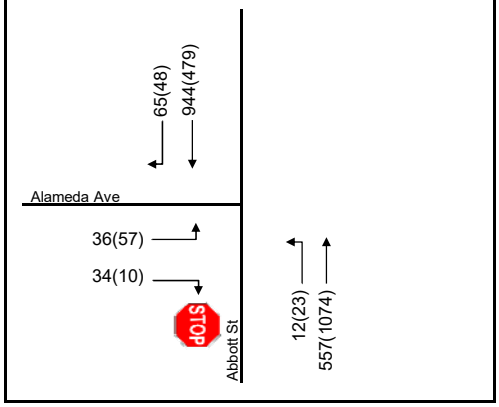
6. Abbott Street / Maple Street



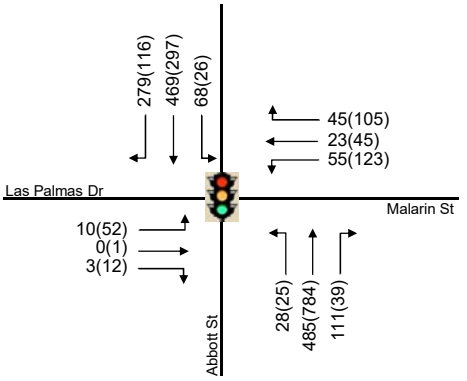
7. Abbott Street / Spicer Street



8. Abbott Street / Alameda Avenue

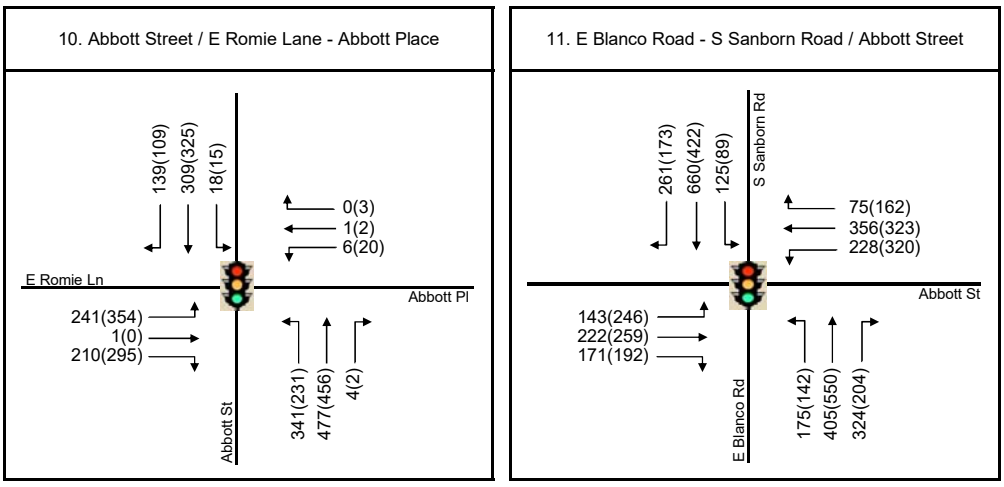


9. Abbott Street / Los Palos Drive - Malarin Street



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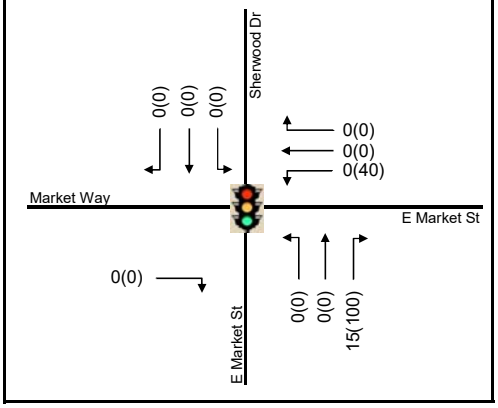
Exhibit 3
Existing Conditions (Off Season)
AM & PM Peak Hour Volumes
(Page 1 of 2)



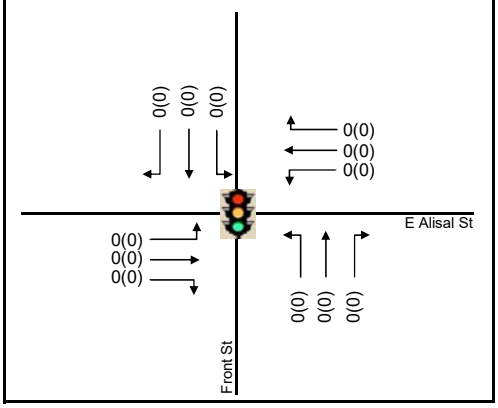
Keith Higgins
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Exhibit 3
Existing Conditions (Off Season)
AM & PM Peak Hour Volumes
(Page 2 of 2)

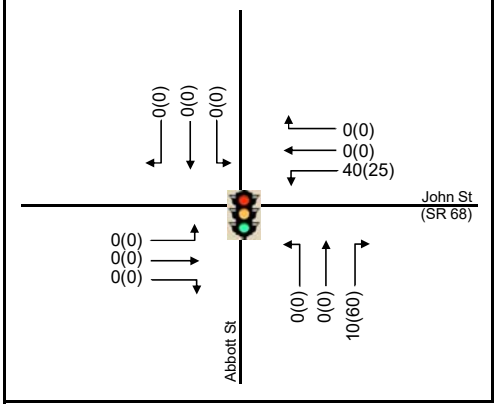
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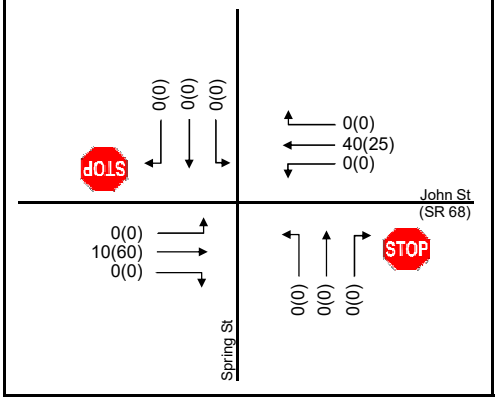
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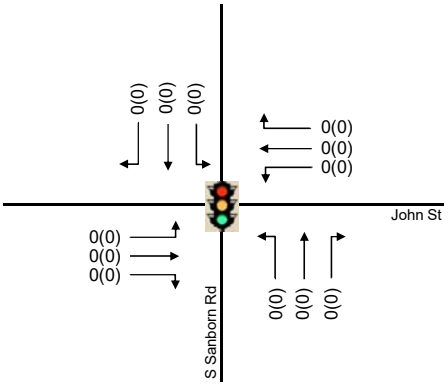
3. Abbott Street / John Street (SR 68)



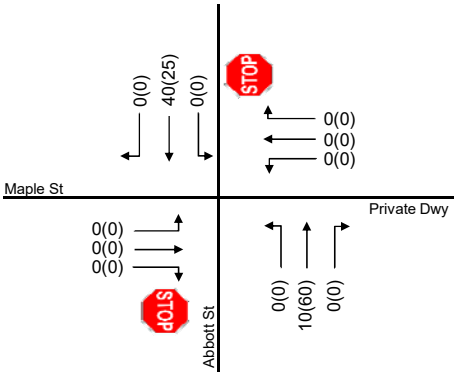
4. Spring Street / John Street (SR 68)



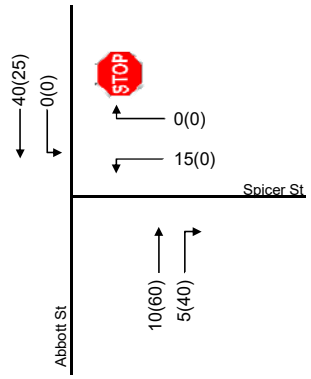
5. S Sanborn Road / John Street



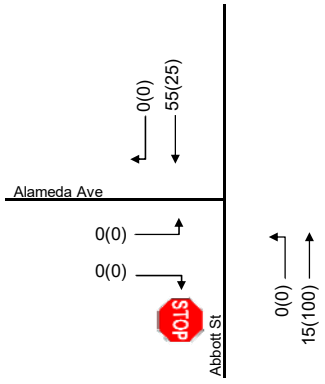
6. Abbott Street / Maple Street



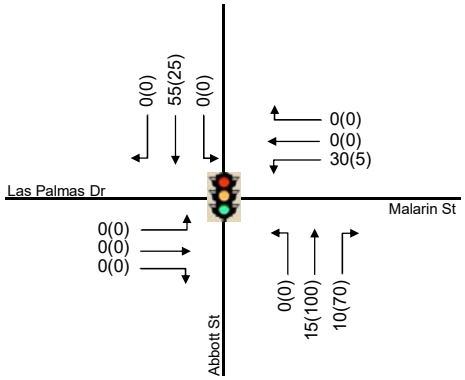
7. Abbott Street / Spicer Street



8. Abbott Street / Alameda Avenue

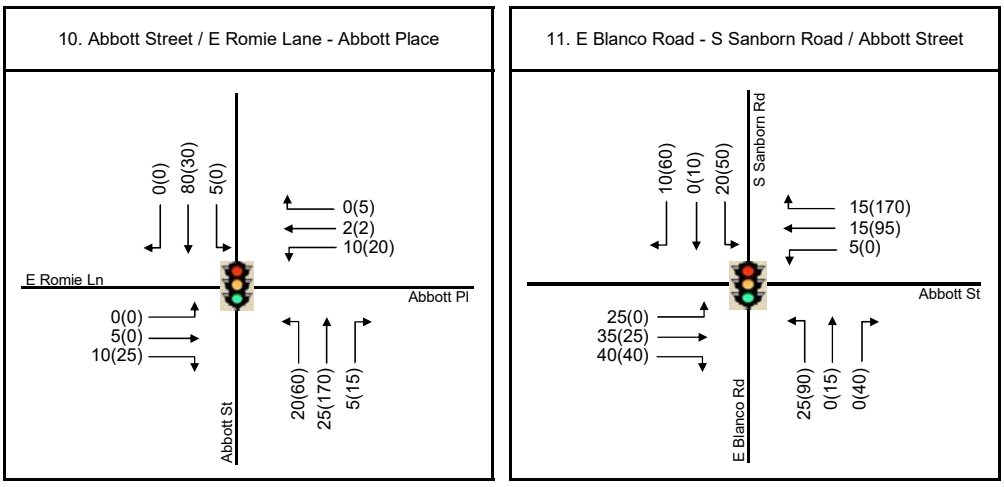


9. Abbott Street / Los Palos Drive - Malarin Street



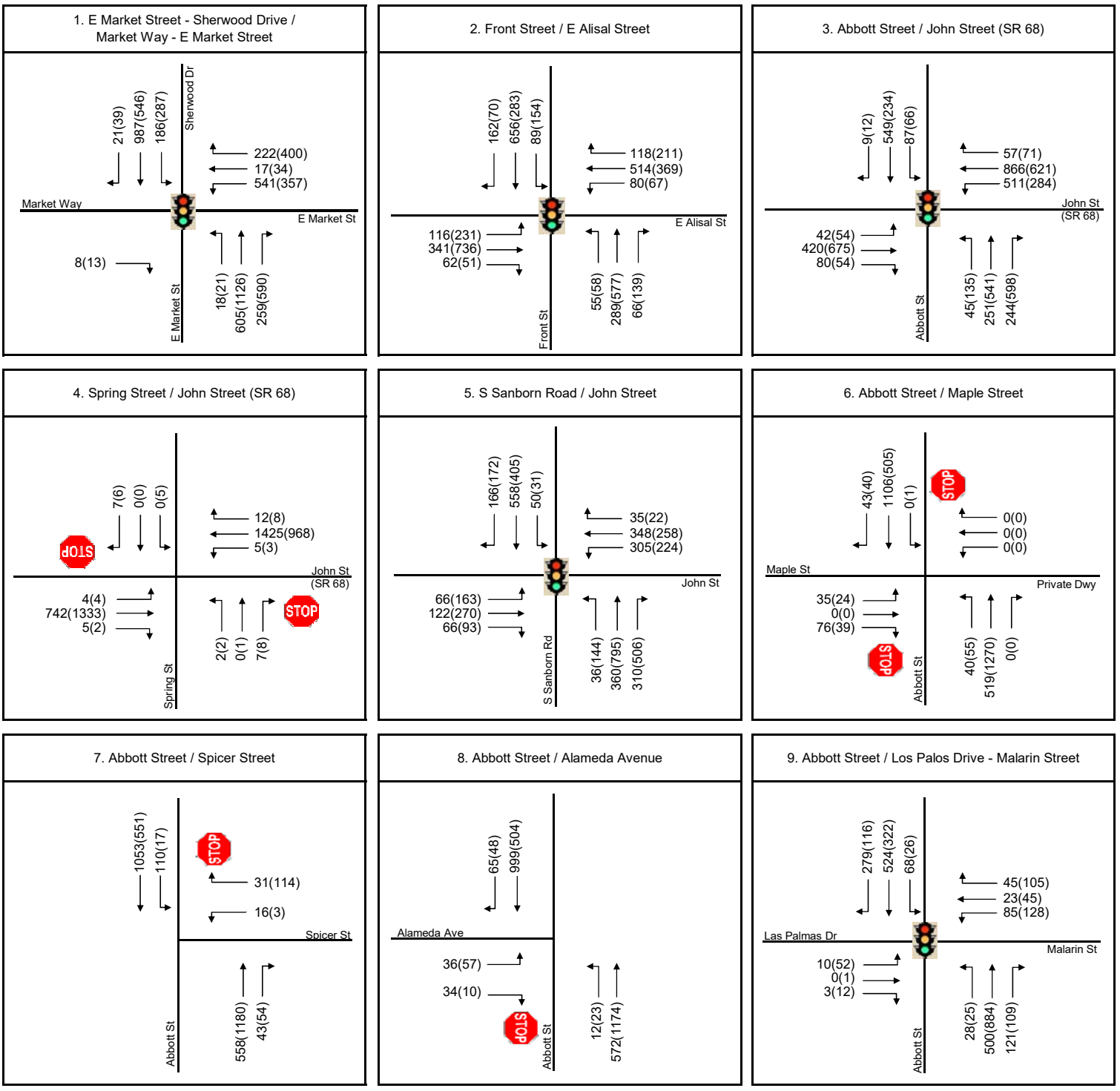
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Traffic Engineer

Exhibit 4
Seasonal Adjustments
AM & PM Peak Hour Volumes
(Page 1 of 2)



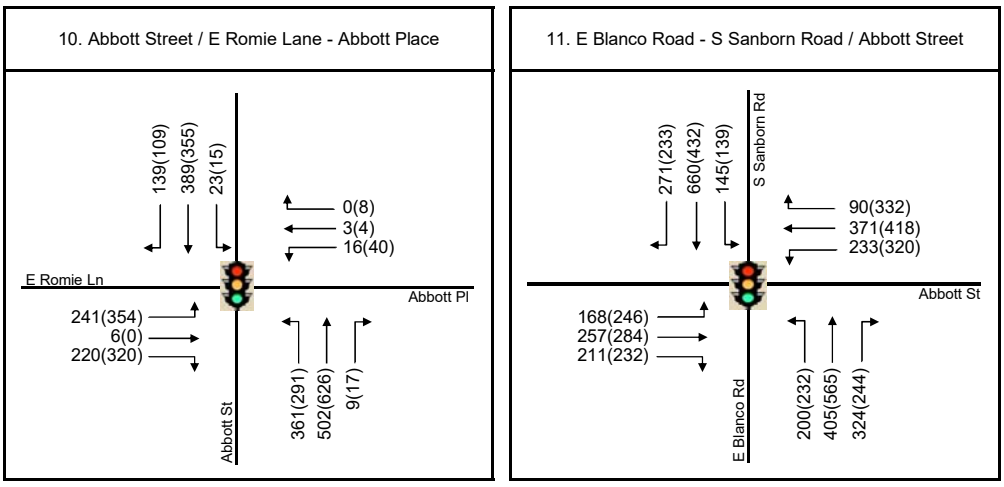
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Traffic Engineer

Exhibit 4
Seasonal Adjustments
AM & PM Peak Hour Volumes
(Page 2 of 2)



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Traffic Engineer

Exhibit 5
Existing Peak Season Conditions
AM & PM Peak Hour Volumes
(Page 1 of 2)



Keith Higgins
Traffic Engineer

Exhibit 5
Existing Peak Season Conditions
AM & PM Peak Hour Volumes
(Page 2 of 2)

	N-S Street	E-W Street	Jurisdiction	Existing Lane Configuration	Existing Intersection Control	LOS Standard	Peak Hour	Existing Conditions (Peak Season) Delay	Existing Conditions (Peak Season) LOS	Existing Plus Project Conditions Delay	Existing Plus Project Conditions LOS	Cumulative Without Project Conditions Delay	Cumulative Without Project Conditions LOS	Cumulative Plus Project Conditions Delay	Cumulative Plus Project Conditions LOS
1	E Market Street - Sherwood Drive	Market Way - E Market Street	City of Salinas	NB 1-L, 2-T, 2-R SB 1-L, 1-T, 1-T/R EB 1-R WB 1-L, 1-L/T, 1-R	Signal	D	AM	21.7	C	22.2	C	35.4	D	50.4	D
							PM	20.3	C	21.2	C	69.7	E	78.6	E
					With Improvement		*AM*					*29.7*	*C*	*31.7*	*C*
							PM					*31.6*	*C*	*34.8*	*C*
2	Front Street	E Alisal Street	City of Salinas	NB 1-L, 2-T, 1-R SB 1-L, 2-T, 1-R EB 1-L, 2-T, 1-R WB 1-L, 1-T, 1-T/R	Signal	D	AM	26.2	C	28.9	C	39.5	D	113.1	F
							PM	29.5	C	33.5	C	59.2	E	75.4	E
					With Improvement		*AM*					*33.9*	*C*	*37.6*	*D*
							PM					*43.3*	*D*	*49.3*	*D*
3	Abbott Street	John Street (SR 68)	Caltrans	NB 1-L, 2-T, 1-R SB 1-L, 2-T, 1-R EB 1-L, 2-T, 1-R WB	Signal	C-D	AM	36.4	D	55.1	E	87.1	F	105.8	F
							PM	61.7	E	75.5	E	98.4	F	138.4	F
					With Improvement (Alternative 1)			*27.5*	*C*	*37.6*	*D*	*37.0*	*D*	*53.6*	*D*
								30.1	*C*	*55.9*	*E*	*44.3*	*D*	*89.6*	*F*
					With Improvement (Alternative 2)		*AM*			*37.4*	*D*			*52.5*	*D*
							PM			*42.8*	*D*			*73.1*	*E*
4	Spring Street	John Street (SR 68)	Caltrans	NB 1-L/T/R SB 1-L/T/R EB 1-L/T, 1-T/R WB 1-L, 1-T, 1-T/R	Two-Way Stop	C-D/C-D	AM	34.3/16.6	D/C	19.2/18.5	C/C	43.7/17.8	E/F	16.1/19.9	C/C
							PM	76.6/54.1	F/F	129.4/*	F/F	141.6/99.9	F/F	*/*	F/F
					With Improvement		*AM*	*12.8/16.6*	*B/C*	*19.3/18.5*	*C/C*	*13.4/17.8*	*B/C*	*16.5/19.9*	*C/C*
							PM	*17.6/12.7*	*C/B*	*63.1/14.5*	*F/B*	*19.8/13.8*	*C/B*	*110.9/16.0*	*F/C*
5	S Sanborn Road	John Street	City of Salinas	NB 1-L, 2-T, 1-R SB 1-L, 2-T, 1-R EB 1-L, 1-T, 1-T/R WB 1-L, 2-T, 1-R	Signal	D	AM	22.8	C	23.1	C	32.0	C	48.0	D
							PM	32.0	C	33.0	C	85.8	F	89.9	F
					With Improvement		*AM*					*32.0*	*C*	*33.3*	*C*
							PM					*34.0*	*C*	*40.3*	*D*
6	Abbott Street	Maple Street	City of Salinas	NB 1-L/T, 1-T/R SB 1-L/T, 1-T/R EB 1-L/T/R WB 1-L/T/R	Two-Way Stop	D/D	AM	85.3/0.0	F/A	*/*	F/F	1060.8/0.0	F/A	*/*	F/F
							PM	40.3/0.0	E/A	11.2/*	B/F	*/0.0	F/A	*/*	F/F
					With Improvement		*AM*	*47.5/0.0*	*E/A*	*17.4*	*B*	*8.5*	*A*	*25.6*	*C*
							PM	*29.2/0.0*	*D/A*	*47.3*	*D*	*7.0*	*A*	*47.3*	*D*
7	Abbott Street	Spicer Street	City of Salinas	NB 1-T, 1-T/R SB 1-L/T, 1-T WB 1-L/R	One-Way Stop	D	AM	31.3	D	43.2	D	12.3	B	12.8	B
							PM	20.2	C	23.4	C	187.4	F	413.7	F
8	Abbott Street	Alameda Avenue	City of Salinas	NB 1-L/T, 1-T SB 1-T, 1-T/R EB 1-L/R	One-Way Stop	D	AM	37.5	E	50.5	F	282.6	F	434.6	F
							PM	44.9	E	86.9	F	1,955.9	F	*	F
					With Improvement		*AM*					*37.1*	*E*	*44.2*	*E*
							PM					*65.9*	*F*	*99.9*	*F*
9	Abbott Street	Los Palos Drive - Malarin Street	City of Salinas	NB 1-L, 1-T, 1-T/R SB 1-L, 1-T, 1-T/R EB 1-L/T/R WB 1-L/T, 1-R	Signal	D	AM	5.6	A	5.7	A	6.4	A	6.6	A
							PM	8.9	A	9.1	A	10.4	B	10.9	B
10	Abbott Street	E Romie Lane - Abbott Place	City of Salinas	NB 1-L, 2-T, 1-R SB 1-L, 2-T, 1-R EB 1-L, 1-L/T, 1-R WB 1-L/T/R	Signal	D	AM	22.5	C	25.4	C	41.4	D	41.4	D
							PM	26.7	C	26.6	C	31.4	C	31.7	C
11	E Blanco Road - S Sanborn Road	Abbott Street	City of Salinas	NB 1-L, 2-T, 1-R SB 1-L, 2-T, 1-R EB 1-L, 1-L/T, 1-T, 1-R WB 1-L, 1-L/T, 1-T, 1-R	Signal	D	AM	35.6	D	36.9	D	76.2	E	78.0	E
							PM	35.3	D	37.0	D	50.5	D	56.5	E
					With Improvement		*AM*					*41.2*	*D*	*43.4*	*D*
							PM					*39.0*	*D*	*42.4*	*D*

Notes:

1. L, T, R = Left, Through, Right.
2. NB, SB, EB, WB = Left, Through, Right, Northbound, Southbound, Eastbound, Westbound.
3. * = Delay exceeds 3000 seconds
4. Overall Caltrans level of service standard is the transition between LOS C and LOS D, abbreviated as "LOS C-D". Caltrans side-street standard assumed as LOS C-D. City of Salinas overall and side-streeet level of service standards are LOS D.
5. For signalized and all-way stop intersection analysis, delay is average overall delay in seconds per vehicle (sec/veh). For one- and two-way stop intersections, delays are side-street approach operations, also in seconds per vehicle (sec/veh).
6. Alternatives 1 and 2 refer to different improvement alternatives for the same intersection. See **Exhibit 6B** for details.
7. N/A = Not Applicable. Intersection does not existi under this scenario.
8. Analysis performed using 2010 and 2000 Highway Capacity Manual methodologies.
9. Level of service calculations can be found in **Appendices E - H.**
10. LOS highlighted in **red** indicates intersection operating below level of service standard.
11. LOS with a thick black border represents a significant impact. Resulting levels of service with recommended improvements noted under "With Improvements". A list of applied improvements can be found on **Exhibit 6B**.

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Traffic Engineer

Exhibit 6A
Intersection
Levels of Service

	N-S Street	E-W Street	Jurisdiction	Existing Conditions (Peak Season)	Existing Plus Project Conditions	Cumulative Without Project Conditions	Cumulative Plus Project Conditions
1	E Market Street - Sherwood Drive	Market Way - E Market Street	City of Salinas	None Required	None Required	Add WB RTO Signal Phase	Add WB RTO Signal Phase
2	Front Street	E Alisal Street	City of Salinas	None Required	None Required	Add EB RTO Signal Phase	Add EB RTO Signal Phase
3	Abbott Street	John Street (SR 68)	Caltrans	a. Add 2nd WB L	Alternative 1: Same as Existing Plus Project Alternative 2: Same as Existing Plus Project PLUS c. Add 2nd NB R	a. Add 2nd WB L	Alternative 1: Same as Existing Plus Project Alternative 2: Same as Existing Plus Project PLUS c. Add 2nd NB R
4	Spring Street	John Street (SR 68)	Caltrans	Modify John Median to: a. Prevent EB L, WB L b. Prevent NB L, NB T c. Prevent SB L, SB T	Modify John Median to: a. Prevent EB L, WB L b. Prevent NB L, NB T c. Prevent SB L, SB T	Modify John Median to: a. Prevent EB L, WB L b. Prevent NB L, NB T c. Prevent SB L, SB T	Modify John Median to: a. Prevent EB L, WB L b. Prevent SB L, SB T c. Prevent NB L, NB T
5	S Sanborn Road	John Street	City of Salinas	None Required	None Required	Add NB RTO Signal Phase	Add NB RTO Signal Phase
6	Abbott Street	Maple Street	City of Salinas	a. Add EB R b. Add NB L (TFO 42) c. Add SB L (TFO 42)	a. Add EB R b. Add NB L (TFO 42) c. Add SB L (TFO 42) d. Add WB R e. Signalize Intersection f. Add WB RTO Signal Phase	a. Add EB R b. Add NB L (TFO 42) c. Add SB L (TFO 42) d. Signalize Intersection	a. Add EB R b. Add NB L (TFO 42) c. Add SB L (TFO 42) d. Add WB R e. Signalize Intersection f. Add WB RTO Signal Phase
7	Abbott Street	Spicer Street	City of Salinas	None Required	None Required	None Required	None Required
8	Abbott Street	Alameda Avenue	City of Salinas	None Required	a. Add EB R b. Add Median Acceleration Lane or Two-Way Left Turn Lane	None Required	a. Add EB R b. Add Median Acceleration Lane or Two-Way Left Turn Lane
9	Abbott Street	Los Palos Drive - Malarin Street	City of Salinas	None Required	None Required	None Required	None Required
10	Abbott Street	E Romie Lane - Abbott Place	City of Salinas	None Required	None Required	None Required	None Required
11	E Blanco Road - S Sanborn Road	Abbott Street	City of Salinas	None Required	None Required	Implement Salinas TFO 68: a. Add 2nd EB L b. Add 2nd WB L c. Convert Abbott Left Turn Signal Phasing to Protected	Implement Salinas TFO 68: a. Add 2nd EB L b. Add 2nd WB L c. Convert Abbott Left Turn Signal Phasing to Protected

Notes:

1. L, T, R = Left, Through, Right.
2. NB, SB, EB, WB, RTO, TWLTL = Left, Through, Right, Northbound, Southbound, Eastbound, Westbound Right Turn Overlap, Two-Way Left Turn Lane.
3. N/A = Not Applicable. Intersection does not exist under this scenario.
4. "TFO xx" refers to City of Salinas Traffic Fee Ordinance project.

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Traffic Engineer

Exhibit 6B
Recommended
Intersection Improvements

TRIP GENERATION RATES	ITE LAND USE CODE	DAILY TRIP RATE	AM PEAK HOUR PEAK HOUR RATE	AM PEAK HOUR % OF ADT	AM PEAK HOUR % IN	AM PEAK HOUR % OUT	PM PEAK HOUR PEAK HOUR RATE	PM PEAK HOUR % OF ADT	PM PEAK HOUR % IN	PM PEAK HOUR % OUT
All Suites Hotel (per occupied room)	311	6.24	0.48	8%	0.67	0.33	0.52	8%	0.43	0.57
Variety Store (per 1,000 sq. ft.)	814	63.47	3.18	5%	0.57	0.43	6.84	11%	0.52	0.48
General Office (per 1,000 sq. ft.)	710	9.74	1.16	12%	0.86	0.14	1.15	12%	0.16	0.84
Medical - Dental Office (per 1,000 sq. ft.)	720	34.80	2.78	8%	0.78	0.22	3.46	10%	0.28	0.72
Fast Casual Restaurant (per 1,000 sq. ft.)	930	315.17	22.06	7%	0.67	0.33	25.21	8%	0.55	0.45
Quality Restaurant (per 1,000 sq. ft.)	931	83.84	0.73	1%	0.60	0.40	7.80	9%	0.50	0.50
Fast Food Restaurant without Drive-Through (per 1,000 sq. ft.)	933	346.23	25.10	7%	0.60	0.40	28.34	8%	0.50	0.50
Supermarket (per 1,000 sq. ft.)	850	106.78	3.82	4%	0.60	0.40	9.24	9%	0.51	0.49
Walk-in Bank (per 1,000 sq. ft.)[4]	911	100.03	12.13	12%	0.44	0.56	26.40	26%	0.51	0.49
Multi-Family Residential (per dwelling unit)	220	7.32	0.46	6%	0.23	0.77	0.56	8%	0.63	0.37

Project Incremental Trip Generation by Phases									
Phase 1 - Gross & Net Trips	693	53	8%	36	17	58	8%	25	33
Phases 1 and 2 - Gross Trips	2,256	134	6%	77	57	219	10%	109	110
Net Trips (5% Internal)	2,143	127	6%	73	54	208	10%	103	104
Phases 1 through 3 - Gross Trips	4,260	256	6%	154	102	403	9%	196	207
Net Trips (10% Internal)	3,834	230	6%	139	92	362	9%	176	186
Phases 1 through 4 - Gross Trips	6,407	388	6%	233	155	592	9%	292	300
Net Trips (10% Internal)	5,766	349	6%	210	140	533	9%	262	270
Phases 1 through 5 - Gross Trips	7,903	476	6%	285	191	726	9%	359	366
Net Trips (10% Internal)	7,112	428	6%	257	172	653	9%	323	330
Phases 1 through 6 - Gross Trips	11,562	698	6%	384	314	1,148	10%	578	569
Net Trips (10% Internal)	10,405	628	6%	346	282	1,033	10%	520	512
Historic Trip Generation									
Vehicles	1,074	161	15%	120	41	150	14%	57	93
Passenger Car Equivalents	1,500	225	15%	168	57	214	14%	82	132

Notes:

1. Trip generation and pass-by rates published by Institute of Transportation Engineers (ITE), *Trip Generation Manual,* 10th Edition, 2017.
2. Pass-By trip rates published by Institute of Transportation Engineers (ITE), Trip Generation Handbook, 3rd Edition, 2017.
3. Sq. Ft. = square feet
4. ITE does not provide daily trip generation rate for Walk-In Bank (ITE Land Use 911). Daily rate estimated from Drive-In Bank (ITE Land Use 912).

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Exhibit 7
Project Trip Generation
(Page 1 of 2 - Trip Generation Rates and Cumulative Trip Generation by Phase)

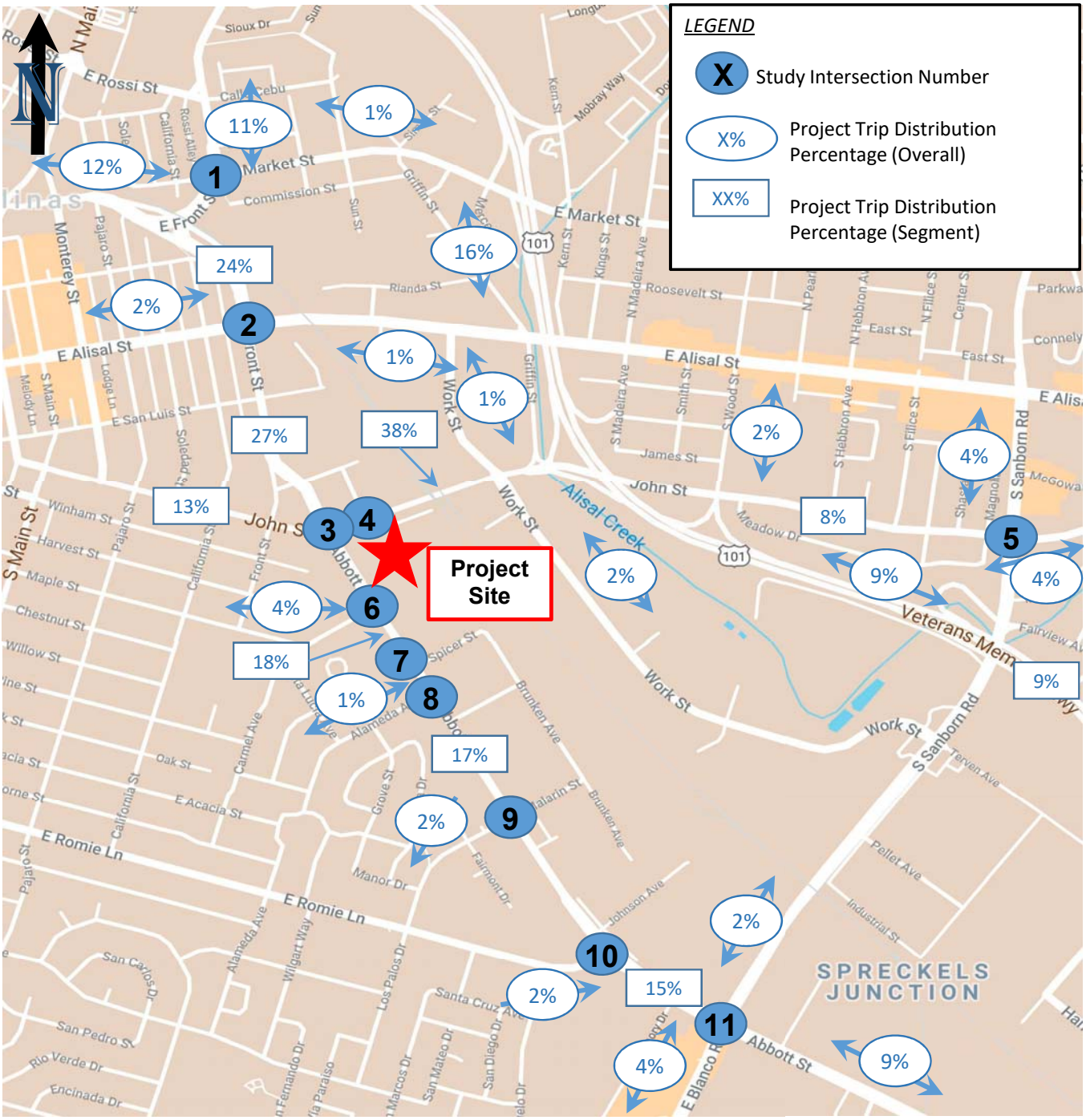
PROPOSED USE	PROJECT SIZE	DAILY TRIPS	WEEKDAY AM PEAK HOUR PEAK HOUR TRIPS	AM PEAK HOUR % OF ADT	AM PEAK HOUR TRIPS IN	AM PEAK HOUR TRIPS OUT	PM PEAK HOUR PEAK HOUR TRIPS	PM PEAK HOUR % OF ADT	PM PEAK HOUR TRIPS IN	PM PEAK HOUR TRIPS OUT
A. INITIAL PROJECT - PHASES 1 THROUGH 5										
1. PHASE 1										
Hilton Home2 Suites	111 Rooms	693	53	8%	36	17	58	8%	25	33
2. PHASE 2										
Building 1F - Variety Store	7,900 Sq. Ft.	501	25	5%	14	11	54	11%	28	26
- Multi-Family Residential	14 Units	102	6	6%	1	5	8	8%	4	4
Building 1H - Variety Store	6,000 Sq. Ft.	381	19	5%	11	8	41	11%	21	20
- Multi-Family Residential	6 Units	44	3	7%	1	2	3	7%	2	1
Building 1J - Variety Store	7,500 Sq. Ft.	476	24	5%	14	10	51	11%	27	24
- Multi-Family Residential	8 Units	59	4	7%	1	3	4	7%	2	2
Phase 2 Subtotal		1,563	81	5%	42	39	161	10%	84	77
3. PHASE 3										
Building 1G (12,800 s.f.) - Variety Store	3,200 Sq. Ft.	203	10	5%	6	4	22	11%	11	11
- Fast Food Restaurant without Drive-Through	3,200 Sq. Ft.	1,108	80	7%	48	32	91	8%	46	46
- 70% General Office	4,480 Sq. Ft.	44	5	11%	4	1	5	11%	1	4
- 30% Medical Office	1,920 Sq. Ft.	67	5	7%	4	1	7	10%	2	5
Building 1I (12,800 s.f.) - Variety Store	3,200 Sq. Ft.	203	10	5%	6	4	22	11%	11	11
- Quality Restaurant	3,200 Sq. Ft.	268	2	1%	1	1	25	9%	13	12
- 70% General Office	4,480 Sq. Ft.	44	5	11%	4	1	5	11%	1	4
- 30% Medical Office	1,920 Sq. Ft.	67	5	7%	4	1	7	10%	2	5
Phase 3 Subtotal	25,600 Sq. Ft.	2,004	122	6%	77	45	184	9%	87	97
4. PHASE 4										
Building 1D (8,500 s.f.) - Variety Store	4,250 Sq. Ft.	270	14	5%	8	6	29	11%	15	14
- Fast Food Restaurant without Drive-Through	4,250 Sq. Ft.	1,471	107	7%	64	43	120	8%	60	60
Building 1E (5,500 s.f.) - Variety Store	2,750 Sq. Ft.	175	9	5%	5	4	19	11%	10	9
- Quality Restaurant	2,750 Sq. Ft.	231	2	1%	1	1	21	9%	11	10
Phase 4 - Subtotal	14,000 Sq. Ft.	2,147	132	6%	79	53	189	9%	96	93
5. PHASE 5										
Building 1B (5,500 s.f.) - Variety Store	2,750 Sq. Ft.	175	9	5%	5	4	19	11%	10	9
- Fast Food Restaurant without Drive-Through	2,750 Sq. Ft.	952	69	7%	41	28	78	8%	39	39
Building 1C (5,000 s.f.) - Variety Store	2,500 Sq. Ft.	159	8	5%	5	3	17	11%	9	8
- Quality Restaurant	2,500 Sq. Ft.	210	2	1%	1	1	20	10%	10	10
Phase 5 Subtotal	10,500 Sq. Ft.	1,496	88	6%	52	36	134	9%	68	66
6. PHASE 6										
Building 3A - Variety Store	4,800 Sq. Ft.	305	15	5%	9	6	33	11%	17	16
- Multi-Family Residential	4 Units	29	2	7%	0	2	2	7%	1	1
Building 3B - Variety Store	5,400 Sq. Ft.	343	17	5%	10	7	37	11%	19	18
- Multi-Family Residential	18 Units	132	8	6%	2	6	10	8%	5	5
Building 3C - Variety Store	6,000 Sq. Ft.	381	19	5%	11	8	41	11%	21	20
- Multi-Family Residential	6 Units	44	3	7%	1	2	3	7%	2	1
Building 3D - Variety Store	13,000 Sq. Ft.	825	41	5%	23	18	89	11%	46	43
- Multi-Family Residential	36 Units	264	17	6%	4	13	20	8%	10	10
Building 3E - Variety Store	7,000 Sq. Ft.	444	22	5%	13	9	48	11%	25	23
- Multi-Family Residential	16 Units	117	7	6%	2	5	9	8%	5	4
Building 3F - Bank	3,800 Sq. Ft.	380	46	12%	20	26	100	26%	51	49
- Multi-Family Residential	4 Units	29	2	7%	0	2	2	7%	1	1
Building 4 - Multi-Family Residential	50 Units	366	23	6%	5	18	28	8%	15	13
Phase 6 Subtotal		3,659	222	6%	99	123	422	12%	219	203
7. PHASE 7										
Building 2A - Multi-Family Residential	80 Units	586	37	6%	9	28	45	8%	23	22
Builidng 2B (17,000 s.f.) - Variety Store	8,500 Sq. Ft.	539	27	5%	15	12	58	11%	30	28
- General Office	8,500 Sq. Ft.	83	10	12%	9	1	10	12%	2	8
Builidng 2C (20,800 s.f.) - Market	11,200 Sq. Ft.	1,196	43	4%	26	17	103	9%	53	50
- Medical Office	9,600 Sq. Ft.	334	27	8%	21	6	33	10%	9	24
Phase 7 Subtotal		2,738	144	5%	80	64	249	9%	117	132
PROJECT GRAND TOTAL (PHASES 1-7) - GROSS TRIPS		14,300	842	6%	464	378	1,397	10%	695	702
NET TRIPS (10% Internal)		12,870	758	6%	418	340	1,257	10%	625	632
ANALYZED TRIP GENERATION										
PROJECT GRAND TOTAL (PHASES 1-7) - GROSS TRIPS		14,477	862	6%	475	387	1,423	10%	708	715
NET TRIPS (10% Internal)		13,029	776	6%	427	349	1,280	10%	637	643

Note:

1. Analyzed Trip Generation is based on a prior project definition. Analysis of this prior definition consititues a slightly more conservative analysis of the project.

Keith Higgins
Traffic Engineer

Exhibit 7
Project Trip Generation
(Page 2 of 2 - Individual Trip Generation by Phase)

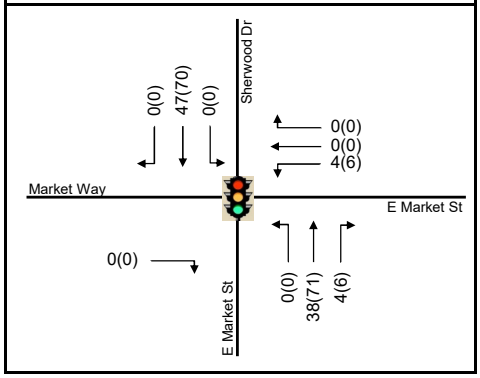


Basemap Source: Google Maps, 2019.

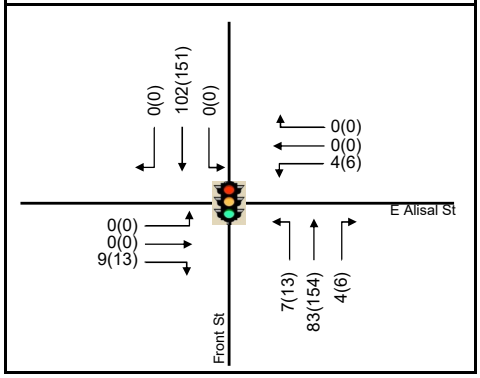
Keith Higgins
Traffic Engineer

Exhibit 8
Project Trip Distribution

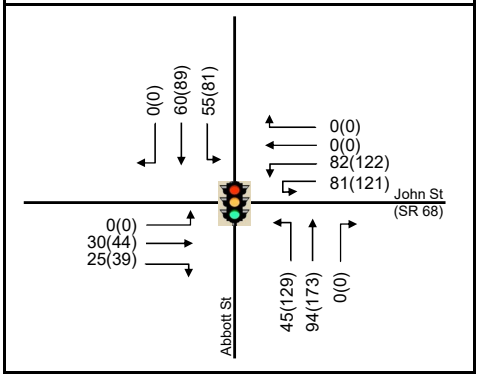
1. E Market Street - Sherwood Drive / Market Way - E Market Street



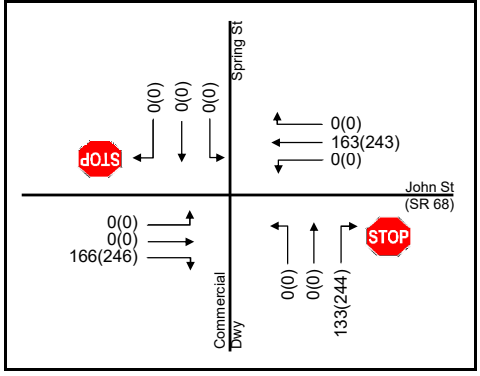
2. Front Street / E Alisal Street



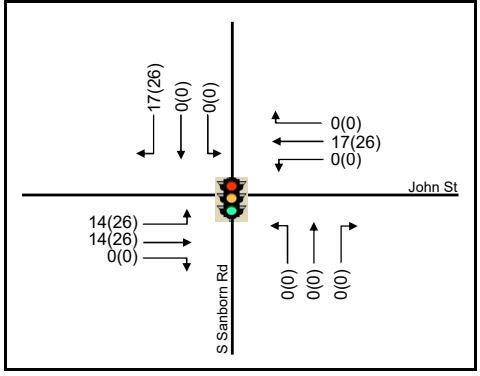
3. Abbott Street / John Street (SR 68)



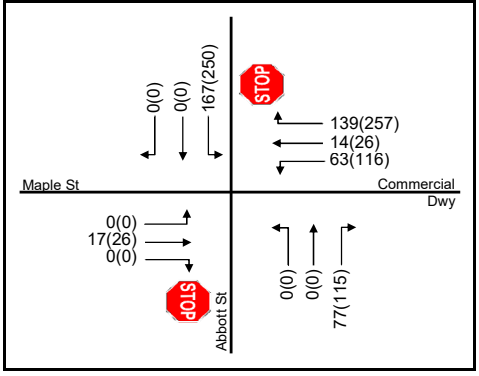
4. Spring Street / John Street (SR 68)



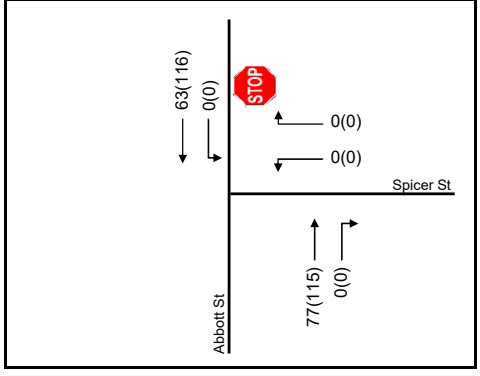
5. S Sanborn Road / John Street



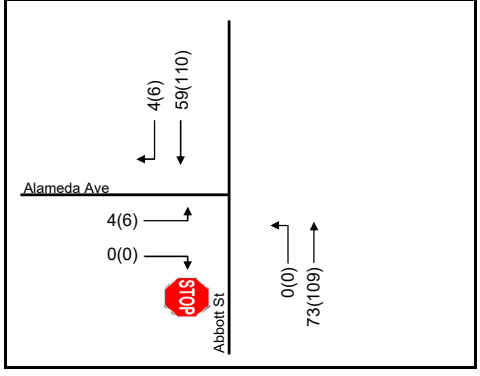
6. Abbott Street / Maple Street



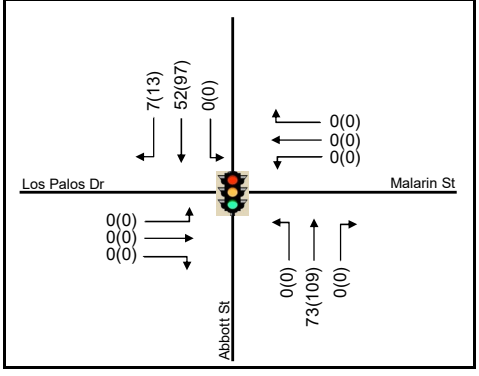
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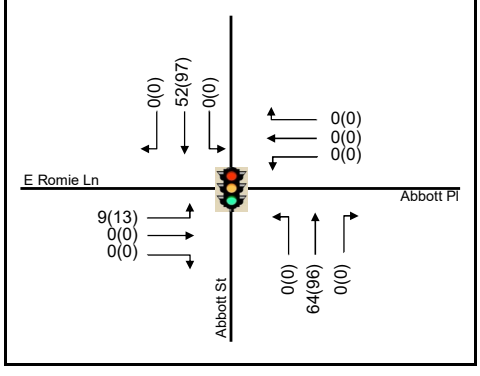
8. Abbott Street / Alameda Avenue



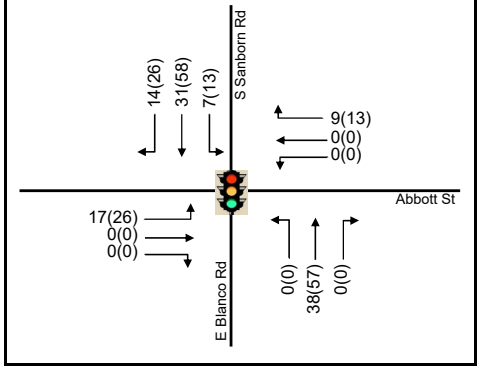
9. Abbott Street / Los Palos Drive - Malarin Street



10. Abbott Street / E Romie Lane - Abbott Place



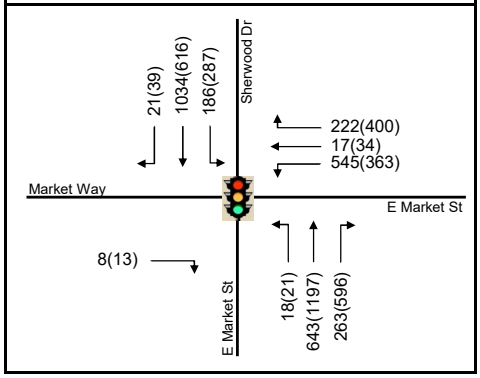
11. E Blanco Road - S Sanborn Road / Abbott Street



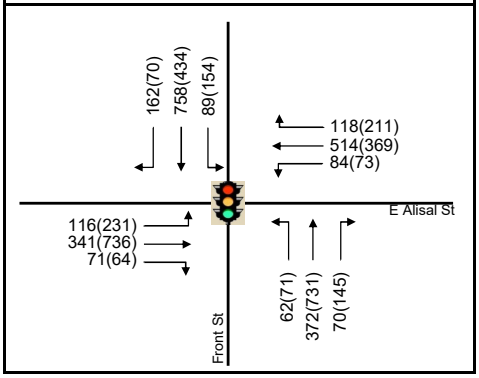
Keith Higgins
Traffic Engineer

Exhibit 9
Project Trip Assignment
AM & PM Peak Hour Volumes

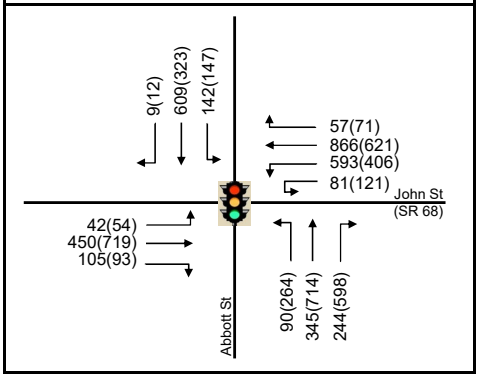
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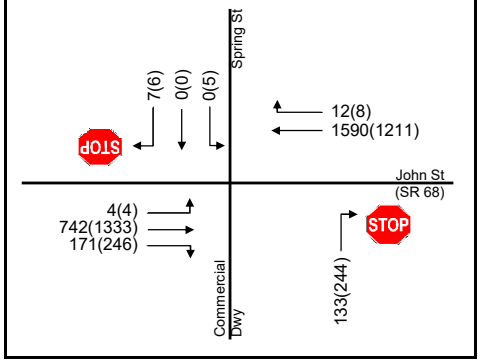
2. Front Street / E Alisal Street



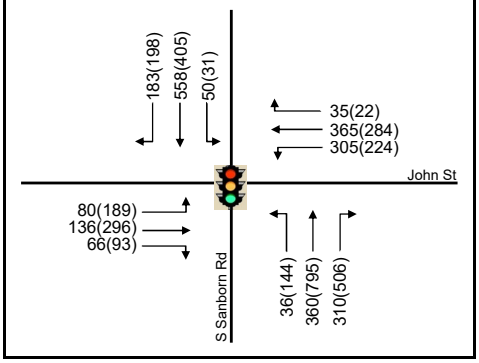
3. Abbott Street / John Street (SR 68)



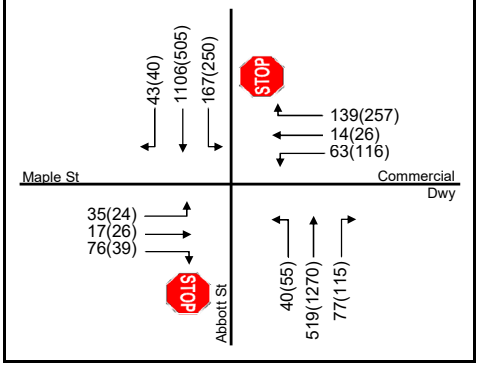
4. Spring Street / John Street (SR 68)



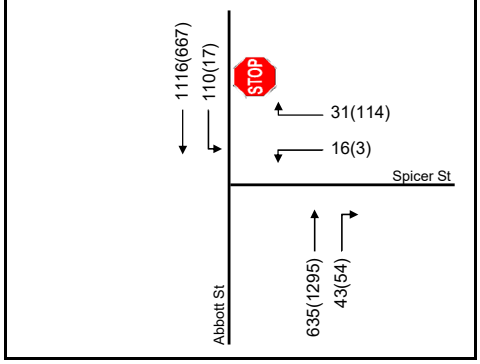
5. S Sanborn Road / John Street



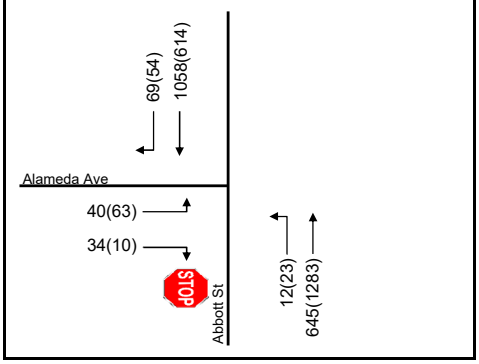
6. Abbott Street / Maple Street



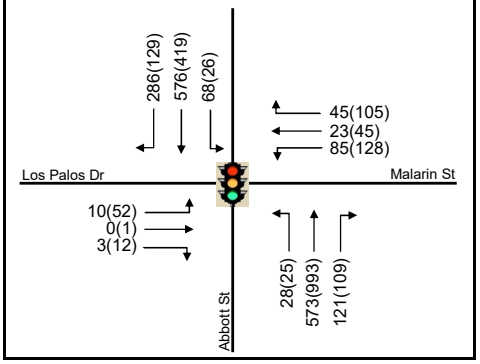
7. Abbott Street / Spicer Street



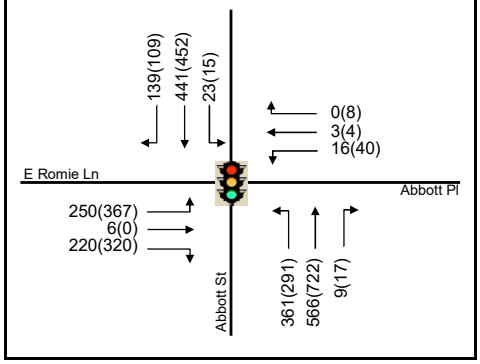
8. Abbott Street / Alameda Avenue



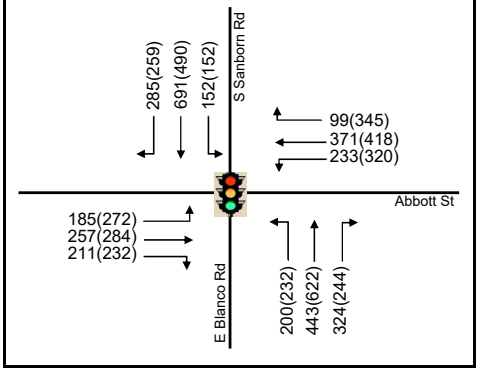
9. Abbott Street / Los Palos Drive - Malarin Street



10. Abbott Street / E Romie Lane - Abbott Place

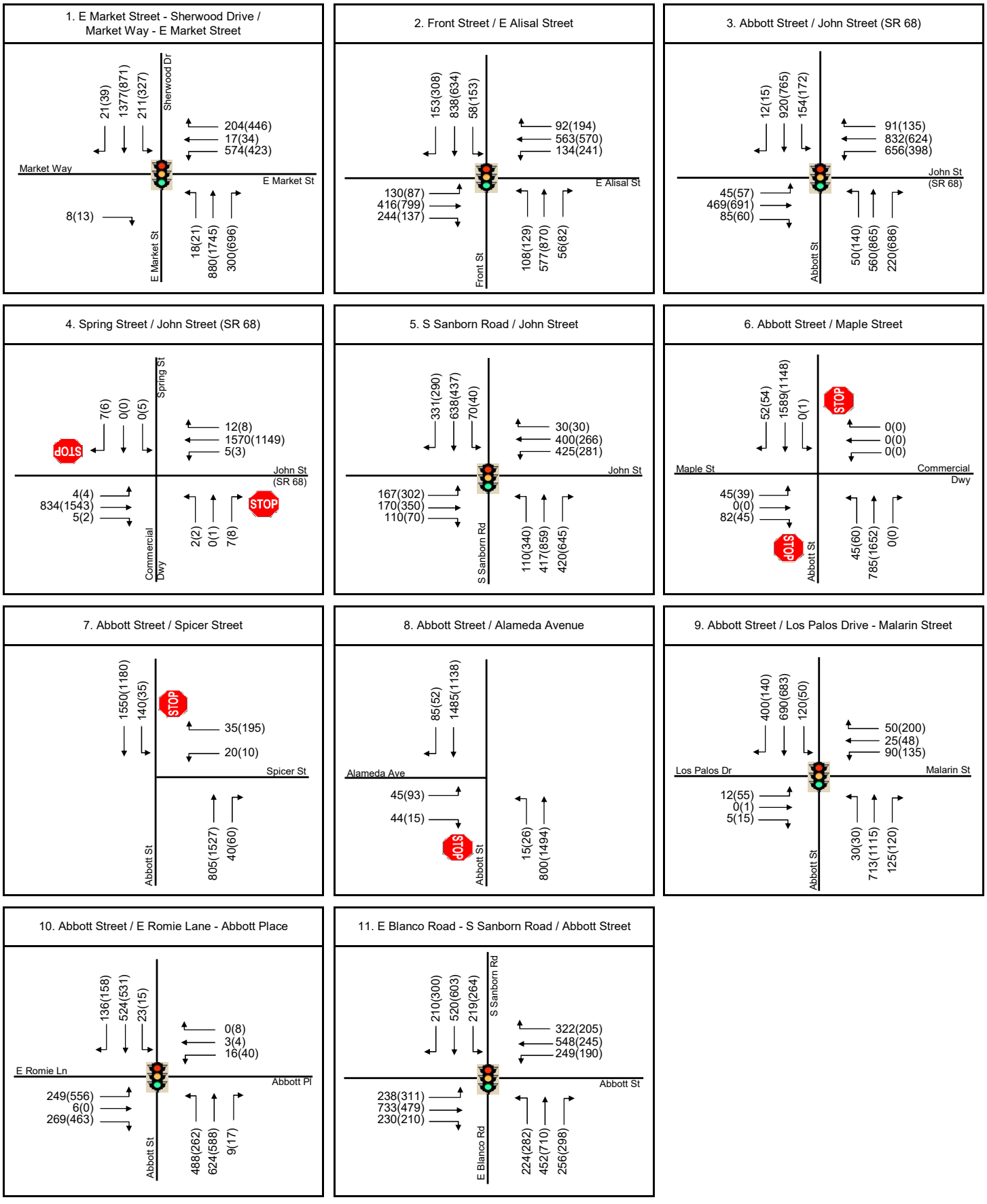


11. E Blanco Road - S Sanborn Road / Abbott Street



Keith Higgins
Traffic Engineer

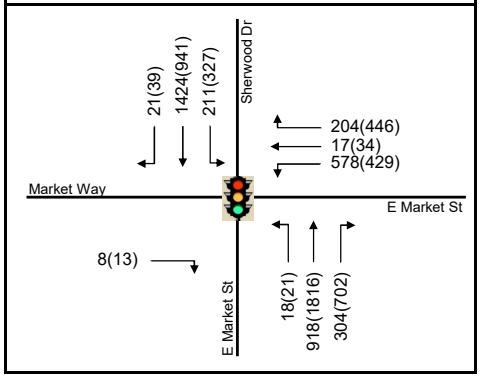
Exhibit 10
Existing Plus Project Conditions
AM & PM Peak Hour Volumes



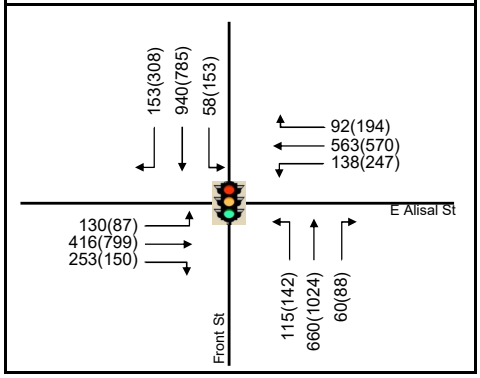
Keith Higgins
Traffic Engineer

Exhibit 11
Cumulative Without Project Conditions
AM & PM Peak Hour Volumes

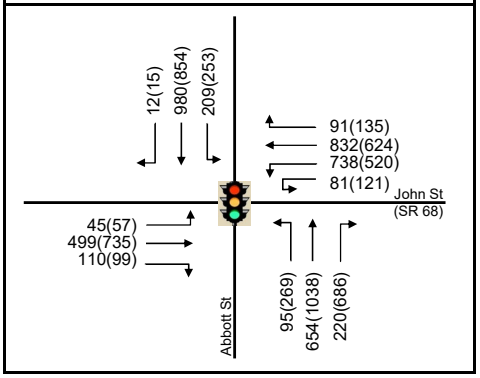
1. E Market Street - Sherwood Drive / Market Way - E Market Street



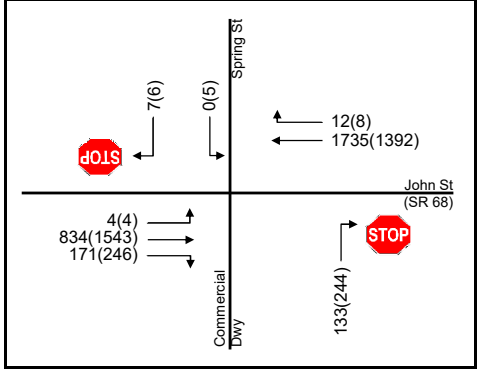
2. Front Street / E Alisal Street



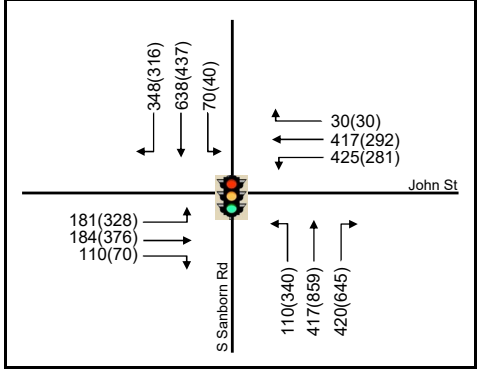
3. Abbott Street / John Street (SR 68)



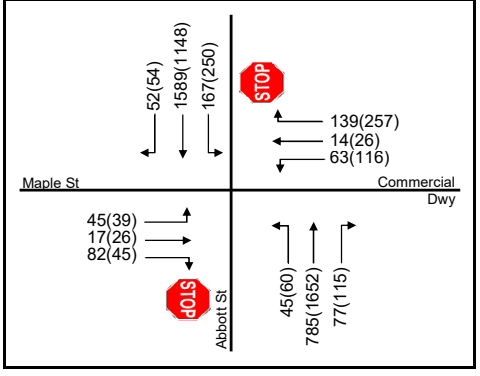
4. Spring Street / John Street (SR 68)



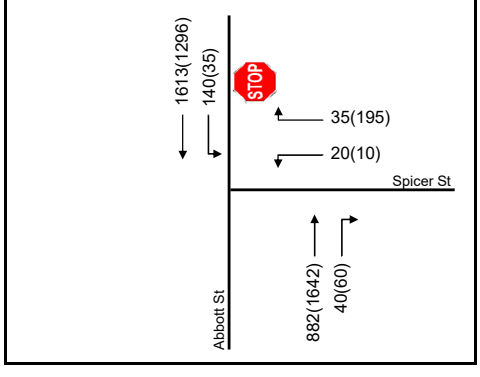
5. S Sanborn Road / John Street



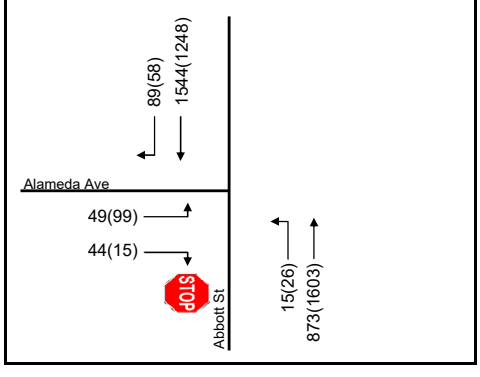
6. Abbott Street / Maple Street



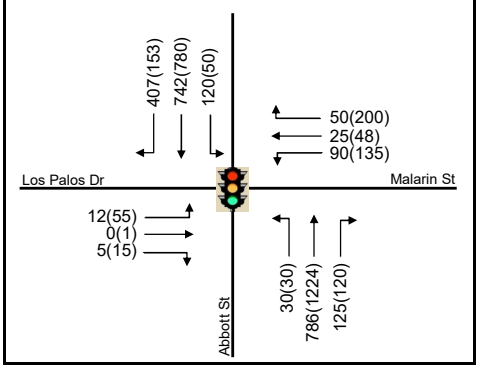
7. Abbott Street / Spicer Street



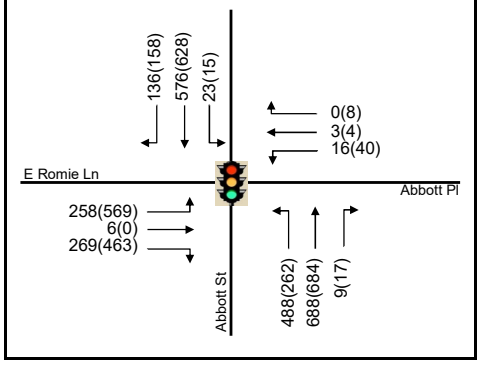
8. Abbott Street / Alameda Avenue



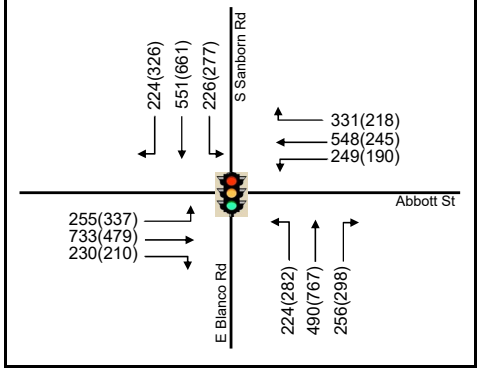
9. Abbott Street / Los Palos Drive - Malarin Street



10. Abbott Street / E Romie Lane - Abbott Place

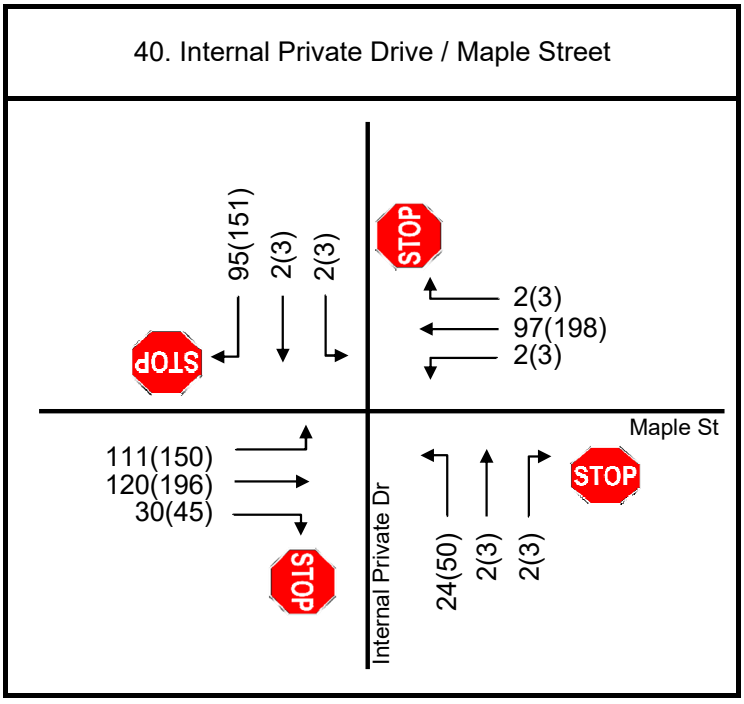


11. E Blanco Road - S Sanborn Road / Abbott Street



Keith Higgins
Traffic Engineer

Exhibit 12
Cumulative Plus Project Conditions
AM & PM Peak Hour Volumes



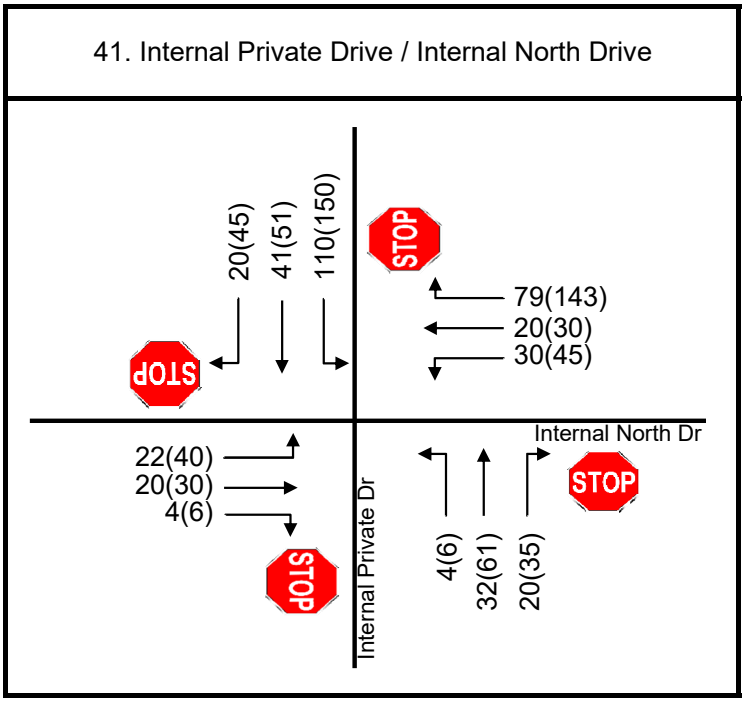


Exhibit 13
Internal Project Driveways
at Project Buildout
(Cumulative Plus Project Conditions)
AM & PM Peak Hour Volumes

Keith Higgins
Traffic Engineer

	N-S Street	E-W Street	Proposed Lane Configuration	Proposed Intersection Control	LOS Standard	Peak Hour	Cumulative Plus Project Conditions	
							Delay	LOS
40	Internal Driveways West	Maple Street	NB 1-L/T/R SB 1-L/T/R EB 1-L/T/R WB 1-L/T/R	All Way Stop	D	AM	9.0	A
						PM	12.2	B
41	Spring Street	Internal Driveways North	NB 1-L/T/R SB 1-L/T/R EB 1-L/T/R WB 1-L/T/R	All Way Stop	D	AM	8.4	A
						PM	9.8	A

Notes:

1. L, T, R = Left, Through, Right.
2. NB, SB, EB, WB = Left, Through, Right, Northbound, Southbound, Eastbound, Westbound.
3. Overall Caltrans level of service standard is the transition between LOS C and LOS D, abbreviated as "LOS C-D". Caltrans side-street st assumed as LOS C-D. City of Salinas overall and side-streeet level of service standards are LOS D.
4. For one- and two-way stop intersections, delays are side-street approach operations, also in seconds per vehicle (sec/veh).
5. Analysis performed using 2010 Highway Capacity Manual methodologies.
6. Level of service calculations can be found in **Appendix H.**
7. LOS highlighted in **red** indicates intersection operating below level of service standard.

Appendix A

Level of Service

Descriptions

APPENDIX A1

LEVEL OF SERVICE (LOS) DESCRIPTION
SIGNALIZED INTERSECTIONS

The capacity of an urban street is related primarily to the signal timing and the geometric characteristics of the facility as well as to the composition of traffic on the facility. Geometrics are a fixed characteristic of a facility. Thus, while traffic composition may vary somewhat over time, the capacity of a facility is generally a stable value that can be significantly improved only by initiating geometric improvements. A traffic signal essentially allocates time among conflicting traffic movements that seek to use the same space. The way in which time is allocated significantly affects the operation and the capacity of the intersection and its approaches.

The methodology for signalized intersection is designed to consider individual intersection approaches and individual lane groups within approaches. A lane group consists of one or more lanes on an intersection approach. The outputs from application of the method described in the HCM 2010 and 2000 are reported on the basis of each lane. For a given lane group at a signalized intersection, three indications are displayed: green, yellow and red. The red indication may include a short period during which all indications are red, referred to as an all-red interval and the yellow indication forms the change and clearance interval between two green phases.

The methodology for analyzing the capacity and level of service must consider a wide variety of prevailing conditions, including the amount and distribution of traffic movements, traffic composition, geometric characteristics, and details of intersection signalization. The methodology addresses the capacity, LOS, and other performance measures for lane groups and the intersection approaches and the LOS for the intersection as a whole.

Capacity is evaluated in terms of the ratio of demand flow rate to capacity (v/c ratio), whereas LOS is evaluated on the basis of control delay per vehicle (in seconds per vehicle). The methodology does not take into account the potential impact of downstream congestion on intersection operation, nor does the methodology detect and adjust for the impacts of turn-pocket overflows on through traffic and intersection operation.

LEVEL OF SERVICE (LOS) CRITERIA FOR SIGNALIZED INTERSECTIONS

(Reference 2010 and 2000 Highway Capacity Manual)

Level of Service	Control Delay (seconds / vehicle)
A	**<10**
B	**>10 - 20**
C	**>20 - 35**
D	**>35 - 55**
E	**>55 - 80**
F	**>80**

APPENDIX A2

LEVEL OF SERVICE (LOS) DESCRIPTION
UNSIGNALIZED INTERSECTIONS WITH ALL-WAY STOP CONTROL (AWSC)

AWSC intersections require every vehicle to stop at the intersection before proceeding. Since each driver must stop, the judgement as to whether to proceed into the intersection is a function of traffic conditions on the other approaches. While giving priority to the driver on the right is a recognized rule in some areas, it is not a good descriptor of actual intersection operations. What happens is the development of a consensus of right-of-way that alternates between the drivers on the intersection approaches, a consensus that depends primarily on the intersection geometry and the arrival patterns at the stop line.

If no traffic is present on the other approaches, a driver can proceed immediately after the stop is made. If there is traffic on one or more of the other approaches, a driver proceeds only after determining that there are no vehicles currently in the intersection and that it is the driver's turn to proceed. Since no traffic signal controls the stream movement or allocates the right-of-way to each conflicting stream, the rate of departure is controlled by the interaction between the traffic streams themselves.

For AWSC intersections, the average control delay (in seconds per vehicle) is used as the primary measure of performance. Control delay is the increased time of travel for a vehicle approaching and passing through an AWSC intersection, compared with a free-flow vehicle if it were not required to slow down or stop at the intersection.

The criteria for AWSC intersections have different threshold values than do those for signalized intersections, primarily because drivers expect different levels of performance from different kinds of traffic control devices (i.e., traffic signals, two way stop or all way stop, etc.). The expectation is that a signalized intersection is designed to carry higher traffic volumes than an AWSC intersection and a higher level of control delay is acceptable at a signalized intersection for the same LOS.

For AWSC analysis using the HCM 2010 method, the LOS shown reflects the weighted average of the delay on each of the approaches.

LEVEL OF SERVICE (LOS) CRITERIA FOR AWSC INTERSECTIONS
(Reference 2010 Highway Capacity Manual)

Level of Service	Control Delay (seconds / vehicle)
A	**0 - 10**
B	**>10 - 15**
C	**>15 - 25**
D	**>25 - 35**
E	**>35 - 50**
F	**>50**

APPENDIX A3

LEVEL OF SERVICE (LOS) DESCRIPTION
UNSIGNALIZED INTERSECTIONS WITH TWO-WAY STOP CONTROL (TWSC)

TWSC intersections are widely used and stop signs are used to control vehicle movements at such intersections. At TWSC intersections, the stop-controlled approaches are referred to as the minor street approaches; they can be either public streets or private driveways. The intersection approaches that are not controlled by stop signs are referred to as the major street approaches. A three-leg intersection is considered to be a standard type of TWSC intersection if the single minor street approach (i.e. the stem of the T configuration) is controlled by a stop sign. Three-leg intersections where two of the three approaches are controlled by stop signs are a special form of unsignalized intersection control.

At TWSC intersections, drivers on the controlled approaches are required to select gaps in the major street flow through which to execute crossing or turning maneuvers on the basis of judgment. In the presence of a queue, each driver on the controlled approach must use some time to move into the front-of-queue position and prepare to evaluate gaps in the major street flow. Capacity analysis at TWSC intersections depends on a clear description and understanding of the interaction of drivers on the minor or stop-controlled approach with drivers on the major street. Both gap acceptance and empirical models have been developed to describe this interaction.

Thus, the capacity of the controlled legs is based on three factors:

- the distribution of gaps in the major street traffic stream;
- driver judgment in selecting gaps through which to execute the desired maneuvers; and
- the follow-up time required by each driver in a queue.

The delay experienced by a motorist is made up of a number of factors that relate to control, geometrics, traffic and incidents. Total delay is the difference between the travel time actually experienced and the reference travel time that would result during base conditions, in the absence of incident, control, traffic or geometric delay. Average control delay for any particular minor movement is a function of the capacity of the approach and the degree of saturation and referred to as level of service.

LEVEL OF SERVICE (LOS) CRITERIA FOR TWSC INTERSECTIONS

(Reference 2010 Highway Capacity Manual)

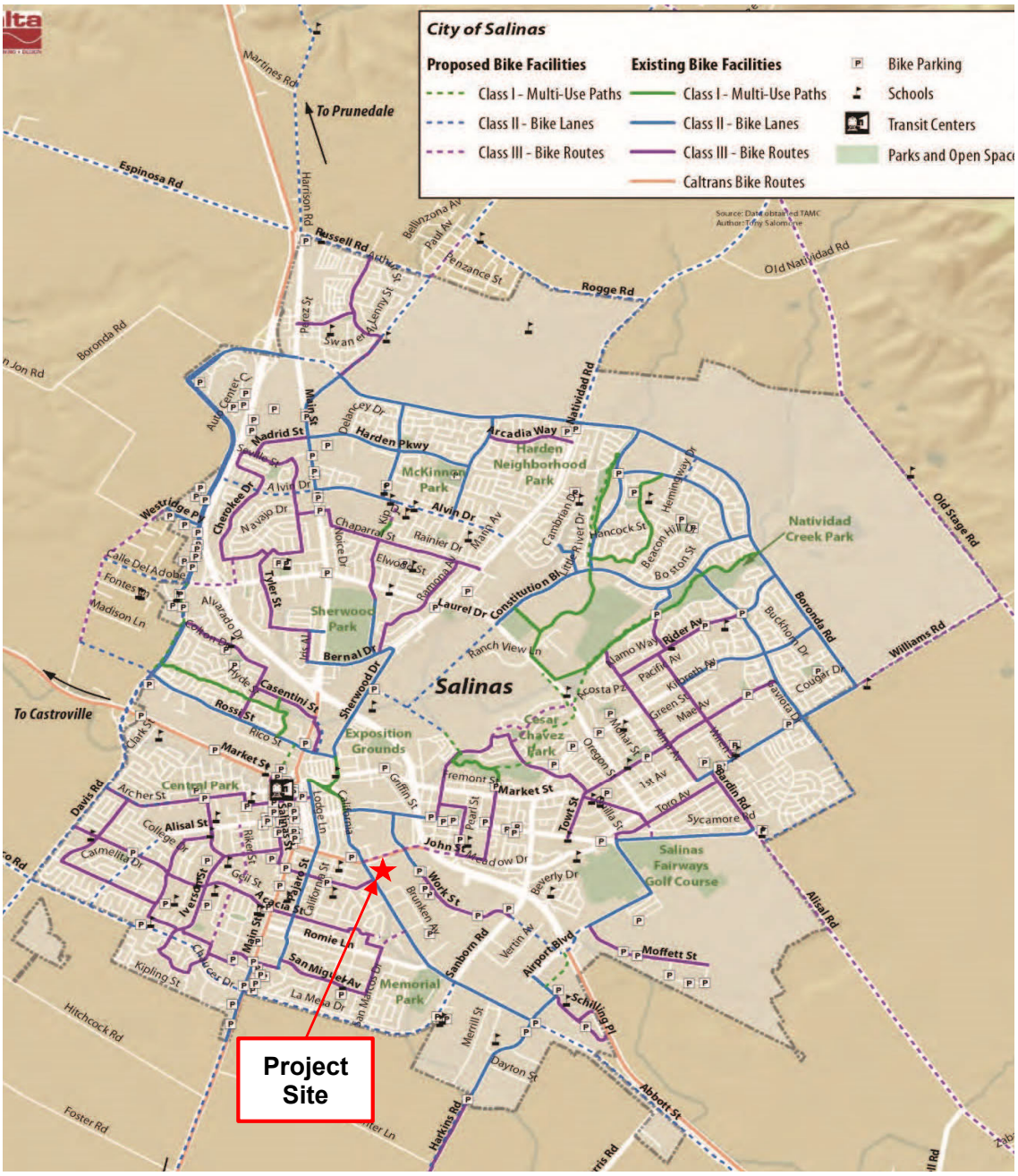
Level of Service	Control Delay (seconds / vehicle)
A	**0 - 10**
B	**>10 - 15**
C	**>15 - 25**
D	**>25 - 35**
E	**>35 - 50**
F	**>50**

Appendix B

Existing and Proposed

Bicycle Facilities

near Project Site



Basemap Source: *Transportation Agency for Monterey County Bicycle and Pedestrian Master Plan,* Alta Planning + Design, December 2011.

Appendix C

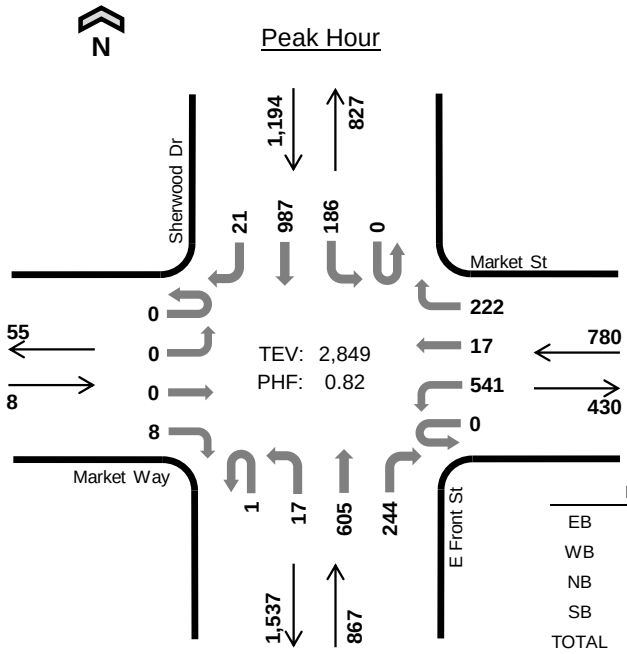
Intersection

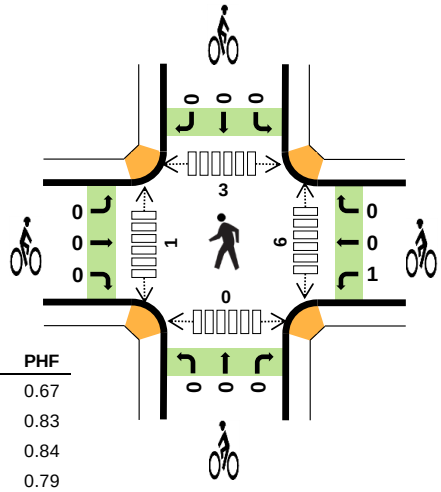
Traffic Volume

Counts

E Front St
Market Way

Date: 11-21-2019
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:30 AM to 8:30 AM





	HV %:	PHF
EB	0.0%	0.67
WB	3.3%	0.83
NB	3.2%	0.84
SB	1.8%	0.79
TOTAL	2.6%	0.82

Two-Hour Count Summaries

Interval Start		Market Way Eastbound				Market St Westbound				E Front St Northbound				Sherwood Dr Southbound				15-min Total	Rolling One Hour
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM		0	0	0	0	0	62	1	30	0	4	56	35	0	29	128	2	347	0
7:15 AM		0	0	0	0	0	82	3	29	0	4	102	42	0	39	182	5	488	0
7:30 AM		**0**	**0**	**0**	**1**	**0**	**153**	**4**	**57**	**1**	**4**	**150**	**44**	**0**	**22**	**272**	**1**	**709**	0
7:45 AM		**0**	**0**	**0**	**3**	**0**	**187**	**3**	**44**	**0**	**7**	**169**	**81**	**0**	**64**	**303**	**9**	**870**	2,414
8:00 AM		**0**	**0**	**0**	**3**	**0**	**121**	**4**	**60**	**0**	**2**	**145**	**71**	**0**	**54**	**212**	**8**	**680**	2,747
8:15 AM		**0**	**0**	**0**	**1**	**0**	**80**	**6**	**61**	**0**	**4**	**141**	**48**	**0**	**46**	**200**	**3**	**590**	**2,849**
8:30 AM		0	0	0	0	0	92	8	46	0	2	130	85	0	55	179	7	604	2,744
8:45 AM		0	0	0	2	0	82	15	59	0	3	130	54	0	62	173	7	587	2,461
Count Total		0	0	0	10	0	859	44	386	1	30	1,023	460	0	371	1,649	42	4,875	0
Peak Hour	**All**	**0**	**0**	**0**	**8**	**0**	**541**	**17**	**222**	**1**	**17**	**605**	**244**	**0**	**186**	**987**	**21**	**2,849**	**0**
	HV	**0**	**0**	**0**	**0**	**0**	**19**	**0**	**7**	**0**	**0**	**16**	**12**	**0**	**9**	**12**	**0**	**75**	**0**
	HV%	**-**	**-**	**-**	**0%**	**-**	**4%**	**0%**	**3%**	**0%**	**0%**	**3%**	**5%**	**-**	**5%**	**1%**	**0%**	**3%**	**0**

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

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	0	2	16	4	*22*	0	0	1	0	*1*	0	0	0	0	*0*
7:15 AM	0	5	7	3	*15*	0	0	0	0	*0*	4	1	0	0	*5*
7:30 AM	**0**	**7**	**5**	**4**	***16***	**0**	**0**	**0**	**0**	***0***	**1**	**0**	**0**	**0**	*1*
7:45 AM	**0**	**9**	**12**	**4**	***25***	**0**	**0**	**0**	**0**	***0***	**2**	**0**	**1**	**0**	*3*
8:00 AM	**0**	**6**	**3**	**6**	***15***	**0**	**1**	**0**	**0**	***1***	**2**	**1**	**2**	**0**	*5*
8:15 AM	**0**	**4**	**8**	**7**	***19***	**0**	**0**	**0**	**0**	***0***	**1**	**0**	**0**	**0**	***1***
8:30 AM	0	10	10	2	*22*	0	0	0	0	*0*	1	0	2	0	*3*
8:45 AM	0	7	3	2	*12*	0	0	0	0	*0*	2	0	3	0	*5*
Count Total	0	50	64	32	*146*	0	1	1	0	*2*	13	2	8	0	*23*
Peak Hour	**0**	**26**	**28**	**21**	***75***	**0**	**1**	**0**	**0**	***1***	**6**	**1**	**3**	**0**	***10***

Two-Hour Count Summaries - Heavy Vehicles

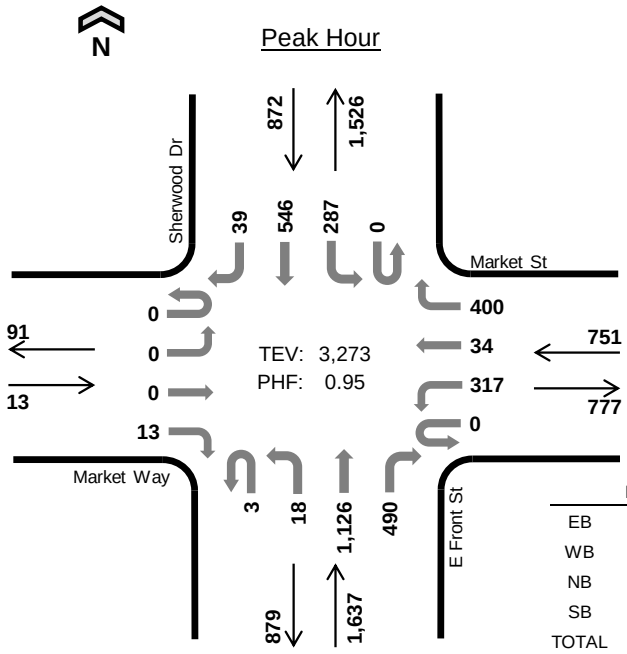
Interval Start	Market Way				Market St				E Front St				Sherwood Dr				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	0	0	1	0	1	0	0	3	13	0	1	3	0	22	0
7:15 AM	0	0	0	0	0	5	0	0	0	0	4	3	0	1	2	0	15	0
7:30 AM	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**3**	**0**	**0**	**4**	**1**	**0**	**2**	**2**	**0**	**16**	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**7**	**0**	**2**	**0**	**0**	**6**	**6**	**0**	**2**	**2**	**0**	**25**	78
8:00 AM	**0**	**0**	**0**	**0**	**0**	**5**	**0**	**1**	**0**	**0**	**1**	**2**	**0**	**2**	**4**	**0**	**15**	71
8:15 AM	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**1**	**0**	**0**	**5**	**3**	**0**	**3**	**4**	**0**	**19**	**75**
8:30 AM	0	0	0	0	0	9	0	1	0	0	2	8	0	2	0	0	22	81
8:45 AM	0	0	0	0	0	5	1	1	0	0	1	2	0	0	2	0	12	68
Count Total	0	0	0	0	0	39	1	10	0	0	26	38	0	13	19	0	146	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**19**	**0**	**7**	**0**	**0**	**16**	**12**	**0**	**9**	**12**	**0**	**75**	**0**

Two-Hour Count Summaries - Bikes

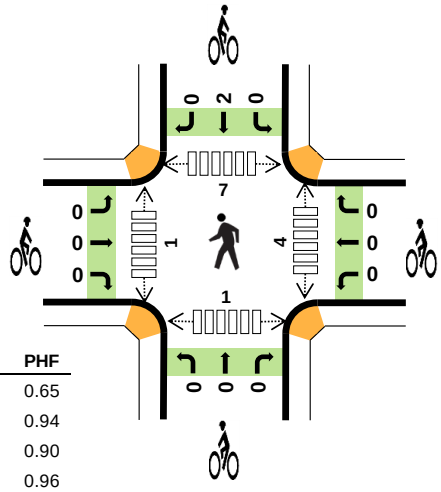
Interval Start	Market Way			Market St			E Front St			Sherwood Dr			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	1	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	1
8:00 AM	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	1
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Count Total	0	0	0	1	0	0	0	1	0	0	0	0	2	0
Peak Hour	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**

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

E Front St
Market Way



Date: 11-21-2019
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:45 PM to 5:45 PM



	HV %:	PHF
EB	0.0%	0.65
WB	1.6%	0.94
NB	1.2%	0.90
SB	0.9%	0.96
TOTAL	1.2%	0.95

Two-Hour Count Summaries

Interval Start		Market Way Eastbound				Market St Westbound				E Front St Northbound				Sherwood Dr Southbound				15-min Total	Rolling One Hour
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM		0	0	0	2	0	88	10	92	0	8	234	106	0	61	129	5	735	0
4:15 PM		0	0	0	4	0	80	3	76	1	3	222	122	0	83	124	8	726	0
4:30 PM		0	0	0	4	0	82	5	78	2	7	241	137	0	69	108	10	743	0
4:45 PM		**0**	**0**	**0**	**2**	**0**	**74**	**4**	**91**	**2**	**5**	**235**	**130**	**0**	**85**	**132**	**10**	**770**	2,974
5:00 PM		**0**	**0**	**0**	**4**	**0**	**80**	**12**	**108**	**1**	**4**	**288**	**110**	**0**	**81**	**128**	**10**	**826**	3,065
5:15 PM		**0**	**0**	**0**	**2**	**0**	**78**	**10**	**103**	**0**	**2**	**313**	**139**	**0**	**60**	**147**	**8**	**862**	3,201
5:30 PM		**0**	**0**	**0**	**5**	**0**	**85**	**8**	**98**	**0**	**7**	**290**	**111**	**0**	**61**	**139**	**11**	**815**	**3,273**
5:45 PM		0	0	0	6	0	68	3	72	0	7	184	107	0	63	120	7	637	3,140
Count Total		0	0	0	29	0	635	55	718	6	43	2,007	962	0	563	1,027	69	6,114	0
Peak Hour	**All**	**0**	**0**	**0**	**13**	**0**	**317**	**34**	**400**	**3**	**18**	**1,126**	**490**	**0**	**287**	**546**	**39**	**3,273**	**0**
	HV	**0**	**0**	**0**	**0**	**0**	**7**	**2**	**3**	**0**	**0**	**2**	**17**	**0**	**4**	**4**	**0**	**39**	**0**
	HV%	**-**	**-**	**-**	**0%**	**-**	**2%**	**6%**	**1%**	**0%**	**0%**	**0%**	**3%**	**-**	**1%**	**1%**	**0%**	**1%**	**0**

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

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	0	7	3	3	*13*	2	1	0	1	*4*	2	2	5	0	*9*
4:15 PM	0	6	5	5	*16*	0	0	0	0	*0*	1	1	2	0	*4*
4:30 PM	0	1	10	2	*13*	0	0	0	1	*1*	2	0	5	0	*7*
4:45 PM	**0**	**3**	**4**	**2**	***9***	**0**	**0**	**0**	**1**	***1***	**1**	**1**	**3**	**0**	*5*
5:00 PM	**0**	**3**	**4**	**3**	***10***	**0**	**0**	**0**	**0**	***0***	**1**	**0**	**2**	**1**	*4*
5:15 PM	**0**	**5**	**3**	**0**	***8***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**1**	**0**	*1*
5:30 PM	**0**	**1**	**8**	**3**	***12***	**0**	**0**	**0**	**1**	***1***	**2**	**0**	**1**	**0**	***3***
5:45 PM	0	2	1	1	*4*	0	0	0	0	*0*	7	0	3	0	*10*
Count Total	0	28	38	19	*85*	2	1	0	4	*7*	16	4	22	1	*43*
Peak Hour	**0**	**12**	**19**	**8**	***39***	**0**	**0**	**0**	**2**	***2***	**4**	**1**	**7**	**1**	***13***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Market Way				Market St				E Front St				Sherwood Dr				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	0	0	0	5	1	1	0	0	1	2	0	1	2	0	13	0
4:15 PM	0	0	0	0	0	6	0	0	0	0	0	5	0	4	1	0	16	0
4:30 PM	0	0	0	0	0	1	0	0	0	0	1	9	0	0	2	0	13	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**1**	**0**	**0**	**0**	**4**	**0**	**1**	**1**	**0**	**9**	51
5:00 PM	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**2**	**0**	**0**	**0**	**4**	**0**	**1**	**2**	**0**	**10**	48
5:15 PM	**0**	**0**	**0**	**0**	**0**	**3**	**2**	**0**	**0**	**0**	**1**	**2**	**0**	**0**	**0**	**0**	**8**	40
5:30 PM	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**	**7**	**0**	**2**	**1**	**0**	**12**	**39**
5:45 PM	0	0	0	0	0	2	0	0	0	0	0	1	0	0	1	0	4	34
Count Total	0	0	0	0	0	21	3	4	0	0	4	34	0	9	10	0	85	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**7**	**2**	**3**	**0**	**0**	**2**	**17**	**0**	**4**	**4**	**0**	**39**	**0**

Two-Hour Count Summaries - Bikes

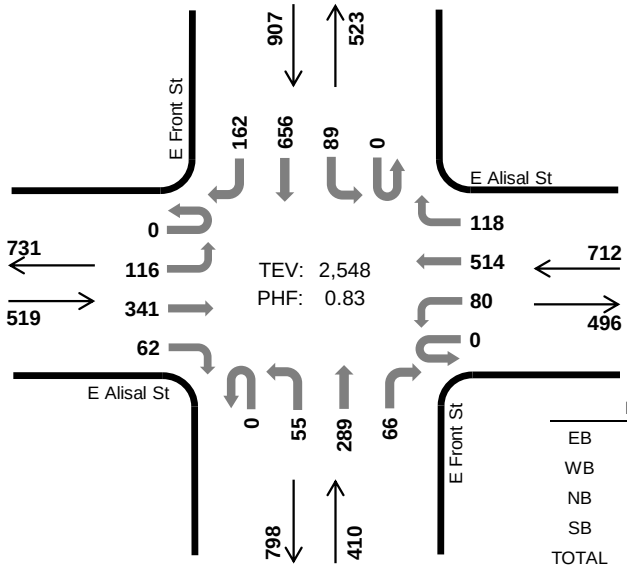
Interval Start	Market Way			Market St			E Front St			Sherwood Dr			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	2	0	0	1	0	0	0	0	0	1	0	4	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	1	1	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**1**	6
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	2
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	2
5:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**1**	**2**
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Count Total	0	2	0	0	1	0	0	0	0	0	3	1	7	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**2**	**0**

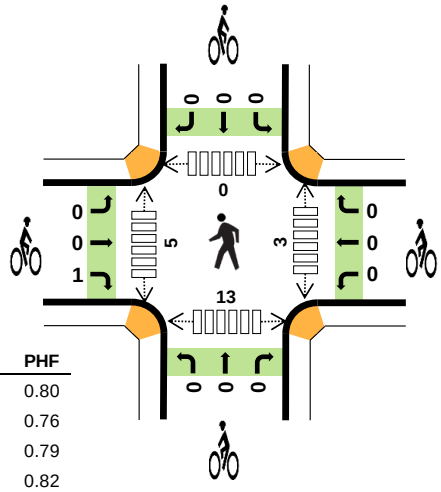
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

E Front St
E Alisal St

Date: 11-21-2019
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:45 AM to 8:45 AM

Peak Hour





	HV %:	PHF
EB	2.3%	0.80
WB	3.2%	0.76
NB	6.6%	0.79
SB	2.2%	0.82
TOTAL	3.2%	0.83

Two-Hour Count Summaries

Interval Start		E Alisal St Eastbound				E Alisal St Westbound				E Front St Northbound				E Front St Southbound				15-min Total	Rolling One Hour
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM		0	8	30	7	0	6	52	21	0	7	32	4	0	18	91	9	285	0
7:15 AM		0	17	44	5	0	8	78	33	0	13	65	11	0	20	111	12	417	0
7:30 AM		0	20	58	11	0	15	129	27	0	8	62	18	0	27	159	32	566	0
7:45 AM		**0**	**38**	**103**	**22**	**0**	**30**	**176**	**27**	**0**	**12**	**66**	**16**	**0**	**21**	**197**	**60**	**768**	2,036
8:00 AM		**0**	**22**	**93**	**10**	**0**	**19**	**127**	**29**	**0**	**11**	**58**	**19**	**0**	**24**	**164**	**53**	**629**	2,380
8:15 AM		**0**	**34**	**83**	**14**	**0**	**17**	**97**	**36**	**0**	**12**	**74**	**12**	**0**	**22**	**159**	**23**	**583**	2,546
8:30 AM		**0**	**22**	**62**	**16**	**0**	**14**	**114**	**26**	**0**	**20**	**91**	**19**	**0**	**22**	**136**	**26**	**568**	**2,548**
8:45 AM		0	24	87	7	0	11	114	42	0	8	71	13	0	30	132	21	560	2,340
Count Total		0	185	560	92	0	120	887	241	0	91	519	112	0	184	1,149	236	4,376	0
Peak Hour	**All**	**0**	**116**	**341**	**62**	**0**	**80**	**514**	**118**	**0**	**55**	**289**	**66**	**0**	**89**	**656**	**162**	**2,548**	**0**
	HV	**0**	**1**	**10**	**1**	**0**	**3**	**12**	**8**	**0**	**2**	**19**	**6**	**0**	**5**	**14**	**1**	**82**	**0**
	HV%	**-**	**1%**	**3%**	**2%**	**-**	**4%**	**2%**	**7%**	**-**	**4%**	**7%**	**9%**	**-**	**6%**	**2%**	**1%**	**3%**	**0**

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

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	4	2	3	8	*17*	0	0	0	0	*0*	1	0	1	1	*3*
7:15 AM	1	7	8	7	*23*	0	0	0	0	*0*	0	0	1	0	*1*
7:30 AM	6	15	5	5	*31*	0	0	0	0	*0*	0	2	0	6	*8*
7:45 AM	**3**	**5**	**6**	**5**	***19***	**0**	**0**	**0**	**0**	***0***	**0**	**3**	**0**	**10**	*13*
8:00 AM	**2**	**6**	**6**	**5**	***19***	**0**	**0**	**0**	**0**	***0***	**1**	**0**	**0**	**0**	*1*
8:15 AM	**4**	**3**	**5**	**5**	***17***	**1**	**0**	**0**	**0**	***1***	**1**	**1**	**0**	**2**	*4*
8:30 AM	**3**	**9**	**10**	**5**	***27***	**0**	**0**	**0**	**0**	***0***	**1**	**1**	**0**	**1**	***3***
8:45 AM	1	7	4	11	*23*	0	0	1	0	*1*	1	0	0	3	*4*
Count Total	24	54	47	51	*176*	1	0	1	0	*2*	5	7	2	23	*37*
Peak Hour	**12**	**23**	**27**	**20**	***82***	**1**	**0**	**0**	**0**	***1***	**3**	**5**	**0**	**13**	***21***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	E Alisal St				E Alisal St				E Front St				E Front St				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	1	2	1	0	0	2	0	0	0	3	0	0	4	4	0	17	0
7:15 AM	0	1	0	0	0	2	4	1	0	2	4	2	0	0	7	0	23	0
7:30 AM	0	0	5	1	0	5	7	3	0	1	4	0	0	0	5	0	31	0
7:45 AM	**0**	**1**	**2**	**0**	**0**	**1**	**1**	**3**	**0**	**0**	**5**	**1**	**0**	**2**	**2**	**1**	**19**	90
8:00 AM	**0**	**0**	**1**	**1**	**0**	**2**	**3**	**1**	**0**	**1**	**2**	**3**	**0**	**1**	**4**	**0**	**19**	92
8:15 AM	**0**	**0**	**4**	**0**	**0**	**0**	**2**	**1**	**0**	**0**	**5**	**0**	**0**	**1**	**4**	**0**	**17**	86
8:30 AM	**0**	**0**	**3**	**0**	**0**	**0**	**6**	**3**	**0**	**1**	**7**	**2**	**0**	**1**	**4**	**0**	**27**	**82**
8:45 AM	0	0	1	0	0	0	4	3	0	0	3	1	0	0	10	1	23	86
Count Total	0	3	18	3	0	10	29	15	0	5	33	9	0	9	40	2	176	0
Peak Hour	**0**	**1**	**10**	**1**	**0**	**3**	**12**	**8**	**0**	**2**	**19**	**6**	**0**	**5**	**14**	**1**	**82**	**0**

Two-Hour Count Summaries - Bikes

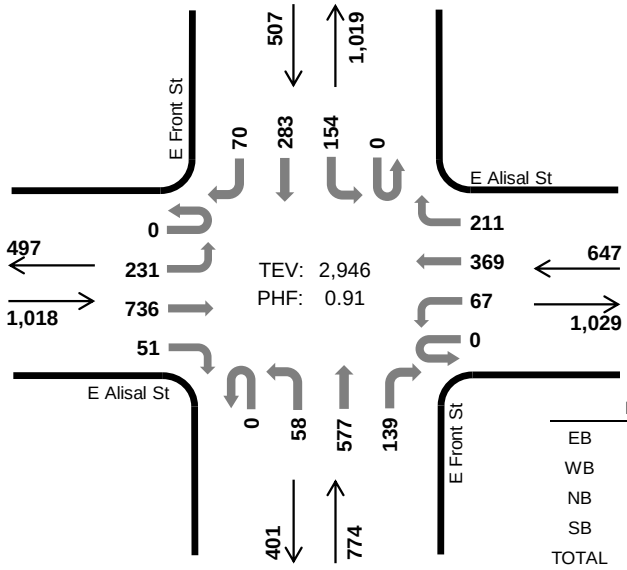
Interval Start	E Alisal St			E Alisal St			E Front St			E Front St			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
8:15 AM	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	1
8:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**
8:45 AM	0	0	0	0	0	0	0	0	1	0	0	0	1	2
Count Total	0	0	1	0	0	0	0	0	1	0	0	0	2	0
Peak Hour	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**

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

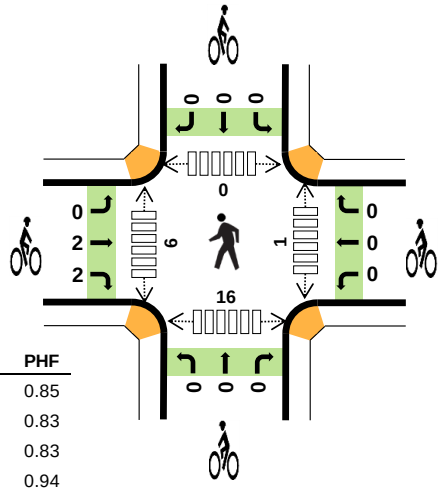
E Front St
E Alisal St

Date: 11-21-2019
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:30 PM to 5:30 PM

Peak Hour



	HV %:	PHF
EB	1.0%	0.85
WB	1.7%	0.83
NB	1.0%	0.83
SB	4.3%	0.94
TOTAL	1.7%	0.91



Two-Hour Count Summaries

Interval Start		E Alisal St Eastbound				E Alisal St Westbound				E Front St Northbound				E Front St Southbound				15-min Total	Rolling One Hour
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM		0	43	179	14	0	13	94	45	0	12	142	33	0	38	84	21	718	0
4:15 PM		0	37	155	9	0	11	77	46	0	14	117	34	0	44	90	25	659	0
4:30 PM		**0**	**44**	**155**	**9**	**0**	**15**	**88**	**54**	**0**	**9**	**145**	**28**	**0**	**38**	**78**	**19**	**682**	0
4:45 PM		**0**	**44**	**179**	**15**	**0**	**20**	**86**	**38**	**0**	**19**	**127**	**22**	**0**	**40**	**64**	**18**	**672**	2,731
5:00 PM		**0**	**78**	**209**	**14**	**0**	**19**	**86**	**47**	**0**	**12**	**173**	**47**	**0**	**36**	**75**	**17**	**813**	2,826
5:15 PM		**0**	**65**	**193**	**13**	**0**	**13**	**109**	**72**	**0**	**18**	**132**	**42**	**0**	**40**	**66**	**16**	**779**	**2,946**
5:30 PM		0	48	139	6	0	8	102	55	0	12	113	23	0	55	91	23	675	2,939
5:45 PM		0	47	121	12	0	14	84	32	0	8	77	14	0	34	69	23	535	2,802
Count Total		0	406	1,330	92	0	113	726	389	0	104	1,026	243	0	325	617	162	5,533	0
Peak Hour	**All**	**0**	**231**	**736**	**51**	**0**	**67**	**369**	**211**	**0**	**58**	**577**	**139**	**0**	**154**	**283**	**70**	**2,946**	**0**
	HV	**0**	**1**	**7**	**2**	**0**	**0**	**8**	**3**	**0**	**1**	**7**	**0**	**0**	**2**	**19**	**1**	**51**	**0**
	HV%	**-**	**0%**	**1%**	**4%**	**-**	**0%**	**2%**	**1%**	**-**	**2%**	**1%**	**0%**	**-**	**1%**	**7%**	**1%**	**2%**	**0**

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

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	8	2	3	1	*14*	1	0	0	0	*1*	0	0	0	1	*1*
4:15 PM	4	5	7	7	*23*	0	0	0	0	*0*	0	2	0	9	*11*
4:30 PM	**3**	**3**	**1**	**4**	***11***	**1**	**0**	**0**	**0**	***1***	**1**	**1**	**0**	**6**	*8*
4:45 PM	**2**	**3**	**4**	**5**	***14***	**1**	**0**	**0**	**0**	***1***	**0**	**0**	**0**	**2**	*2*
5:00 PM	**2**	**3**	**1**	**8**	***14***	**1**	**0**	**0**	**0**	***1***	**0**	**4**	**0**	**3**	*7*
5:15 PM	**3**	**2**	**2**	**5**	***12***	**1**	**0**	**0**	**0**	***1***	**0**	**1**	**0**	**5**	***6***
5:30 PM	0	3	3	4	*10*	0	1	0	0	*1*	1	4	0	3	*8*
5:45 PM	1	0	3	3	*7*	0	0	0	1	*1*	4	0	2	3	*9*
Count Total	23	21	24	37	*105*	5	1	0	1	*7*	6	12	2	32	*52*
Peak Hour	**10**	**11**	**8**	**22**	***51***	**4**	**0**	**0**	**0**	***4***	**1**	**6**	**0**	**16**	***23***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	E Alisal St				E Alisal St				E Front St				E Front St				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	1	7	0	0	0	1	1	0	0	3	0	0	0	1	0	14	0
4:15 PM	0	0	4	0	0	0	1	4	0	0	6	1	0	2	5	0	23	0
4:30 PM	**0**	**0**	**3**	**0**	**0**	**0**	**2**	**1**	**0**	**0**	**1**	**0**	**0**	**0**	**4**	**0**	**11**	0
4:45 PM	**0**	**0**	**1**	**1**	**0**	**0**	**2**	**1**	**0**	**0**	**4**	**0**	**0**	**0**	**5**	**0**	**14**	62
5:00 PM	**0**	**0**	**2**	**0**	**0**	**0**	**2**	**1**	**0**	**0**	**1**	**0**	**0**	**2**	**6**	**0**	**14**	62
5:15 PM	**0**	**1**	**1**	**1**	**0**	**0**	**2**	**0**	**0**	**1**	**1**	**0**	**0**	**0**	**4**	**1**	**12**	**51**
5:30 PM	0	0	0	0	0	0	2	1	0	0	1	2	0	0	4	0	10	50
5:45 PM	0	0	1	0	0	0	0	0	0	0	3	0	0	0	3	0	7	43
Count Total	0	2	19	2	0	0	12	9	0	1	20	3	0	4	32	1	105	0
Peak Hour	**0**	**1**	**7**	**2**	**0**	**0**	**8**	**3**	**0**	**1**	**7**	**0**	**0**	**2**	**19**	**1**	**51**	**0**

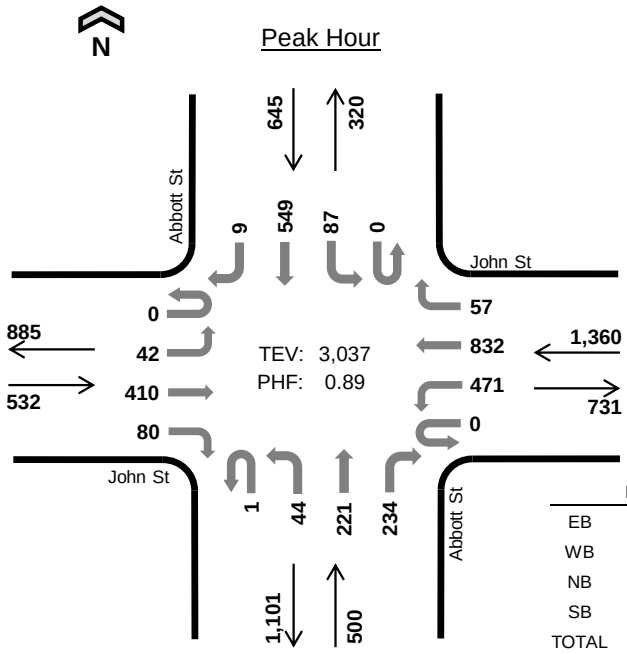
Two-Hour Count Summaries - Bikes

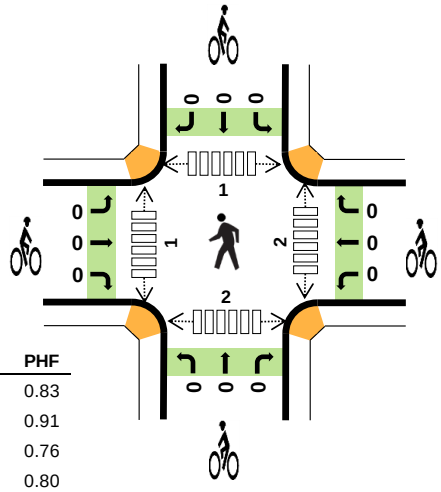
Interval Start	E Alisal St			E Alisal St			E Front St			E Front St			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	1	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	0
4:45 PM	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	3
5:00 PM	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	3
5:15 PM	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**4**
5:30 PM	0	0	0	0	1	0	0	0	0	0	0	0	1	4
5:45 PM	0	0	0	0	0	0	0	0	0	1	0	0	1	4
Count Total	0	3	2	0	1	0	0	0	0	1	0	0	7	0
Peak Hour	**0**	**2**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**0**

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

Abbott St
John St

Date: 11-21-2019
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:30 AM to 8:30 AM





	HV %:	PHF
EB	1.7%	0.83
WB	1.3%	0.91
NB	4.6%	0.76
SB	2.5%	0.80
TOTAL	2.1%	0.89

Two-Hour Count Summaries

Interval Start	John St Eastbound				John St Westbound				Abbott St Northbound				Abbott St Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	2	74	8	0	80	73	11	0	6	31	38	0	11	54	0	388	0
7:15 AM	0	3	77	14	0	99	101	14	0	7	61	46	0	10	97	1	530	0
7:30 AM	**0**	**9**	**102**	**12**	**0**	**95**	**227**	**15**	**1**	**10**	**46**	**50**	**0**	**22**	**110**	**1**	**700**	0
7:45 AM	**0**	**12**	**117**	**32**	**0**	**121**	**238**	**14**	**0**	**13**	**54**	**55**	**0**	**19**	**179**	**3**	**857**	2,475
8:00 AM	**0**	**8**	**110**	**20**	**0**	**138**	**218**	**14**	**0**	**11**	**48**	**48**	**0**	**22**	**142**	**2**	**781**	2,868
8:15 AM	**0**	**13**	**81**	**16**	**0**	**117**	**149**	**14**	**0**	**10**	**73**	**81**	**0**	**24**	**118**	**3**	**699**	**3,037**
8:30 AM	0	8	74	16	0	108	175	20	0	22	73	59	0	16	98	0	669	3,006
8:45 AM	0	11	81	22	0	100	156	18	0	17	67	65	0	11	106	4	658	2,807
Count Total	0	66	716	140	0	858	1,337	120	1	96	453	442	0	135	904	14	5,282	0
Peak Hour All	**0**	**42**	**410**	**80**	**0**	**471**	**832**	**57**	**1**	**44**	**221**	**234**	**0**	**87**	**549**	**9**	**3,037**	**0**
Peak Hour HV	**0**	**1**	**5**	**3**	**0**	**7**	**7**	**3**	**0**	**2**	**13**	**8**	**0**	**6**	**10**	**0**	**65**	**0**
Peak Hour HV%	**-**	**2%**	**1%**	**4%**	**-**	**1%**	**1%**	**5%**	**0%**	**5%**	**6%**	**3%**	**-**	**7%**	**2%**	**0%**	**2%**	**0**

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

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	3	6	5	1	*15*	0	0	0	0	*0*	0	0	0	2	*2*
7:15 AM	4	4	8	6	*22*	0	0	0	0	*0*	0	0	0	1	*1*
7:30 AM	**2**	**1**	**6**	**6**	***15***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**1**	*1*
7:45 AM	**1**	**6**	**5**	**3**	***15***	**0**	**0**	**0**	**0**	***0***	**0**	**1**	**0**	**0**	*1*
8:00 AM	**5**	**8**	**5**	**3**	***21***	**0**	**0**	**0**	**0**	***0***	**2**	**0**	**0**	**1**	*3*
8:15 AM	**1**	**2**	**7**	**4**	***14***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**1**	**0**	***1***
8:30 AM	1	9	10	4	*24*	0	1	0	0	*1*	1	0	1	0	*2*
8:45 AM	3	5	11	7	*26*	0	0	2	0	*2*	0	0	0	1	*1*
Count Total	20	41	57	34	*152*	0	1	2	0	*3*	3	1	2	6	*12*
Peak Hour	**9**	**17**	**23**	**16**	***65***	**0**	**0**	**0**	**0**	***0***	**2**	**1**	**1**	**2**	***6***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	John St Eastbound				John St Westbound				Abbott St Northbound				Abbott St Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	1	1	1	0	2	2	2	0	0	3	2	0	0	1	0	15	0
7:15 AM	0	0	3	1	0	1	2	1	0	0	6	2	0	0	6	0	22	0
7:30 AM	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**4**	**2**	**0**	**3**	**3**	**0**	**15**	0
7:45 AM	**0**	**0**	**0**	**1**	**0**	**2**	**3**	**1**	**0**	**0**	**2**	**3**	**0**	**2**	**1**	**0**	**15**	67
8:00 AM	**0**	**1**	**2**	**2**	**0**	**4**	**3**	**1**	**0**	**0**	**3**	**2**	**0**	**0**	**3**	**0**	**21**	73
8:15 AM	**0**	**0**	**1**	**0**	**0**	**1**	**1**	**0**	**0**	**2**	**4**	**1**	**0**	**1**	**3**	**0**	**14**	**65**
8:30 AM	0	0	1	0	0	6	2	1	0	0	7	3	0	2	2	0	24	74
8:45 AM	0	0	1	2	0	2	1	2	0	1	4	6	0	1	6	0	26	85
Count Total	0	2	11	7	0	18	14	9	0	3	33	21	0	9	25	0	152	0
Peak Hour	**0**	**1**	**5**	**3**	**0**	**7**	**7**	**3**	**0**	**2**	**13**	**8**	**0**	**6**	**10**	**0**	**65**	**0**

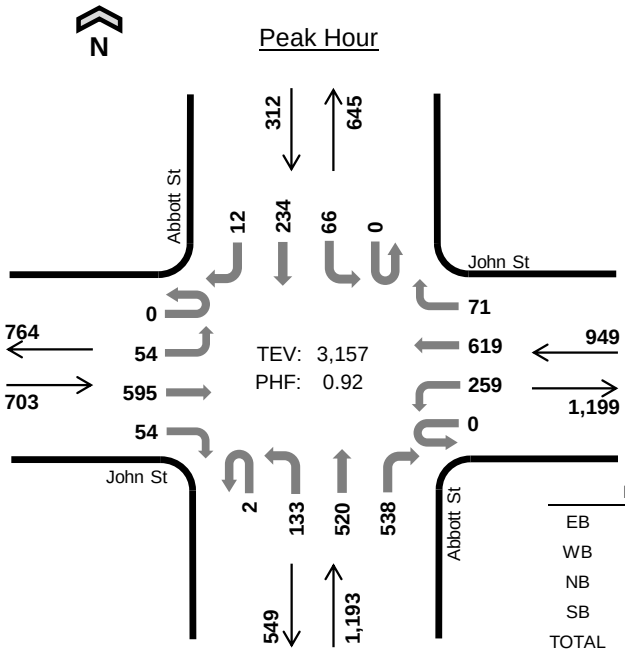
Two-Hour Count Summaries - Bikes

Interval Start	John St Eastbound			John St Westbound			Abbott St Northbound			Abbott St Southbound			15-min Total	Rolling One Hour
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
8:30 AM	0	0	0	0	1	0	0	0	0	0	0	0	1	1
8:45 AM	0	0	0	0	0	0	0	2	0	0	0	0	2	3
Count Total	0	0	0	0	1	0	0	2	0	0	0	0	3	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

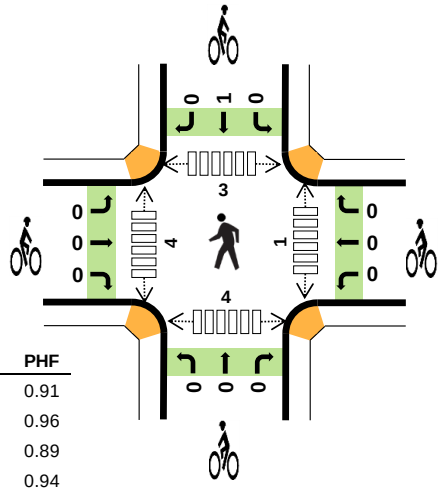
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Abbott St
John St

Date: 11-21-2019
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:00 PM to 5:00 PM



	HV %:	PHF
EB	1.0%	0.91
WB	1.9%	0.96
NB	2.1%	0.89
SB	5.4%	0.94
TOTAL	2.1%	0.92



Two-Hour Count Summaries

Interval Start	John St Eastbound				John St Westbound				Abbott St Northbound				Abbott St Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	**0**	**12**	**167**	**14**	**0**	**69**	**159**	**19**	**0**	**38**	**148**	**148**	**0**	**16**	**62**	**3**	**855**	0
4:15 PM	**0**	**9**	**139**	**12**	**0**	**75**	**132**	**24**	**0**	**28**	**92**	**125**	**0**	**12**	**63**	**1**	**712**	0
4:30 PM	**0**	**18**	**146**	**13**	**0**	**60**	**172**	**16**	**2**	**35**	**141**	**142**	**0**	**21**	**59**	**3**	**828**	0
4:45 PM	**0**	**15**	**143**	**15**	**0**	**55**	**156**	**12**	**0**	**32**	**139**	**123**	**0**	**17**	**50**	**5**	**762**	**3,157**
5:00 PM	0	24	165	15	0	55	165	10	0	35	154	156	0	17	43	10	849	3,151
5:15 PM	0	16	142	19	0	34	127	13	0	25	128	106	0	15	47	4	676	3,115
5:30 PM	0	11	133	12	0	41	149	15	0	9	89	87	0	12	47	2	607	2,894
5:45 PM	0	11	115	9	0	48	137	13	0	14	61	67	0	22	40	3	540	2,672
Count Total	0	116	1,150	109	0	437	1,197	122	2	216	952	954	0	132	411	31	5,829	0
Peak Hour All	**0**	**54**	**595**	**54**	**0**	**259**	**619**	**71**	**2**	**133**	**520**	**538**	**0**	**66**	**234**	**12**	**3,157**	**0**
Peak Hour HV	**0**	**1**	**4**	**2**	**0**	**8**	**9**	**1**	**1**	**1**	**13**	**10**	**0**	**2**	**15**	**0**	**67**	**0**
Peak Hour HV%	**-**	**2%**	**1%**	**4%**	**-**	**3%**	**1%**	**1%**	**50%**	**1%**	**3%**	**2%**	**-**	**3%**	**6%**	**0%**	**2%**	**0**

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

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	**0**	**6**	**4**	**1**	***11***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**1**	**1**	*2*
4:15 PM	**3**	**6**	**10**	**6**	***25***	**0**	**0**	**0**	**0**	***0***	**0**	**2**	**0**	**1**	*3*
4:30 PM	**3**	**3**	**5**	**3**	***14***	**0**	**0**	**0**	**1**	***1***	**1**	**2**	**1**	**1**	*5*
4:45 PM	**1**	**3**	**6**	**7**	***17***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**1**	**1**	***2***
5:00 PM	0	1	1	3	*5*	0	0	0	0	*0*	1	0	0	2	*3*
5:15 PM	2	2	6	6	*16*	0	0	0	0	*0*	0	0	0	4	*4*
5:30 PM	2	4	7	3	*16*	0	0	0	0	*0*	1	1	0	0	*2*
5:45 PM	2	5	4	4	*15*	0	0	0	0	*0*	0	0	0	0	*0*
Count Total	13	30	43	33	*119*	0	0	0	1	*1*	3	5	3	10	*21*
Peak Hour	**7**	**18**	**25**	**17**	***67***	**0**	**0**	**0**	**1**	***1***	**1**	**4**	**3**	**4**	***12***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	John St Eastbound				John St Westbound				Abbott St Northbound				Abbott St Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	**0**	**0**	**0**	**0**	**0**	**4**	**1**	**1**	**0**	**0**	**2**	**2**	**0**	**0**	**1**	**0**	**11**	0
4:15 PM	**0**	**0**	**2**	**1**	**0**	**1**	**5**	**0**	**0**	**1**	**6**	**3**	**0**	**1**	**5**	**0**	**25**	0
4:30 PM	**0**	**1**	**1**	**1**	**0**	**1**	**2**	**0**	**1**	**0**	**0**	**4**	**0**	**0**	**3**	**0**	**14**	0
4:45 PM	**0**	**0**	**1**	**0**	**0**	**2**	**1**	**0**	**0**	**0**	**5**	**1**	**0**	**1**	**6**	**0**	**17**	**67**
5:00 PM	0	0	0	0	0	1	0	0	0	0	0	1	0	1	2	0	5	61
5:15 PM	0	0	1	1	0	2	0	0	0	0	2	4	0	0	6	0	16	52
5:30 PM	0	1	1	0	0	1	2	1	0	0	3	4	0	1	2	0	16	54
5:45 PM	0	0	2	0	0	2	2	1	0	0	2	2	0	0	4	0	15	52
Count Total	0	2	8	3	0	14	13	3	1	1	20	21	0	4	29	0	119	0
Peak Hour	**0**	**1**	**4**	**2**	**0**	**8**	**9**	**1**	**1**	**1**	**13**	**10**	**0**	**2**	**15**	**0**	**67**	**0**

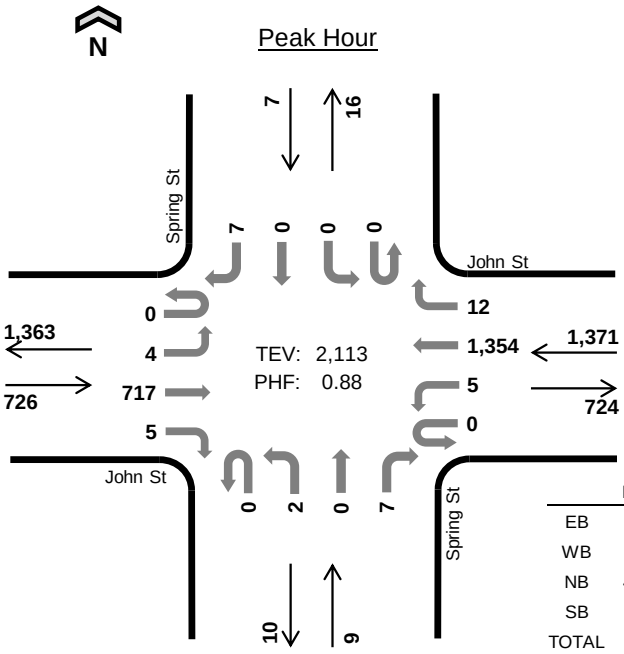
Two-Hour Count Summaries - Bikes

Interval Start	John St Eastbound			John St Westbound			Abbott St Northbound			Abbott St Southbound			15-min Total	Rolling One Hour
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
4:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
4:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**1**	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	1	0	1	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**1**	**0**

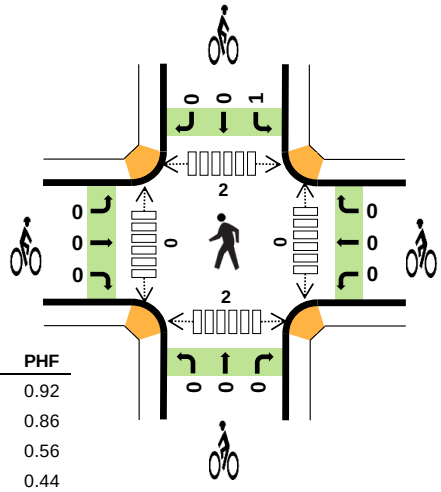
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Spring St
John St

Date: 11-21-2019
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:30 AM to 8:30 AM



	HV %:	PHF
EB	2.8%	0.92
WB	1.2%	0.86
NB	44.4%	0.56
SB	0.0%	0.44
TOTAL	1.9%	0.88



Two-Hour Count Summaries

Interval Start		John St Eastbound				John St Westbound				Spring St Northbound				Spring St Southbound				15-min Total	Rolling One Hour
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM		0	0	119	0	0	2	154	3	0	2	0	2	0	0	0	0	282	0
7:15 AM		0	0	133	3	0	2	223	1	0	2	0	4	0	0	0	1	369	0
7:30 AM		**0**	**0**	**170**	**1**	**0**	**2**	**325**	**2**	**0**	**1**	**0**	**3**	**0**	**0**	**0**	**1**	**505**	0
7:45 AM		**0**	**3**	**193**	**1**	**0**	**1**	**390**	**7**	**0**	**1**	**0**	**2**	**0**	**0**	**0**	**0**	**598**	1,754
8:00 AM		**0**	**0**	**178**	**1**	**0**	**1**	**354**	**2**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**4**	**542**	2,014
8:15 AM		**0**	**1**	**176**	**2**	**0**	**1**	**285**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**468**	**2,113**
8:30 AM		0	1	149	0	0	2	294	7	0	1	0	5	0	0	0	0	459	2,067
8:45 AM		0	1	147	2	1	2	274	3	0	1	0	0	0	0	0	4	435	1,904
Count Total		0	6	1,265	10	1	13	2,299	26	0	8	0	18	0	0	0	12	3,658	0
Peak Hour	**All**	**0**	**4**	**717**	**5**	**0**	**5**	**1,354**	**12**	**0**	**2**	**0**	**7**	**0**	**0**	**0**	**7**	**2,113**	**0**
	HV	**0**	**0**	**18**	**2**	**0**	**0**	**17**	**0**	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**0**	**41**	**0**
	HV%	**-**	**0%**	**3%**	**40%**	**-**	**0%**	**1%**	**0%**	**-**	**0%**	**-**	**57%**	**-**	**-**	**-**	**0%**	**2%**	**0**

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

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	3	7	2	0	*12*	0	0	0	0	*0*	0	0	0	2	*2*
7:15 AM	5	4	4	0	*13*	0	0	0	0	*0*	0	0	0	1	*1*
7:30 AM	**7**	**1**	**2**	**0**	***10***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
7:45 AM	**5**	**6**	**1**	**0**	***12***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
8:00 AM	**4**	**8**	**1**	**0**	***13***	**0**	**0**	**0**	**1**	***1***	**0**	**0**	**1**	**2**	*3*
8:15 AM	**4**	**2**	**0**	**0**	***6***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**1**	**0**	***1***
8:30 AM	5	10	3	0	*18*	0	1	0	1	*2*	0	0	2	0	*2*
8:45 AM	8	5	0	0	*13*	0	0	0	0	*0*	0	0	1	0	*1*
Count Total	41	43	13	0	*97*	0	1	0	2	*3*	0	0	5	5	*10*
Peak Hour	**20**	**17**	**4**	**0**	***41***	**0**	**0**	**0**	**1**	***1***	**0**	**0**	**2**	**2**	***4***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	John St Eastbound				John St Westbound				Spring St Northbound				Spring St Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	3	0	0	1	6	0	0	0	0	2	0	0	0	0	12	0
7:15 AM	0	0	5	0	0	1	3	0	0	0	0	4	0	0	0	0	13	0
7:30 AM	**0**	**0**	**7**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**10**	0
7:45 AM	**0**	**0**	**4**	**1**	**0**	**0**	**6**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**12**	47
8:00 AM	**0**	**0**	**4**	**0**	**0**	**0**	**8**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**13**	48
8:15 AM	**0**	**0**	**3**	**1**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**6**	**41**
8:30 AM	0	0	5	0	0	1	9	0	0	0	0	3	0	0	0	0	18	49
8:45 AM	0	0	7	1	0	0	5	0	0	0	0	0	0	0	0	0	13	50
Count Total	0	0	38	3	0	3	40	0	0	0	0	13	0	0	0	0	97	0
Peak Hour	**0**	**0**	**18**	**2**	**0**	**0**	**17**	**0**	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**0**	**41**	**0**

Two-Hour Count Summaries - Bikes

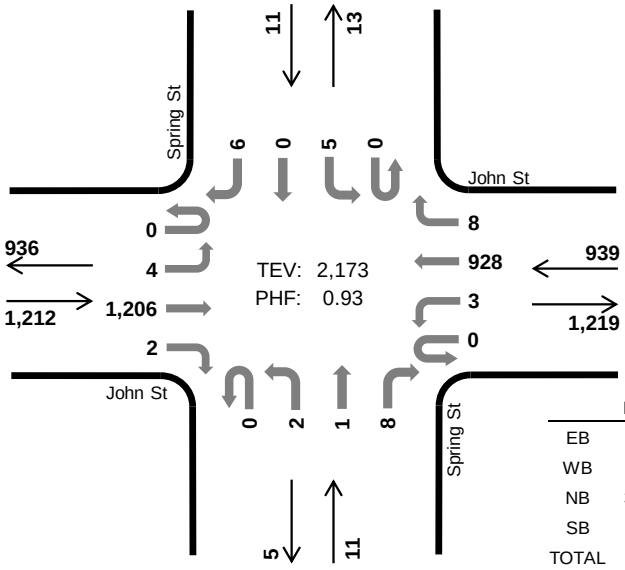
Interval Start	John St Eastbound			John St Westbound			Spring St Northbound			Spring St Southbound			15-min Total	Rolling One Hour
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**1**	1
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**
8:30 AM	0	0	0	0	1	0	0	0	0	1	0	0	2	3
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Count Total	0	0	0	0	1	0	0	0	0	2	0	0	3	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**1**	**0**

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

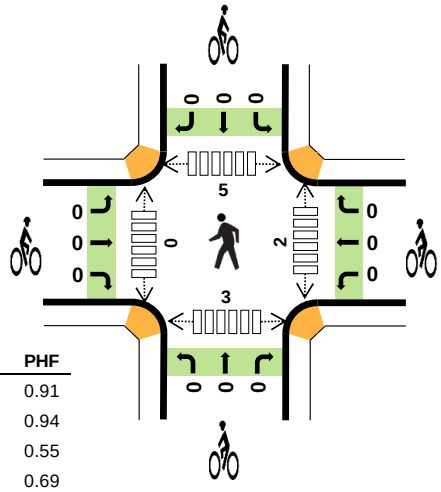
Spring St
John St

Date: 11-21-2019
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:00 PM to 5:00 PM

Peak Hour



	HV %:	PHF
EB	1.3%	0.91
WB	1.7%	0.94
NB	36.4%	0.55
SB	9.1%	0.69
TOTAL	1.7%	0.93



Two-Hour Count Summaries

Interval Start		John St Eastbound				John St Westbound				Spring St Northbound				Spring St Southbound				15-min Total	Rolling One Hour
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM		**0**	**1**	**332**	**0**	**0**	**1**	**246**	**1**	**0**	**0**	**0**	**3**	**0**	**2**	**0**	**1**	**587**	0
4:15 PM		**0**	**0**	**274**	**0**	**0**	**1**	**211**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**2**	**489**	0
4:30 PM		**0**	**3**	**307**	**1**	**0**	**1**	**246**	**3**	**0**	**0**	**0**	**2**	**0**	**2**	**0**	**2**	**567**	0
4:45 PM		**0**	**0**	**293**	**1**	**0**	**0**	**225**	**4**	**0**	**2**	**1**	**2**	**0**	**1**	**0**	**1**	**530**	**2,173**
5:00 PM		0	5	313	0	0	0	231	1	0	0	0	0	0	2	0	3	555	2,141
5:15 PM		0	2	287	0	0	1	179	3	0	0	0	1	0	1	0	4	478	2,130
5:30 PM		0	0	234	0	0	0	204	2	0	0	0	1	0	1	0	1	443	2,006
5:45 PM		0	0	205	0	0	2	192	2	0	0	0	1	0	0	0	0	402	1,878
Count Total		0	11	2,245	2	0	6	1,734	16	0	2	1	11	0	9	0	14	4,051	0
Peak Hour	**All**	**0**	**4**	**1,206**	**2**	**0**	**3**	**928**	**8**	**0**	**2**	**1**	**8**	**0**	**5**	**0**	**6**	**2,173**	**0**
	HV	**0**	**0**	**14**	**2**	**0**	**0**	**16**	**0**	**0**	**0**	**1**	**3**	**0**	**1**	**0**	**0**	**37**	**0**
	HV%	**-**	**0%**	**1%**	**100%**	**-**	**0%**	**2%**	**0%**	**-**	**0%**	**100%**	**38%**	**-**	**20%**	**-**	**0%**	**2%**	**0**

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

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	**2**	**4**	**1**	**0**	***7***	**0**	**0**	**0**	**0**	***0***	**2**	**0**	**0**	**1**	*3*
4:15 PM	**6**	**6**	**0**	**0**	***12***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**1**	**1**	*2*
4:30 PM	**5**	**3**	**0**	**1**	***9***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**2**	**0**	*2*
4:45 PM	**3**	**3**	**3**	**0**	***9***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**2**	**1**	***3***
5:00 PM	2	3	0	0	*5*	0	0	0	0	*0*	0	0	1	2	*3*
5:15 PM	5	3	0	0	*8*	0	0	0	0	*0*	0	0	1	2	*3*
5:30 PM	6	4	0	0	*10*	0	0	0	0	*0*	0	0	0	0	*0*
5:45 PM	4	7	0	0	*11*	0	0	0	0	*0*	0	0	1	0	*1*
Count Total	33	33	4	1	*71*	0	0	0	0	*0*	2	0	8	7	*17*
Peak Hour	**16**	**16**	**4**	**1**	***37***	**0**	**0**	**0**	**0**	***0***	**2**	**0**	**5**	**3**	***10***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	John St Eastbound				John St Westbound				Spring St Northbound				Spring St Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	**0**	**0**	**2**	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**7**	0
4:15 PM	**0**	**0**	**6**	**0**	**0**	**0**	**6**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**12**	0
4:30 PM	**0**	**0**	**4**	**1**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**9**	0
4:45 PM	**0**	**0**	**2**	**1**	**0**	**0**	**3**	**0**	**0**	**0**	**1**	**2**	**0**	**0**	**0**	**0**	**9**	**37**
5:00 PM	0	0	2	0	0	0	3	0	0	0	0	0	0	0	0	0	5	35
5:15 PM	0	0	5	0	0	1	2	0	0	0	0	0	0	0	0	0	8	31
5:30 PM	0	0	6	0	0	0	4	0	0	0	0	0	0	0	0	0	10	32
5:45 PM	0	0	4	0	0	2	5	0	0	0	0	0	0	0	0	0	11	34
Count Total	0	0	31	2	0	3	30	0	0	0	1	3	0	1	0	0	71	0
Peak Hour	**0**	**0**	**14**	**2**	**0**	**0**	**16**	**0**	**0**	**0**	**1**	**3**	**0**	**1**	**0**	**0**	**37**	**0**

Two-Hour Count Summaries - Bikes

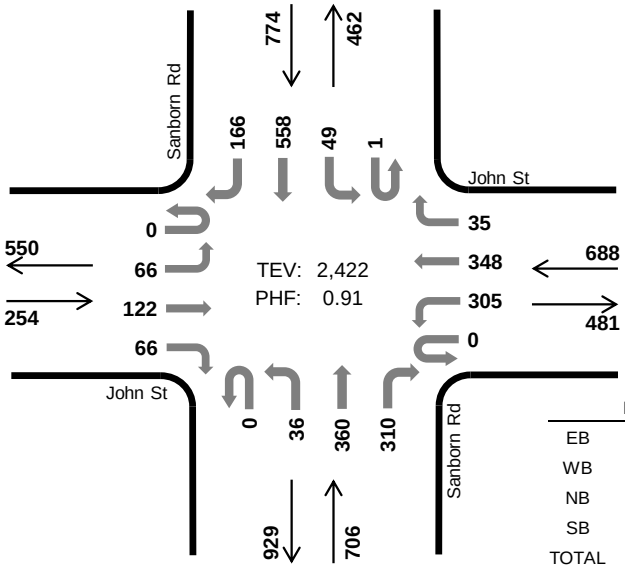
Interval Start	John St Eastbound			John St Westbound			Spring St Northbound			Spring St Southbound			15-min Total	Rolling One Hour
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
4:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
4:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

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

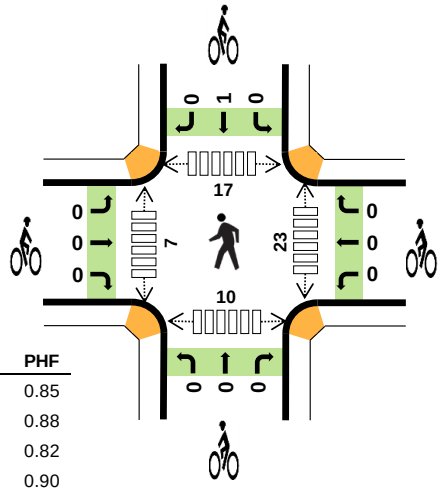
Sanborn Rd
John St

Peak Hour

Date: 11-21-2019
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:30 AM to 8:30 AM



	HV %:	PHF
EB	2.8%	0.85
WB	1.5%	0.88
NB	3.0%	0.82
SB	1.4%	0.90
TOTAL	2.0%	0.91



Two-Hour Count Summaries

Interval Start		John St Eastbound				John St Westbound				Sanborn Rd Northbound				Sanborn Rd Southbound				15-min Total	Rolling One Hour
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM		0	8	21	9	0	58	41	2	0	4	47	45	0	5	124	21	385	0
7:15 AM		0	11	34	8	0	84	62	1	0	15	60	70	0	11	115	24	495	0
7:30 AM		**0**	**10**	**31**	**16**	**0**	**75**	**101**	**4**	**0**	**14**	**93**	**107**	**1**	**21**	**154**	**39**	**666**	0
7:45 AM		**0**	**24**	**39**	**12**	**0**	**85**	**91**	**19**	**0**	**8**	**93**	**82**	**0**	**14**	**153**	**41**	**661**	2,207
8:00 AM		**0**	**14**	**28**	**22**	**0**	**72**	**67**	**9**	**0**	**6**	**89**	**71**	**0**	**11**	**138**	**33**	**560**	2,382
8:15 AM		**0**	**18**	**24**	**16**	**0**	**73**	**89**	**3**	**0**	**8**	**85**	**50**	**0**	**3**	**113**	**53**	**535**	**2,422**
8:30 AM		0	15	20	18	0	76	77	4	0	21	97	45	1	1	110	38	523	2,279
8:45 AM		0	11	22	13	0	51	55	4	0	9	78	51	0	2	100	35	431	2,049
Count Total		0	111	219	114	0	574	583	46	0	85	642	521	2	68	1,007	284	4,256	0
Peak Hour	**All**	**0**	**66**	**122**	**66**	**0**	**305**	**348**	**35**	**0**	**36**	**360**	**310**	**1**	**49**	**558**	**166**	**2,422**	**0**
	HV	**0**	**2**	**4**	**1**	**0**	**3**	**6**	**1**	**0**	**0**	**16**	**5**	**0**	**3**	**7**	**1**	**49**	**0**
	HV%	**-**	**3%**	**3%**	**2%**	**-**	**1%**	**2%**	**3%**	**-**	**0%**	**4%**	**2%**	**0%**	**6%**	**1%**	**1%**	**2%**	**0**

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

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	3	2	5	10	*20*	0	0	0	0	*0*	6	0	3	3	*12*
7:15 AM	0	5	7	7	*19*	0	0	0	1	*1*	1	3	0	3	*7*
7:30 AM	**4**	**3**	**5**	**4**	***16***	**0**	**0**	**0**	**0**	***0***	**9**	**2**	**14**	**5**	*30*
7:45 AM	**0**	**4**	**5**	**1**	***10***	**0**	**0**	**0**	**1**	***1***	**1**	**2**	**1**	**1**	*5*
8:00 AM	**2**	**1**	**5**	**5**	***13***	**0**	**0**	**0**	**0**	***0***	**7**	**1**	**1**	**0**	*9*
8:15 AM	**1**	**2**	**6**	**1**	***10***	**0**	**0**	**0**	**0**	***0***	**6**	**2**	**1**	**4**	***13***
8:30 AM	0	4	3	4	*11*	0	0	0	0	*0*	5	2	2	4	*13*
8:45 AM	2	1	4	0	*7*	0	0	0	0	*0*	3	1	0	1	*5*
Count Total	12	22	40	32	*106*	0	0	0	2	*2*	38	13	22	21	*94*
Peak Hour	**7**	**10**	**21**	**11**	***49***	**0**	**0**	**0**	**1**	***1***	**23**	**7**	**17**	**10**	***57***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	John St Eastbound				John St Westbound				Sanborn Rd Northbound				Sanborn Rd Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	1	2	0	0	1	1	0	0	0	3	2	0	1	7	2	20	0
7:15 AM	0	0	0	0	0	2	3	0	0	2	2	3	0	1	6	0	19	0
7:30 AM	**0**	**2**	**2**	**0**	**0**	**1**	**2**	**0**	**0**	**0**	**5**	**0**	**0**	**2**	**1**	**1**	**16**	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**1**	**0**	**0**	**5**	**0**	**0**	**0**	**1**	**0**	**10**	65
8:00 AM	**0**	**0**	**1**	**1**	**0**	**1**	**0**	**0**	**0**	**0**	**4**	**1**	**0**	**1**	**4**	**0**	**13**	58
8:15 AM	**0**	**0**	**1**	**0**	**0**	**1**	**1**	**0**	**0**	**0**	**2**	**4**	**0**	**0**	**1**	**0**	**10**	**49**
8:30 AM	0	0	0	0	0	1	2	1	0	1	2	0	0	0	4	0	11	44
8:45 AM	0	0	1	1	0	1	0	0	0	0	2	2	0	0	0	0	7	41
Count Total	0	3	7	2	0	8	12	2	0	3	25	12	0	5	24	3	106	0
Peak Hour	**0**	**2**	**4**	**1**	**0**	**3**	**6**	**1**	**0**	**0**	**16**	**5**	**0**	**3**	**7**	**1**	**49**	**0**

Two-Hour Count Summaries - Bikes

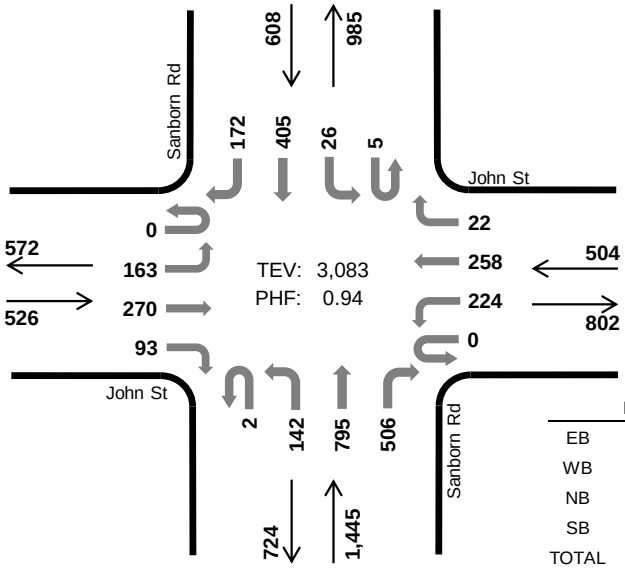
Interval Start	John St Eastbound			John St Westbound			Sanborn Rd Northbound			Sanborn Rd Southbound			15-min Total	Rolling One Hour
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	1	0	1	0
7:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**1**	2
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	2
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	2	0	2	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**1**	**0**

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

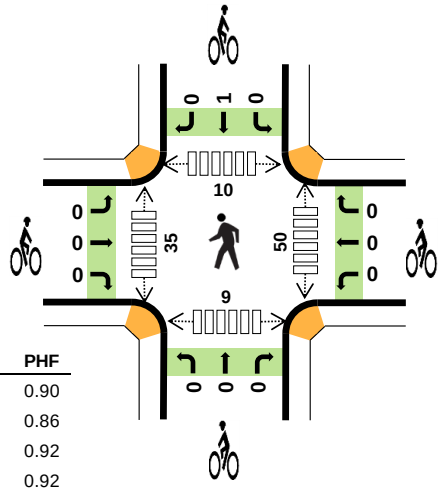
Sanborn Rd
John St

Peak Hour

Date: 11-21-2019
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:30 PM to 5:30 PM



	HV %:	PHF
EB	0.4%	0.90
WB	0.8%	0.86
NB	0.9%	0.92
SB	0.8%	0.92
TOTAL	0.8%	0.94



Two-Hour Count Summaries

Interval Start		John St Eastbound				John St Westbound				Sanborn Rd Northbound				Sanborn Rd Southbound				15-min Total	Rolling One Hour
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM		0	32	79	24	0	68	82	11	0	24	174	127	0	4	119	51	795	0
4:15 PM		0	30	63	18	0	51	67	1	0	30	153	115	0	12	85	37	662	0
4:30 PM		**0**	**36**	**52**	**24**	**0**	**56**	**68**	**8**	**1**	**31**	**177**	**124**	**1**	**4**	**93**	**47**	**722**	0
4:45 PM		**0**	**48**	**57**	**23**	**0**	**63**	**53**	**2**	**0**	**44**	**227**	**121**	**1**	**4**	**112**	**39**	**794**	2,973
5:00 PM		**0**	**43**	**71**	**26**	**0**	**56**	**84**	**6**	**0**	**35**	**201**	**136**	**2**	**10**	**115**	**39**	**824**	3,002
5:15 PM		**0**	**36**	**90**	**20**	**0**	**49**	**53**	**6**	**1**	**32**	**190**	**125**	**1**	**8**	**85**	**47**	**743**	**3,083**
5:30 PM		0	38	56	24	0	51	61	4	1	20	176	99	0	6	90	39	665	3,026
5:45 PM		0	45	58	23	1	52	75	9	0	24	166	131	0	2	89	50	725	2,957
Count Total		0	308	526	182	1	446	543	47	3	240	1,464	978	5	50	788	349	5,930	0
Peak Hour	**All**	**0**	**163**	**270**	**93**	**0**	**224**	**258**	**22**	**2**	**142**	**795**	**506**	**5**	**26**	**405**	**172**	**3,083**	**0**
	HV	**0**	**0**	**1**	**1**	**0**	**1**	**3**	**0**	**0**	**5**	**3**	**5**	**0**	**0**	**4**	**1**	**24**	**0**
	HV%	**-**	**0%**	**0%**	**1%**	**-**	**0%**	**1%**	**0%**	**0%**	**4%**	**0%**	**1%**	**0%**	**0%**	**1%**	**1%**	**1%**	**0**

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

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	1	0	2	1	*4*	0	0	0	0	*0*	4	8	6	0	*18*
4:15 PM	2	2	3	0	*7*	0	0	0	0	*0*	5	10	3	2	*20*
4:30 PM	**2**	**2**	**4**	**1**	***9***	**0**	**0**	**0**	**0**	***0***	**19**	**8**	**7**	**9**	*43*
4:45 PM	**0**	**1**	**6**	**1**	***8***	**0**	**0**	**0**	**0**	***0***	**10**	**5**	**2**	**0**	*17*
5:00 PM	**0**	**0**	**2**	**2**	***4***	**0**	**0**	**0**	**1**	***1***	**9**	**8**	**0**	**0**	*17*
5:15 PM	**0**	**1**	**1**	**1**	***3***	**0**	**0**	**0**	**0**	***0***	**12**	**14**	**1**	**0**	***27***
5:30 PM	1	2	1	1	*5*	0	0	0	0	*0*	12	9	1	2	*24*
5:45 PM	1	1	3	2	*7*	0	0	0	0	*0*	17	12	0	7	*36*
Count Total	7	9	22	9	*47*	0	0	0	1	*1*	88	74	20	20	*202*
Peak Hour	**2**	**4**	**13**	**5**	***24***	**0**	**0**	**0**	**1**	***1***	**50**	**35**	**10**	**9**	***104***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	John St				John St				Sanborn Rd				Sanborn Rd				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	1	0	0	0	0	0	0	0	1	1	0	0	1	0	4	0
4:15 PM	0	1	0	1	0	0	2	0	0	0	1	2	0	0	0	0	7	0
4:30 PM	**0**	**0**	**1**	**1**	**0**	**0**	**2**	**0**	**0**	**1**	**1**	**2**	**0**	**0**	**1**	**0**	**9**	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**2**	**2**	**2**	**0**	**0**	**1**	**0**	**8**	28
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**1**	**0**	**0**	**1**	**1**	**4**	28
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**	**0**	**3**	**24**
5:30 PM	0	0	1	0	0	2	0	0	0	0	0	1	0	0	0	1	5	20
5:45 PM	0	0	1	0	0	1	0	0	0	0	2	1	0	0	2	0	7	19
Count Total	0	1	4	2	0	4	5	0	0	5	7	10	0	0	7	2	47	0
Peak Hour	**0**	**0**	**1**	**1**	**0**	**1**	**3**	**0**	**0**	**5**	**3**	**5**	**0**	**0**	**4**	**1**	**24**	**0**

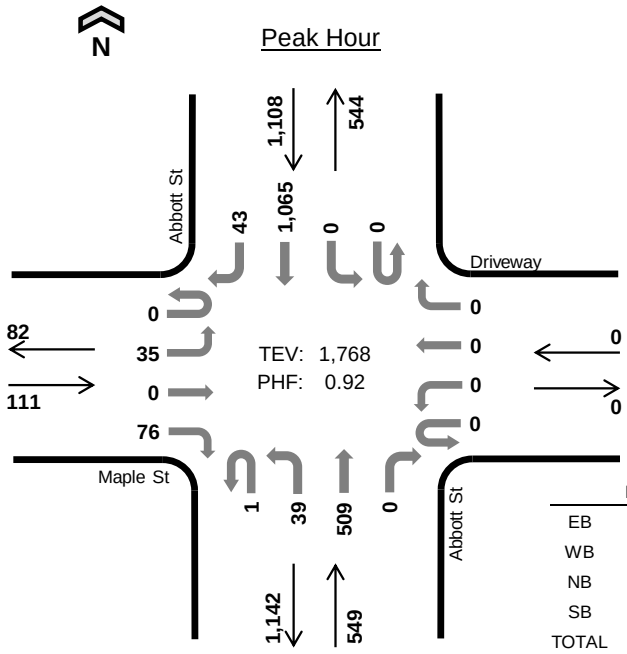
Two-Hour Count Summaries - Bikes

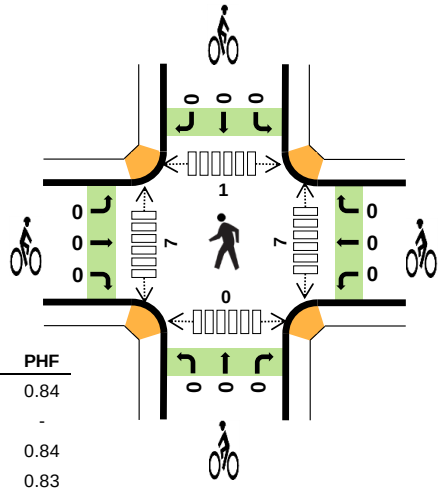
Interval Start	John St			John St			Sanborn Rd			Sanborn Rd			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**1**	1
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Count Total	0	0	0	0	0	0	0	0	0	0	1	0	1	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**1**	**0**

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

Abbott St
Maple St

Date: 11-21-2019
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:45 AM to 8:45 AM





	HV %:	PHF
EB	1.8%	0.84
WB	-	-
NB	5.1%	0.84
SB	2.3%	0.83
TOTAL	3.1%	0.92

Two-Hour Count Summaries

Interval Start		Maple St Eastbound				Driveway Westbound				Abbott St Northbound				Abbott St Southbound				15-min Total	Rolling One Hour
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM		0	8	0	11	0	0	0	0	0	3	72	0	0	0	134	17	245	0
7:15 AM		0	14	0	13	0	0	0	0	0	3	93	0	0	0	190	13	326	0
7:30 AM		0	9	0	15	0	0	0	0	0	4	100	0	0	0	204	14	346	0
7:45 AM		**0**	**7**	**0**	**18**	**0**	**0**	**0**	**0**	**1**	**6**	**114**	**0**	**0**	**0**	**321**	**12**	**479**	1,396
8:00 AM		**0**	**9**	**0**	**23**	**0**	**0**	**0**	**0**	**0**	**12**	**103**	**0**	**0**	**0**	**285**	**10**	**442**	1,593
8:15 AM		**0**	**11**	**0**	**22**	**0**	**0**	**0**	**0**	**0**	**12**	**151**	**0**	**0**	**0**	**237**	**14**	**447**	1,714
8:30 AM		**0**	**8**	**0**	**13**	**0**	**0**	**0**	**0**	**0**	**9**	**141**	**0**	**0**	**0**	**222**	**7**	**400**	**1,768**
8:45 AM		0	7	0	13	0	0	0	0	1	5	148	0	0	1	209	9	393	1,682
Count Total		0	73	0	128	0	0	0	0	2	54	922	0	0	1	1,802	96	3,078	0
Peak Hour	**All**	**0**	**35**	**0**	**76**	**0**	**0**	**0**	**0**	**1**	**39**	**509**	**0**	**0**	**0**	**1,065**	**43**	**1,768**	**0**
	HV	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**1**	**27**	**0**	**0**	**0**	**23**	**2**	**55**	**0**
	HV%	**-**	**0%**	**-**	**3%**	**-**	**-**	**-**	**-**	**0%**	**3%**	**5%**	**-**	**-**	**-**	**2%**	**5%**	**3%**	**0**

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

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	0	0	5	4	*9*	0	0	0	0	*0*	0	1	0	0	*1*
7:15 AM	0	0	8	8	*16*	0	0	0	0	*0*	1	3	1	0	*5*
7:30 AM	1	0	6	3	*10*	0	0	0	0	*0*	0	2	0	0	*2*
7:45 AM	**0**	**0**	**5**	**3**	***8***	**0**	**0**	**0**	**0**	***0***	**1**	**2**	**0**	**0**	*3*
8:00 AM	**1**	**0**	**7**	**10**	***18***	**0**	**0**	**0**	**0**	***0***	**4**	**2**	**0**	**0**	*6*
8:15 AM	**1**	**0**	**6**	**4**	***11***	**0**	**0**	**0**	**0**	***0***	**1**	**1**	**1**	**0**	*3*
8:30 AM	**0**	**0**	**10**	**8**	***18***	**0**	**0**	**0**	**0**	***0***	**1**	**2**	**0**	**0**	***3***
8:45 AM	2	0	10	11	*23*	0	0	1	0	*1*	2	3	0	0	*5*
Count Total	5	0	57	51	*113*	0	0	1	0	*1*	10	16	2	0	*28*
Peak Hour	**2**	**0**	**28**	**25**	***55***	**0**	**0**	**0**	**0**	***0***	**7**	**7**	**1**	**0**	***15***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Maple St				Driveway				Abbott St				Abbott St				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	5	0	0	0	2	2	9	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	8	0	0	0	6	2	16	0
7:30 AM	0	1	0	0	0	0	0	0	0	1	5	0	0	0	3	0	10	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**5**	**0**	**0**	**0**	**2**	**1**	**8**	43
8:00 AM	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**7**	**0**	**0**	**0**	**9**	**1**	**18**	52
8:15 AM	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**1**	**5**	**0**	**0**	**0**	**4**	**0**	**11**	47
8:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**10**	**0**	**0**	**0**	**8**	**0**	**18**	**55**
8:45 AM	0	1	0	1	0	0	0	0	0	0	10	0	0	1	10	0	23	70
Count Total	0	2	0	3	0	0	0	0	0	2	55	0	0	1	44	6	113	0
Peak Hour	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**1**	**27**	**0**	**0**	**0**	**23**	**2**	**55**	**0**

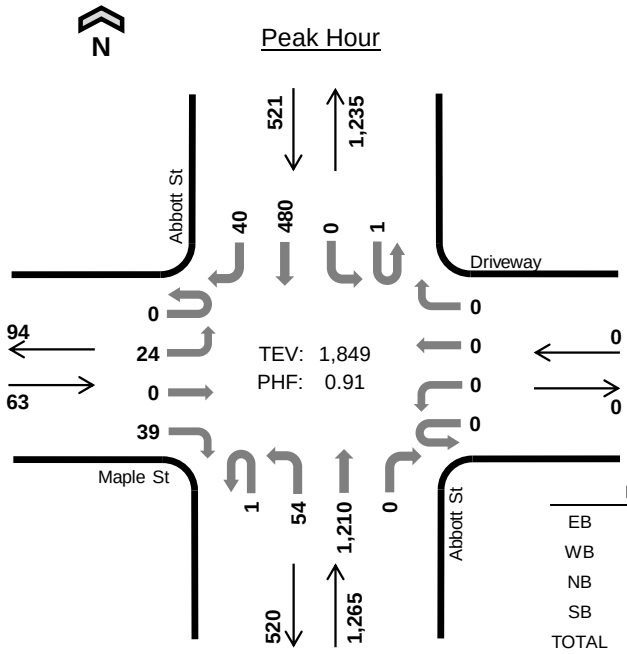
Two-Hour Count Summaries - Bikes

Interval Start	Maple St			Driveway			Abbott St			Abbott St			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
8:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
8:45 AM	0	0	0	0	0	0	0	1	0	0	0	0	1	1
Count Total	0	0	0	0	0	0	0	1	0	0	0	0	1	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

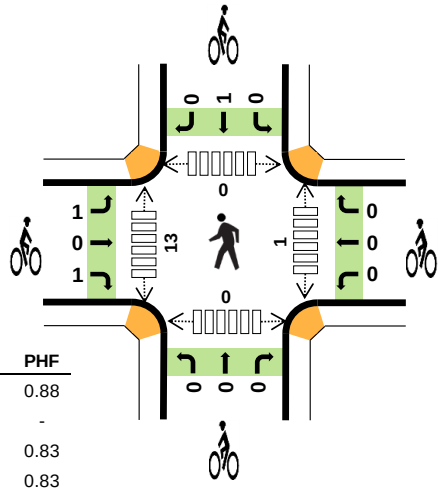
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Abbott St
Maple St

Date: 11-21-2019
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:15 PM to 5:15 PM



	HV %:	PHF
EB	1.6%	0.88
WB	-	-
NB	1.7%	0.83
SB	4.6%	0.83
TOTAL	2.5%	0.91



Two-Hour Count Summaries

Interval Start	Maple St Eastbound				Driveway Westbound				Abbott St Northbound				Abbott St Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	5	0	8	0	0	0	0	0	10	336	0	0	0	135	9	503	0
4:15 PM	**0**	**5**	**0**	**9**	**0**	**0**	**0**	**0**	**0**	**4**	**249**	**0**	**0**	**0**	**149**	**8**	**424**	0
4:30 PM	**0**	**9**	**0**	**9**	**0**	**0**	**0**	**0**	**1**	**15**	**322**	**0**	**1**	**0**	**123**	**11**	**491**	0
4:45 PM	**0**	**8**	**0**	**6**	**0**	**0**	**0**	**0**	**0**	**15**	**279**	**0**	**0**	**0**	**110**	**9**	**427**	1,845
5:00 PM	**0**	**2**	**0**	**15**	**0**	**0**	**0**	**0**	**0**	**20**	**360**	**0**	**0**	**0**	**98**	**12**	**507**	**1,849**
5:15 PM	0	5	0	7	0	0	0	1	0	14	231	0	0	1	99	5	363	1,788
5:30 PM	0	3	0	5	0	0	0	0	0	9	186	0	0	0	91	9	303	1,600
5:45 PM	0	4	0	4	0	0	0	0	0	6	132	0	0	0	83	7	236	1,409
Count Total	0	41	0	63	0	0	0	1	1	93	2,095	0	1	1	888	70	3,254	0
Peak Hour All	**0**	**24**	**0**	**39**	**0**	**0**	**0**	**0**	**1**	**54**	**1,210**	**0**	**1**	**0**	**480**	**40**	**1,849**	**0**
Peak Hour HV	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**22**	**0**	**0**	**0**	**22**	**2**	**47**	**0**
Peak Hour HV%	**-**	**0%**	**-**	**3%**	**-**	**-**	**-**	**-**	**0%**	**0%**	**2%**	**-**	**0%**	**-**	**5%**	**5%**	**3%**	**0**

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

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	0	0	4	5	*9*	0	0	0	0	*0*	1	3	2	0	*6*
4:15 PM	**0**	**0**	**10**	**7**	***17***	**1**	**0**	**0**	**0**	***1***	**0**	**4**	**0**	**0**	*4*
4:30 PM	**0**	**0**	**6**	**6**	***12***	**1**	**0**	**0**	**1**	***2***	**0**	**2**	**0**	**0**	*2*
4:45 PM	**1**	**0**	**5**	**8**	***14***	**0**	**0**	**0**	**0**	***0***	**0**	**4**	**0**	**0**	*4*
5:00 PM	**0**	**0**	**1**	**3**	***4***	**0**	**0**	**0**	**0**	***0***	**1**	**3**	**0**	**0**	***4***
5:15 PM	0	0	6	10	*16*	0	0	0	0	*0*	0	1	0	0	*1*
5:30 PM	0	0	7	3	*10*	0	0	0	0	*0*	1	4	0	0	*5*
5:45 PM	1	0	4	5	*10*	0	0	0	0	*0*	1	2	0	0	*3*
Count Total	2	0	43	47	*92*	2	0	0	1	*3*	4	23	2	0	*29*
Peak Hour	**1**	**0**	**22**	**24**	***47***	**2**	**0**	**0**	**1**	***3***	**1**	**13**	**0**	**0**	***14***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Maple St				Driveway				Abbott St				Abbott St				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	4	0	0	0	5	0	9	0
4:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**10**	**0**	**0**	**0**	**7**	**0**	**17**	0
4:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**6**	**0**	**0**	**0**	**5**	**1**	**12**	0
4:45 PM	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**5**	**0**	**0**	**0**	**7**	**1**	**14**	52
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**3**	**0**	**4**	**47**
5:15 PM	0	0	0	0	0	0	0	0	0	0	6	0	0	0	10	0	16	46
5:30 PM	0	0	0	0	0	0	0	0	0	0	7	0	0	0	3	0	10	44
5:45 PM	0	0	0	1	0	0	0	0	0	0	4	0	0	0	5	0	10	40
Count Total	0	0	0	2	0	0	0	0	0	0	43	0	0	0	45	2	92	0
Peak Hour	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**22**	**0**	**0**	**0**	**22**	**2**	**47**	**0**

Two-Hour Count Summaries - Bikes

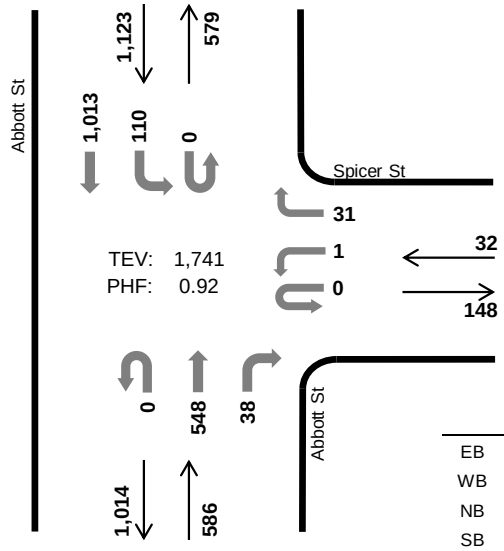
Interval Start	Maple St			Driveway			Abbott St			Abbott St			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	0
4:30 PM	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**2**	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	3
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	1	0	1	0	0	0	0	0	0	0	1	0	3	0
Peak Hour	**1**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**3**	**0**

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

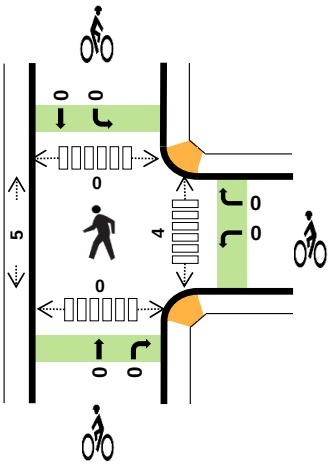
Abbott St
Spicer St

Date: 11-21-2019
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:45 AM to 8:45 AM

Peak Hour



	HV %:	PHF
EB	-	-
WB	0.0%	0.80
NB	6.7%	0.83
SB	2.2%	0.84
TOTAL	3.7%	0.92



Two-Hour Count Summaries

Interval Start		n/a Eastbound				Spicer St Westbound				Abbott St Northbound				Abbott St Southbound				15-min Total	Rolling One Hour
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM		0	0	0	0	0	1	0	7	0	0	58	7	0	23	119	0	215	0
7:15 AM		0	0	0	0	0	0	0	7	0	0	79	8	0	22	172	0	288	0
7:30 AM		0	0	0	0	0	0	0	10	0	0	97	8	0	33	197	0	345	0
7:45 AM		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**0**	**125**	**9**	**0**	**41**	**293**	**0**	**472**	1,320
8:00 AM		**0**	**0**	**0**	**0**	**0**	**1**	**0**	**9**	**0**	**0**	**109**	**11**	**0**	**28**	**273**	**0**	**431**	1,536
8:15 AM		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**8**	**0**	**0**	**164**	**12**	**0**	**15**	**235**	**0**	**434**	1,682
8:30 AM		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**10**	**0**	**0**	**150**	**6**	**0**	**26**	**212**	**0**	**404**	**1,741**
8:45 AM		0	0	0	0	0	3	0	10	0	0	144	3	1	13	208	0	382	1,651
Count Total		0	0	0	0	0	5	0	65	0	0	926	64	1	201	1,709	0	2,971	0
Peak Hour	**All**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**31**	**0**	**0**	**548**	**38**	**0**	**110**	**1,013**	**0**	**1,741**	**0**
	HV	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**29**	**10**	**0**	**3**	**22**	**0**	**64**	**0**
	HV%	**-**	**-**	**-**	**-**	**-**	**0%**	**-**	**0%**	**-**	**-**	**5%**	**26%**	**-**	**3%**	**2%**	**-**	**4%**	**0**

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

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	0	2	3	2	*7*	0	0	0	0	*0*	1	0	1	1	*3*
7:15 AM	0	2	8	8	*18*	0	0	0	0	*0*	1	0	0	0	*1*
7:30 AM	0	0	10	3	*13*	0	0	0	0	*0*	0	0	0	0	*0*
7:45 AM	**0**	**0**	**7**	**3**	***10***	**0**	**0**	**0**	**0**	***0***	**1**	**1**	**0**	**0**	*2*
8:00 AM	**0**	**0**	**10**	**7**	***17***	**0**	**0**	**0**	**0**	***0***	**2**	**1**	**0**	**0**	*3*
8:15 AM	**0**	**0**	**8**	**8**	***16***	**0**	**0**	**0**	**0**	***0***	**1**	**1**	**0**	**0**	*2*
8:30 AM	**0**	**0**	**14**	**7**	***21***	**0**	**0**	**0**	**0**	***0***	**0**	**2**	**0**	**0**	***2***
8:45 AM	0	1	10	12	*23*	0	0	1	0	*1*	1	3	0	0	*4*
Count Total	0	5	70	50	*125*	0	0	1	0	*1*	7	8	1	1	*17*
Peak Hr	**0**	**0**	**39**	**25**	***64***	**0**	**0**	**0**	**0**	***0***	**4**	**5**	**0**	**0**	***9***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	n/a				Spicer St				Abbott St				Abbott St				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	2	0	0	2	1	0	0	2	0	7	0
7:15 AM	0	0	0	0	0	0	0	2	0	0	5	3	0	1	7	0	18	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	6	4	0	0	3	0	13	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**5**	**2**	**0**	**1**	**2**	**0**	**10**	48
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**7**	**3**	**0**	**2**	**5**	**0**	**17**	58
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**6**	**2**	**0**	**0**	**8**	**0**	**16**	56
8:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**11**	**3**	**0**	**0**	**7**	**0**	**21**	**64**
8:45 AM	0	0	0	0	0	0	0	1	0	0	9	1	1	0	11	0	23	77
Count Total	0	0	0	0	0	0	0	5	0	0	51	19	1	4	45	0	125	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**29**	**10**	**0**	**3**	**22**	**0**	**64**	**0**

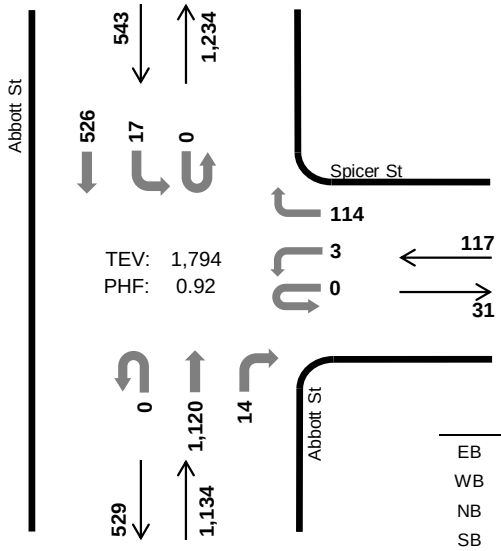
Two-Hour Count Summaries - Bikes

Interval Start	n/a			Spicer St			Abbott St			Abbott St			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
8:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
8:45 AM	0	0	0	0	0	0	0	1	0	0	0	0	1	1
Count Total	0	0	0	0	0	0	0	1	0	0	0	0	1	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

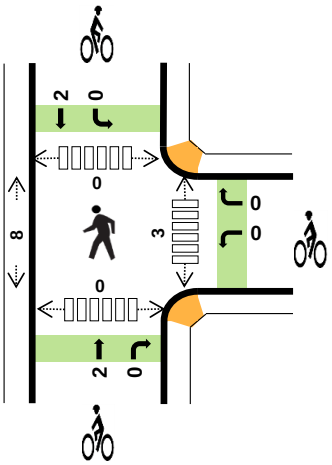
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Abbott St
Spicer St

Date: 11-21-2019
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:15 PM to 5:15 PM



	HV %:	PHF
EB	-	-
WB	0.9%	0.81
NB	3.0%	0.86
SB	4.2%	0.86
TOTAL	3.2%	0.92



Two-Hour Count Summaries

Interval Start		n/a Eastbound				Spicer St Westbound				Abbott St Northbound				Abbott St Southbound				15-min Total	Rolling One Hour
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM		0	0	0	0	0	2	0	33	0	0	295	4	0	7	143	0	484	0
4:15 PM		**0**	**0**	**0**	**0**	**0**	**2**	**0**	**21**	**0**	**0**	**227**	**5**	**0**	**8**	**150**	**0**	**413**	0
4:30 PM		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**26**	**0**	**0**	**307**	**3**	**0**	**2**	**138**	**0**	**476**	0
4:45 PM		**0**	**0**	**0**	**0**	**0**	**1**	**0**	**31**	**0**	**0**	**258**	**3**	**0**	**5**	**117**	**0**	**415**	1,788
5:00 PM		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**36**	**0**	**0**	**328**	**3**	**0**	**2**	**121**	**0**	**490**	**1,794**
5:15 PM		0	0	0	0	0	1	0	14	0	0	225	2	0	4	105	0	351	1,732
5:30 PM		0	0	0	0	0	3	0	22	0	0	169	4	0	4	95	0	297	1,553
5:45 PM		0	0	0	0	0	1	0	11	0	0	124	2	0	2	84	0	224	1,362
Count Total		0	0	0	0	0	10	0	194	0	0	1,933	26	0	34	953	0	3,150	0
Peak Hour	**All**	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**114**	**0**	**0**	**1,120**	**14**	**0**	**17**	**526**	**0**	**1,794**	**0**
	HV	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**22**	**12**	**0**	**2**	**21**	**0**	**58**	**0**
	HV%	**-**	**-**	**-**	**-**	**-**	**0%**	**-**	**1%**	**-**	**-**	**2%**	**86%**	**-**	**12%**	**4%**	**-**	**3%**	**0**

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

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	0	1	5	5	*11*	0	0	2	0	*2*	2	3	0	0	*5*
4:15 PM	**0**	**0**	**12**	**6**	***18***	**0**	**0**	**0**	**0**	***0***	**0**	**2**	**0**	**0**	*2*
4:30 PM	**0**	**1**	**8**	**5**	***14***	**0**	**0**	**0**	**1**	***1***	**1**	**2**	**0**	**0**	*3*
4:45 PM	**0**	**0**	**9**	**9**	***18***	**0**	**0**	**1**	**0**	***1***	**1**	**2**	**0**	**0**	*3*
5:00 PM	**0**	**0**	**5**	**3**	***8***	**0**	**0**	**1**	**1**	***2***	**1**	**2**	**0**	**0**	***3***
5:15 PM	0	2	5	10	*17*	0	0	0	0	*0*	1	2	0	0	*3*
5:30 PM	0	1	11	2	*14*	0	0	0	0	*0*	1	1	1	0	*3*
5:45 PM	0	0	6	6	*12*	0	0	0	0	*0*	1	0	0	0	*1*
Count Total	0	5	61	46	*112*	0	0	4	2	*6*	8	14	1	0	*23*
Peak Hr	**0**	**1**	**34**	**23**	***58***	**0**	**0**	**2**	**2**	***4***	**3**	**8**	**0**	**0**	***11***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	n/a				Spicer St				Abbott St				Abbott St				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	1	0	0	3	2	0	1	4	0	11	0
4:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**9**	**3**	**0**	**1**	**5**	**0**	**18**	0
4:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**5**	**3**	**0**	**0**	**5**	**0**	**14**	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**6**	**3**	**0**	**1**	**8**	**0**	**18**	61
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**3**	**0**	**0**	**3**	**0**	**8**	**58**
5:15 PM	0	0	0	0	0	0	0	2	0	0	3	2	0	1	9	0	17	57
5:30 PM	0	0	0	0	0	0	0	1	0	0	7	4	0	0	2	0	14	57
5:45 PM	0	0	0	0	0	0	0	0	0	0	4	2	0	0	6	0	12	51
Count Total	0	0	0	0	0	0	0	5	0	0	39	22	0	4	42	0	112	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**22**	**12**	**0**	**2**	**21**	**0**	**58**	**0**

Two-Hour Count Summaries - Bikes

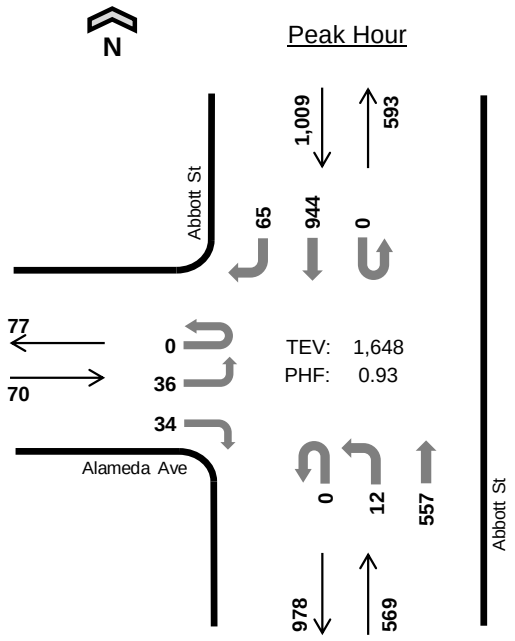
Interval Start	n/a			Spicer St			Abbott St			Abbott St			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	1	1	0	0	0	2	0
4:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
4:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**1**	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**	4
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**1**	**0**	**2**	**4**
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	4
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	3
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Count Total	0	0	0	0	0	0	0	3	1	0	2	0	6	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**2**	**0**	**4**	**0**

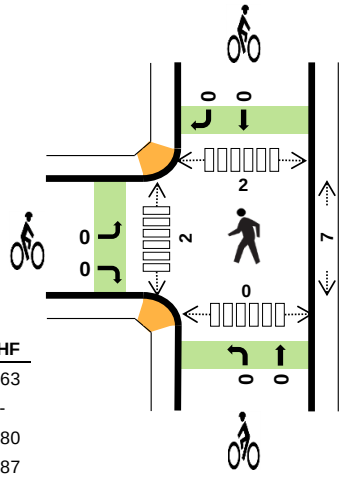
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Abbott St
Alameda Ave

Date: 11-21-2019
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:45 AM to 8:45 AM

Peak Hour





	HV %:	PHF
EB	0.0%	0.63
WB	-	-
NB	7.0%	0.80
SB	2.2%	0.87
TOTAL	3.8%	0.93

Two-Hour Count Summaries

Interval Start		Alameda Ave Eastbound				n/a Westbound				Abbott St Northbound				Abbott St Southbound				15-min Total	Rolling One Hour
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM		0	7	0	4	0	0	0	0	0	2	58	0	0	0	113	7	191	0
7:15 AM		0	13	0	7	0	0	0	0	0	0	75	0	0	0	158	13	266	0
7:30 AM		0	14	0	9	0	0	0	0	0	2	92	0	0	0	189	10	316	0
7:45 AM		**0**	**13**	**0**	**15**	**0**	**0**	**0**	**0**	**0**	**2**	**122**	**0**	**0**	**0**	**272**	**17**	**441**	1,214
8:00 AM		**0**	**8**	**0**	**6**	**0**	**0**	**0**	**0**	**0**	**0**	**113**	**0**	**0**	**0**	**255**	**18**	**400**	1,423
8:15 AM		**0**	**8**	**0**	**8**	**0**	**0**	**0**	**0**	**0**	**8**	**170**	**0**	**0**	**0**	**221**	**14**	**429**	1,586
8:30 AM		**0**	**7**	**0**	**5**	**0**	**0**	**0**	**0**	**0**	**2**	**152**	**0**	**0**	**0**	**196**	**16**	**378**	**1,648**
8:45 AM		0	4	0	6	0	0	0	0	0	2	142	0	0	0	204	7	365	1,572
Count Total		0	74	0	60	0	0	0	0	0	18	924	0	0	0	1,608	102	2,786	0
Peak Hour	**All**	**0**	**36**	**0**	**34**	**0**	**0**	**0**	**0**	**0**	**12**	**557**	**0**	**0**	**0**	**944**	**65**	**1,648**	**0**
	HV	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**39**	**0**	**0**	**0**	**20**	**2**	**62**	**0**
	HV%	**-**	**0%**	**-**	**0%**	**-**	**-**	**-**	**-**	**-**	**8%**	**7%**	**-**	**-**	**-**	**2%**	**3%**	**4%**	**0**

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

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	0	0	3	2	*5*	0	0	0	0	*0*	0	0	0	0	*0*
7:15 AM	1	0	8	7	*16*	0	0	0	0	*0*	1	0	0	0	*1*
7:30 AM	0	0	10	3	*13*	0	0	0	0	*0*	0	0	0	0	*0*
7:45 AM	**0**	**0**	**8**	**2**	***10***	**0**	**0**	**0**	**0**	***0***	**1**	**1**	**0**	**0**	*2*
8:00 AM	**0**	**0**	**10**	**5**	***15***	**0**	**0**	**0**	**0**	***0***	**3**	**1**	**0**	**0**	*4*
8:15 AM	**0**	**0**	**8**	**7**	***15***	**0**	**0**	**0**	**0**	***0***	**2**	**0**	**2**	**0**	*4*
8:30 AM	**0**	**0**	**14**	**8**	***22***	**0**	**0**	**0**	**0**	***0***	**1**	**0**	**0**	**0**	***1***
8:45 AM	0	0	10	11	*21*	0	0	1	0	*1*	3	1	2	0	*6*
Count Total	1	0	71	45	*117*	0	0	1	0	*1*	11	3	4	0	*18*
Peak Hr	**0**	**0**	**40**	**22**	***62***	**0**	**0**	**0**	**0**	***0***	**7**	**2**	**2**	**0**	***11***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Alameda Ave				n/a				Abbott St				Abbott St				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	3	0	0	0	2	0	5	0
7:15 AM	0	0	0	1	0	0	0	0	0	0	8	0	0	0	7	0	16	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	10	0	0	0	3	0	13	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**7**	**0**	**0**	**0**	**2**	**0**	**10**	44
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**10**	**0**	**0**	**0**	**5**	**0**	**15**	54
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**8**	**0**	**0**	**0**	**7**	**0**	**15**	53
8:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**14**	**0**	**0**	**0**	**6**	**2**	**22**	**62**
8:45 AM	0	0	0	0	0	0	0	0	0	0	10	0	0	0	11	0	21	73
Count Total	0	0	0	1	0	0	0	0	0	1	70	0	0	0	43	2	117	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**39**	**0**	**0**	**0**	**20**	**2**	**62**	**0**

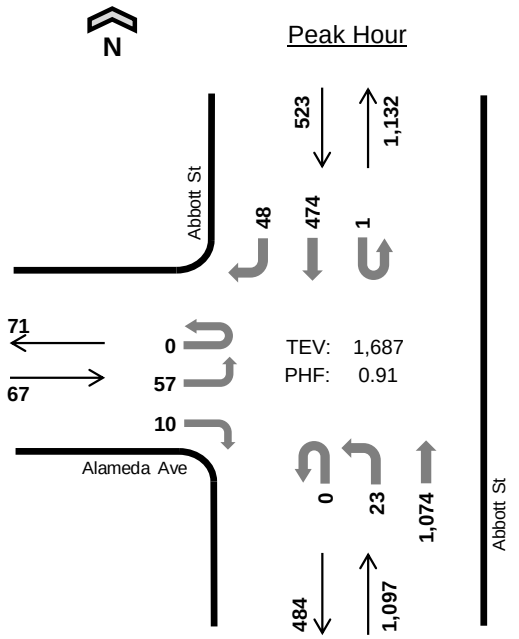
Two-Hour Count Summaries - Bikes

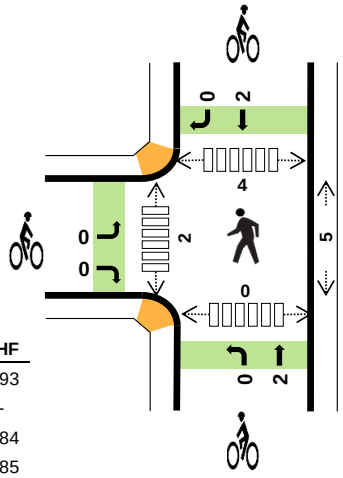
Interval Start	Alameda Ave			n/a			Abbott St			Abbott St			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
8:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
8:45 AM	0	0	0	0	0	0	0	1	0	0	0	0	1	1
Count Total	0	0	0	0	0	0	0	1	0	0	0	0	1	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

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

Abbott St
Alameda Ave

Date: 11-21-2019
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:15 PM to 5:15 PM





	HV %:	PHF
EB	0.0%	0.93
WB	-	-
NB	3.1%	0.84
SB	4.2%	0.85
TOTAL	3.3%	0.91

Two-Hour Count Summaries

Interval Start		Alameda Ave Eastbound				n/a Westbound				Abbott St Northbound				Abbott St Southbound				15-min Total	Rolling One Hour
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM		0	11	0	3	0	0	0	0	0	3	287	0	0	0	134	10	448	0
4:15 PM		**0**	**14**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**2**	**217**	**0**	**0**	**0**	**141**	**12**	**389**	0
4:30 PM		**0**	**14**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**9**	**295**	**0**	**1**	**0**	**123**	**11**	**456**	0
4:45 PM		**0**	**15**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**246**	**0**	**0**	**0**	**104**	**11**	**379**	1,672
5:00 PM		**0**	**14**	**0**	**4**	**0**	**0**	**0**	**0**	**0**	**9**	**316**	**0**	**0**	**0**	**106**	**14**	**463**	**1,687**
5:15 PM		0	16	0	3	0	0	0	0	0	1	208	0	0	0	92	14	334	1,632
5:30 PM		0	12	0	3	0	0	0	0	0	4	160	0	0	0	91	8	278	1,454
5:45 PM		0	8	0	3	0	0	0	0	0	3	116	0	0	0	73	12	215	1,290
Count Total		0	104	0	22	0	0	0	0	0	34	1,845	0	1	0	864	92	2,962	0
Peak Hour	**All**	**0**	**57**	**0**	**10**	**0**	**0**	**0**	**0**	**0**	**23**	**1,074**	**0**	**1**	**0**	**474**	**48**	**1,687**	**0**
	HV	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**34**	**0**	**0**	**0**	**22**	**0**	**56**	**0**
	HV%	**-**	**0%**	**-**	**0%**	**-**	**-**	**-**	**-**	**-**	**0%**	**3%**	**-**	**0%**	**-**	**5%**	**0%**	**3%**	**0**

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

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	0	0	6	3	*9*	0	0	2	0	*2*	3	1	2	0	*6*
4:15 PM	**0**	**0**	**12**	**5**	***17***	**0**	**0**	**0**	**0**	***0***	**1**	**0**	**1**	**0**	*2*
4:30 PM	**0**	**0**	**8**	**5**	***13***	**0**	**0**	**0**	**1**	***1***	**1**	**0**	**2**	**0**	*3*
4:45 PM	**0**	**0**	**9**	**8**	***17***	**0**	**0**	**1**	**0**	***1***	**1**	**0**	**1**	**0**	*2*
5:00 PM	**0**	**0**	**5**	**4**	***9***	**0**	**0**	**1**	**1**	***2***	**2**	**2**	**0**	**0**	***4***
5:15 PM	0	0	5	9	*14*	0	0	0	0	*0*	3	0	1	0	*4*
5:30 PM	0	0	11	2	*13*	0	0	0	0	*0*	2	0	1	0	*3*
5:45 PM	0	0	5	6	*11*	0	0	0	0	*0*	0	0	3	0	*3*
Count Total	0	0	61	42	*103*	0	0	4	2	*6*	13	3	11	0	*27*
Peak Hr	**0**	**0**	**34**	**22**	***56***	**0**	**0**	**2**	**2**	***4***	**5**	**2**	**4**	**0**	***11***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Alameda Ave				n/a				Abbott St				Abbott St				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	6	0	0	0	3	0	9	0
4:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**12**	**0**	**0**	**0**	**5**	**0**	**17**	0
4:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**8**	**0**	**0**	**0**	**5**	**0**	**13**	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**9**	**0**	**0**	**0**	**8**	**0**	**17**	56
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**5**	**0**	**0**	**0**	**4**	**0**	**9**	**56**
5:15 PM	0	0	0	0	0	0	0	0	0	0	5	0	0	0	9	0	14	53
5:30 PM	0	0	0	0	0	0	0	0	0	0	11	0	0	0	2	0	13	53
5:45 PM	0	0	0	0	0	0	0	0	0	0	5	0	0	0	6	0	11	47
Count Total	0	0	0	0	0	0	0	0	0	0	61	0	0	0	42	0	103	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**34**	**0**	**0**	**0**	**22**	**0**	**56**	**0**

Two-Hour Count Summaries - Bikes

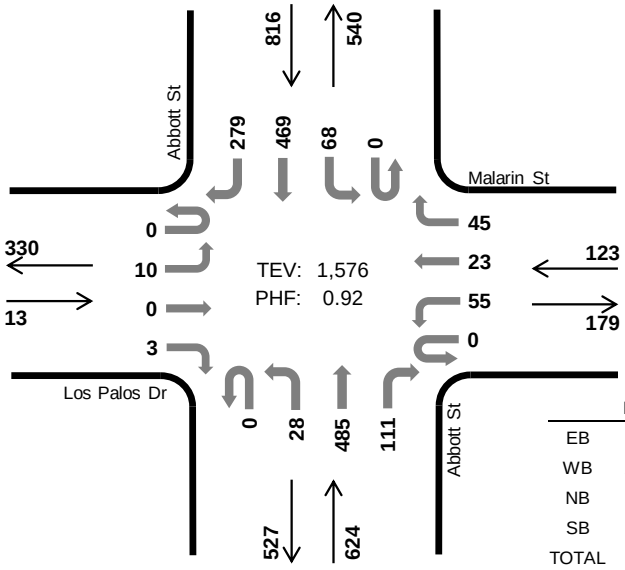
Interval Start	Alameda Ave			n/a			Abbott St			Abbott St			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	2	0	0	0	0	2	0
4:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
4:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**1**	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**	4
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**1**	**0**	**2**	**4**
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	4
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	3
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Count Total	0	0	0	0	0	0	0	4	0	0	2	0	6	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**2**	**0**	**4**	**0**

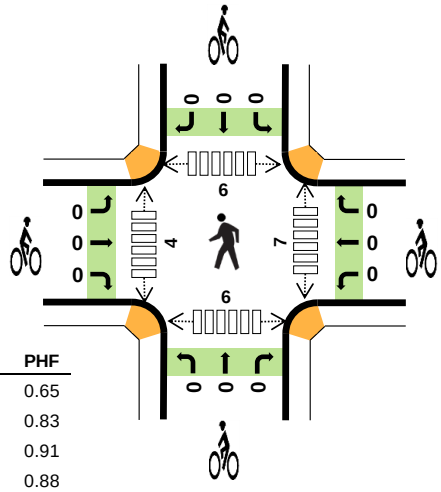
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Abbott St
Los Palos Dr

Date: 11-21-2019
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:45 AM to 8:45 AM

Peak Hour





	HV %:	PHF
EB	0.0%	0.65
WB	14.6%	0.83
NB	5.6%	0.91
SB	2.3%	0.88
TOTAL	4.6%	0.92

Two-Hour Count Summaries

Interval Start		Los Palos Dr Eastbound				Malarin St Westbound				Abbott St Northbound				Abbott St Southbound				15-min Total	Rolling One Hour
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM		0	0	1	0	0	5	2	1	0	2	65	13	0	9	70	28	196	0
7:15 AM		0	1	0	0	0	8	1	4	0	2	68	12	0	16	84	28	224	0
7:30 AM		0	3	1	0	0	12	4	2	0	3	90	16	0	14	93	58	296	0
7:45 AM		**0**	**3**	**0**	**2**	**0**	**11**	**6**	**9**	**0**	**9**	**117**	**40**	**0**	**26**	**125**	**82**	**430**	1,146
8:00 AM		**0**	**1**	**0**	**1**	**0**	**13**	**11**	**10**	**0**	**8**	**105**	**32**	**0**	**17**	**124**	**77**	**399**	1,349
8:15 AM		**0**	**1**	**0**	**0**	**0**	**21**	**6**	**10**	**0**	**6**	**149**	**16**	**0**	**13**	**107**	**67**	**396**	1,521
8:30 AM		**0**	**5**	**0**	**0**	**0**	**10**	**0**	**16**	**0**	**5**	**114**	**23**	**0**	**12**	**113**	**53**	**351**	**1,576**
8:45 AM		0	4	1	0	0	11	1	14	0	5	119	16	0	16	105	59	351	1,497
Count Total		0	18	3	3	0	91	31	66	0	40	827	168	0	123	821	452	2,643	0
Peak Hour	**All**	**0**	**10**	**0**	**3**	**0**	**55**	**23**	**45**	**0**	**28**	**485**	**111**	**0**	**68**	**469**	**279**	**1,576**	**0**
	HV	**0**	**0**	**0**	**0**	**0**	**15**	**1**	**2**	**0**	**0**	**32**	**3**	**0**	**1**	**18**	**0**	**72**	**0**
	HV%	**-**	**0%**	**-**	**0%**	**-**	**27%**	**4%**	**4%**	**-**	**0%**	**7%**	**3%**	**-**	**1%**	**4%**	**0%**	**5%**	**0**

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

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	0	3	5	2	*10*	0	0	0	0	*0*	1	0	0	1	*2*
7:15 AM	0	4	8	10	*22*	0	0	0	0	*0*	0	0	2	0	*2*
7:30 AM	0	7	11	3	*21*	0	0	0	0	*0*	0	0	0	0	*0*
7:45 AM	**0**	**4**	**7**	**2**	***13***	**0**	**0**	**0**	**0**	***0***	**2**	**3**	**3**	**2**	*10*
8:00 AM	**0**	**7**	**10**	**5**	***22***	**0**	**0**	**0**	**0**	***0***	**1**	**1**	**2**	**1**	*5*
8:15 AM	**0**	**5**	**8**	**7**	***20***	**0**	**0**	**0**	**0**	***0***	**2**	**0**	**1**	**1**	*4*
8:30 AM	**0**	**2**	**10**	**5**	***17***	**0**	**0**	**0**	**0**	***0***	**2**	**0**	**0**	**2**	***4***
8:45 AM	0	1	7	10	*18*	0	0	0	0	*0*	0	1	1	0	*2*
Count Total	0	33	66	44	*143*	0	0	0	0	*0*	8	5	9	7	*29*
Peak Hour	**0**	**18**	**35**	**19**	***72***	**0**	**0**	**0**	**0**	***0***	**7**	**4**	**6**	**6**	***23***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Los Palos Dr				Malarin St				Abbott St				Abbott St				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	0	0	2	1	0	0	0	5	0	0	0	2	0	10	0
7:15 AM	0	0	0	0	0	4	0	0	0	0	6	2	0	1	9	0	22	0
7:30 AM	0	0	0	0	0	7	0	0	0	0	11	0	0	1	2	0	21	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**1**	**0**	**0**	**6**	**1**	**0**	**0**	**2**	**0**	**13**	66
8:00 AM	**0**	**0**	**0**	**0**	**0**	**5**	**1**	**1**	**0**	**0**	**9**	**1**	**0**	**1**	**4**	**0**	**22**	78
8:15 AM	**0**	**0**	**0**	**0**	**0**	**5**	**0**	**0**	**0**	**0**	**7**	**1**	**0**	**0**	**7**	**0**	**20**	76
8:30 AM	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**10**	**0**	**0**	**0**	**5**	**0**	**17**	**72**
8:45 AM	0	0	0	0	0	0	1	0	0	0	7	0	0	0	10	0	18	77
Count Total	0	0	0	0	0	28	3	2	0	0	61	5	0	3	41	0	143	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**15**	**1**	**2**	**0**	**0**	**32**	**3**	**0**	**1**	**18**	**0**	**72**	**0**

Two-Hour Count Summaries - Bikes

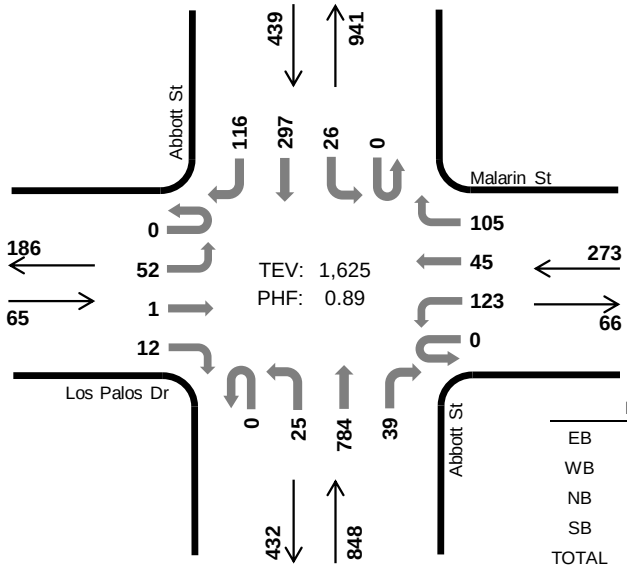
Interval Start	Los Palos Dr			Malarin St			Abbott St			Abbott St			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
8:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

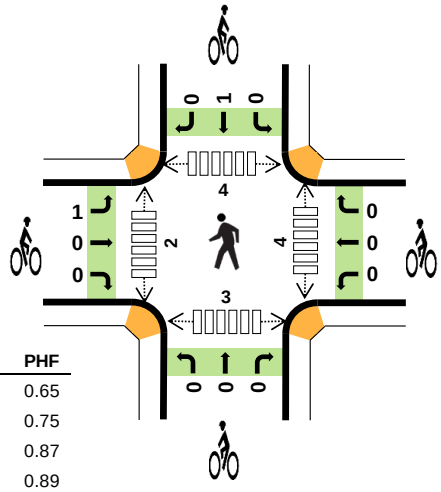
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Abbott St
Los Palos Dr

Date: 11-21-2019
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:15 PM to 5:15 PM

Peak Hour





	HV %:	PHF
EB	0.0%	0.65
WB	6.2%	0.75
NB	4.0%	0.87
SB	3.4%	0.89
TOTAL	4.1%	0.89

Two-Hour Count Summaries

Interval Start		Los Palos Dr Eastbound				Malarin St Westbound				Abbott St Northbound				Abbott St Southbound				15-min Total	Rolling One Hour
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM		0	4	0	0	0	22	4	28	0	5	230	18	0	5	92	28	436	0
4:15 PM		**0**	**4**	**0**	**1**	**0**	**31**	**5**	**12**	**0**	**2**	**161**	**15**	**0**	**6**	**70**	**47**	**354**	0
4:30 PM		**0**	**12**	**0**	**2**	**0**	**30**	**18**	**31**	**0**	**7**	**223**	**12**	**0**	**4**	**85**	**26**	**450**	0
4:45 PM		**0**	**19**	**1**	**5**	**0**	**19**	**8**	**28**	**0**	**9**	**169**	**7**	**0**	**9**	**72**	**17**	**363**	1,603
5:00 PM		**0**	**17**	**0**	**4**	**0**	**43**	**14**	**34**	**0**	**7**	**231**	**5**	**0**	**7**	**70**	**26**	**458**	**1,625**
5:15 PM		0	8	0	1	0	21	5	19	0	4	154	9	0	5	73	18	317	1,588
5:30 PM		0	1	0	1	0	8	8	13	0	2	123	5	1	2	53	19	236	1,374
5:45 PM		0	1	0	0	0	8	3	15	0	1	92	1	0	0	45	22	188	1,199
Count Total		0	66	1	14	0	182	65	180	0	37	1,383	72	1	38	560	203	2,802	0
Peak Hour	**All**	**0**	**52**	**1**	**12**	**0**	**123**	**45**	**105**	**0**	**25**	**784**	**39**	**0**	**26**	**297**	**116**	**1,625**	**0**
	HV	**0**	**0**	**0**	**0**	**0**	**17**	**0**	**0**	**0**	**1**	**32**	**1**	**0**	**0**	**15**	**0**	**66**	**0**
	HV%	**-**	**0%**	**0%**	**0%**	**-**	**14%**	**0%**	**0%**	**-**	**4%**	**4%**	**3%**	**-**	**0%**	**5%**	**0%**	**4%**	**0**

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

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	0	2	8	3	*13*	0	0	0	0	*0*	1	5	2	0	*8*
4:15 PM	**0**	**5**	**10**	**5**	***20***	**0**	**0**	**0**	**0**	***0***	**2**	**0**	**0**	**1**	*3*
4:30 PM	**0**	**3**	**7**	**1**	***11***	**0**	**0**	**0**	**1**	***1***	**1**	**0**	**3**	**2**	*6*
4:45 PM	**0**	**4**	**10**	**5**	***19***	**1**	**0**	**0**	**0**	***1***	**0**	**1**	**0**	**0**	*1*
5:00 PM	**0**	**5**	**7**	**4**	***16***	**0**	**0**	**0**	**0**	***0***	**1**	**1**	**1**	**0**	***3***
5:15 PM	0	2	3	8	*13*	0	0	0	0	*0*	0	0	0	0	*0*
5:30 PM	0	1	10	3	*14*	0	0	0	0	*0*	1	0	1	0	*2*
5:45 PM	0	0	3	5	*8*	0	0	0	0	*0*	2	0	0	0	*2*
Count Total	0	22	58	34	*114*	1	0	0	1	*2*	8	7	7	3	*25*
Peak Hour	**0**	**17**	**34**	**15**	***66***	**1**	**0**	**0**	**1**	***2***	**4**	**2**	**4**	**3**	***13***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Los Palos Dr				Malarin St				Abbott St				Abbott St				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	0	0	0	2	0	0	0	0	6	2	0	0	3	0	13	0
4:15 PM	**0**	**0**	**0**	**0**	**0**	**5**	**0**	**0**	**0**	**0**	**10**	**0**	**0**	**0**	**5**	**0**	**20**	0
4:30 PM	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**6**	**1**	**0**	**0**	**1**	**0**	**11**	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**0**	**10**	**0**	**0**	**0**	**5**	**0**	**19**	63
5:00 PM	**0**	**0**	**0**	**0**	**0**	**5**	**0**	**0**	**0**	**1**	**6**	**0**	**0**	**0**	**4**	**0**	**16**	**66**
5:15 PM	0	0	0	0	0	2	0	0	0	0	3	0	0	0	8	0	13	59
5:30 PM	0	0	0	0	0	1	0	0	0	0	10	0	0	0	3	0	14	62
5:45 PM	0	0	0	0	0	0	0	0	0	0	3	0	0	0	5	0	8	51
Count Total	0	0	0	0	0	22	0	0	0	1	54	3	0	0	34	0	114	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**17**	**0**	**0**	**0**	**1**	**32**	**1**	**0**	**0**	**15**	**0**	**66**	**0**

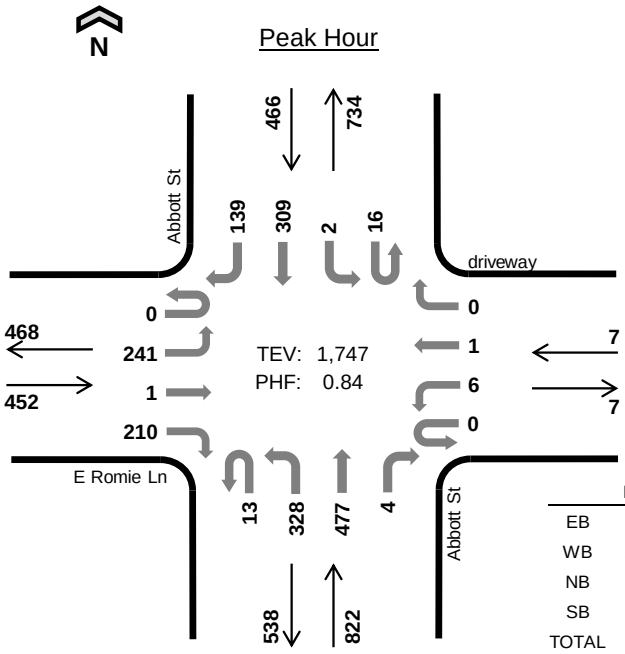
Two-Hour Count Summaries - Bikes

Interval Start	Los Palos Dr			Malarin St			Abbott St			Abbott St			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
4:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**1**	0
4:45 PM	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	2
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	1	0	0	0	0	0	0	0	0	0	1	0	2	0
Peak Hour	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**2**	**0**

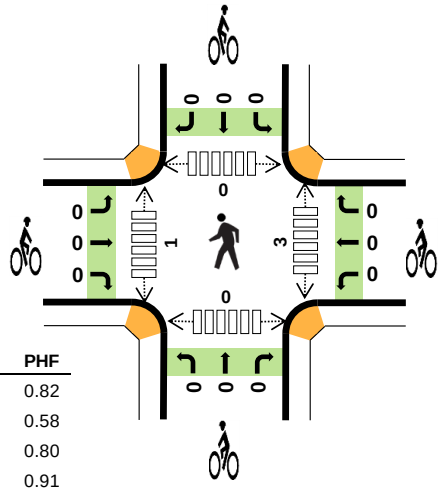
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Abbott St
E Romie Ln

Date: 11-21-2019
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:45 AM to 8:45 AM



	HV %:	PHF
EB	4.0%	0.82
WB	14.3%	0.58
NB	3.6%	0.80
SB	6.9%	0.91
TOTAL	4.6%	0.84



Two-Hour Count Summaries

Interval Start	E Romie Ln Eastbound				driveway Westbound				Abbott St Northbound				Abbott St Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	29	0	36	0	4	0	0	2	13	63	0	1	0	51	22	221	0
7:15 AM	0	40	0	29	0	2	0	0	1	20	57	4	1	0	63	23	240	0
7:30 AM	0	42	1	49	0	2	0	0	2	64	91	3	5	0	58	18	335	0
7:45 AM	**0**	**64**	**1**	**72**	**0**	**0**	**0**	**0**	**1**	**107**	**147**	**1**	**7**	**0**	**85**	**36**	**521**	1,317
8:00 AM	**0**	**59**	**0**	**62**	**0**	**1**	**1**	**0**	**4**	**78**	**112**	**2**	**4**	**2**	**75**	**31**	**431**	1,527
8:15 AM	**0**	**69**	**0**	**43**	**0**	**2**	**0**	**0**	**4**	**72**	**113**	**1**	**3**	**0**	**83**	**36**	**426**	1,713
8:30 AM	**0**	**49**	**0**	**33**	**0**	**3**	**0**	**0**	**4**	**71**	**105**	**0**	**2**	**0**	**66**	**36**	**369**	**1,747**
8:45 AM	0	55	0	43	0	1	1	0	6	65	97	0	0	0	78	34	380	1,606
Count Total	0	407	2	367	0	15	2	0	24	490	785	11	23	2	559	236	2,923	0
Peak Hour All	**0**	**241**	**1**	**210**	**0**	**6**	**1**	**0**	**13**	**328**	**477**	**4**	**16**	**2**	**309**	**139**	**1,747**	**0**
Peak Hour HV	**0**	**11**	**0**	**7**	**0**	**1**	**0**	**0**	**0**	**2**	**27**	**1**	**1**	**1**	**16**	**14**	**81**	**0**
Peak Hour HV%	**-**	**5%**	**0%**	**3%**	**-**	**17%**	**0%**	**-**	**0%**	**1%**	**6%**	**25%**	**6%**	**50%**	**5%**	**10%**	**5%**	**0**

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

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	2	3	4	4	*13*	0	0	0	0	*0*	0	0	0	0	*0*
7:15 AM	3	2	10	13	*28*	0	0	0	0	*0*	1	0	1	0	*2*
7:30 AM	3	0	10	9	*22*	1	0	1	0	*2*	0	0	0	1	*1*
7:45 AM	**2**	**0**	**7**	**5**	***14***	**0**	**0**	**0**	**0**	***0***	**0**	**1**	**0**	**0**	*1*
8:00 AM	**7**	**0**	**7**	**7**	***21***	**0**	**0**	**0**	**0**	***0***	**3**	**0**	**0**	**0**	*3*
8:15 AM	**5**	**1**	**7**	**14**	***27***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
8:30 AM	**4**	**0**	**9**	**6**	***19***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
8:45 AM	3	1	5	10	*19*	0	0	0	0	*0*	0	1	0	0	*1*
Count Total	29	7	59	68	*163*	1	0	1	0	*2*	4	2	1	1	*8*
Peak Hour	**18**	**1**	**30**	**32**	***81***	**0**	**0**	**0**	**0**	***0***	**3**	**1**	**0**	**0**	***4***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	E Romie Ln				driveway				Abbott St				Abbott St				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	2	0	0	0	3	0	0	1	1	2	0	0	0	1	3	13	0
7:15 AM	0	3	0	0	0	2	0	0	1	2	6	1	0	0	9	4	28	0
7:30 AM	0	3	0	0	0	0	0	0	0	2	8	0	0	0	6	3	22	0
7:45 AM	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**7**	**0**	**0**	**0**	**0**	**5**	**14**	77
8:00 AM	**0**	**4**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**6**	**1**	**1**	**1**	**2**	**3**	**21**	85
8:15 AM	**0**	**3**	**0**	**2**	**0**	**1**	**0**	**0**	**0**	**2**	**5**	**0**	**0**	**0**	**11**	**3**	**27**	84
8:30 AM	**0**	**2**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**9**	**0**	**0**	**0**	**3**	**3**	**19**	**81**
8:45 AM	0	2	0	1	0	1	0	0	0	0	5	0	0	0	8	2	19	86
Count Total	0	21	0	8	0	7	0	0	2	7	48	2	1	1	40	26	163	0
Peak Hour	**0**	**11**	**0**	**7**	**0**	**1**	**0**	**0**	**0**	**2**	**27**	**1**	**1**	**1**	**16**	**14**	**81**	**0**

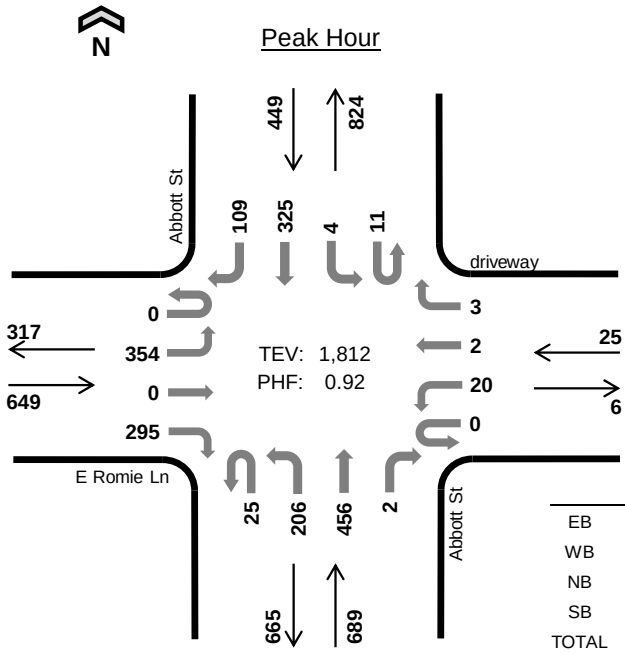
Two-Hour Count Summaries - Bikes

Interval Start	E Romie Ln			driveway			Abbott St			Abbott St			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	1	0	0	0	1	0	0	0	0	0	2	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	2
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	2
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	2
8:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	1	0	0	0	1	0	0	0	0	0	2	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

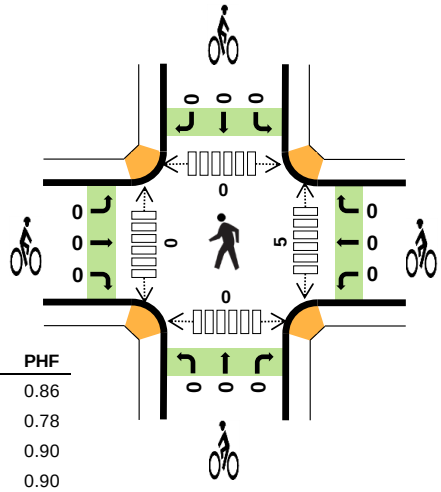
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Abbott St
E Romie Ln

Date: 11-21-2019
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:00 PM to 5:00 PM



	HV %:	PHF
EB	2.9%	0.86
WB	28.0%	0.78
NB	4.5%	0.90
SB	6.2%	0.90
TOTAL	4.7%	0.92



Two-Hour Count Summaries

Interval Start	E Romie Ln Eastbound				driveway Westbound				Abbott St Northbound				Abbott St Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	**0**	**100**	**0**	**88**	**0**	**5**	**0**	**2**	**5**	**54**	**131**	**1**	**1**	**0**	**81**	**26**	**494**	0
4:15 PM	**0**	**76**	**0**	**75**	**0**	**2**	**1**	**0**	**5**	**50**	**108**	**0**	**4**	**1**	**85**	**26**	**433**	0
4:30 PM	**0**	**96**	**0**	**62**	**0**	**7**	**0**	**1**	**9**	**53**	**121**	**1**	**3**	**2**	**90**	**30**	**475**	0
4:45 PM	**0**	**82**	**0**	**70**	**0**	**6**	**1**	**0**	**6**	**49**	**96**	**0**	**3**	**1**	**69**	**27**	**410**	**1,812**
5:00 PM	0	84	0	108	0	6	1	0	6	50	115	0	1	0	96	25	492	1,810
5:15 PM	0	65	0	76	0	7	0	0	9	58	86	0	1	0	71	33	406	1,783
5:30 PM	0	48	0	59	0	6	0	0	6	32	61	0	1	0	43	19	275	1,583
5:45 PM	0	43	0	40	0	3	2	0	6	32	50	0	0	0	40	10	226	1,399
Count Total	0	594	0	578	0	42	5	3	52	378	768	2	14	4	575	196	3,211	0
Peak Hour All	**0**	**354**	**0**	**295**	**0**	**20**	**2**	**3**	**25**	**206**	**456**	**2**	**11**	**4**	**325**	**109**	**1,812**	**0**
Peak Hour HV	**0**	**13**	**0**	**6**	**0**	**6**	**0**	**1**	**1**	**1**	**29**	**0**	**1**	**2**	**14**	**11**	**85**	**0**
Peak Hour HV%	**-**	**4%**	**-**	**2%**	**-**	**30%**	**0%**	**33%**	**4%**	**0%**	**6%**	**0%**	**9%**	**50%**	**4%**	**10%**	**5%**	**0**

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

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	**7**	**2**	**10**	**4**	***23***	**0**	**0**	**0**	**0**	***0***	**3**	**0**	**0**	**0**	*3*
4:15 PM	**2**	**1**	**11**	**9**	***23***	**0**	**0**	**0**	**0**	***0***	**1**	**0**	**0**	**0**	*1*
4:30 PM	**4**	**3**	**4**	**5**	***16***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
4:45 PM	**6**	**1**	**6**	**10**	***23***	**0**	**0**	**0**	**0**	***0***	**1**	**0**	**0**	**0**	***1***
5:00 PM	4	1	5	8	*18*	0	0	0	0	*0*	3	8	0	0	*11*
5:15 PM	2	4	6	8	*20*	0	0	0	0	*0*	1	0	0	0	*1*
5:30 PM	3	0	2	5	*10*	0	0	0	0	*0*	0	0	0	0	*0*
5:45 PM	1	1	3	4	*9*	0	0	0	0	*0*	0	1	0	0	*1*
Count Total	29	13	47	53	*142*	0	0	0	0	*0*	9	9	0	0	*18*
Peak Hour	**19**	**7**	**31**	**28**	***85***	**0**	**0**	**0**	**0**	***0***	**5**	**0**	**0**	**0**	***5***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	E Romie Ln				driveway				Abbott St				Abbott St				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	**0**	**3**	**0**	**4**	**0**	**2**	**0**	**0**	**0**	**1**	**9**	**0**	**0**	**0**	**3**	**1**	**23**	0
4:15 PM	**0**	**2**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**11**	**0**	**1**	**1**	**4**	**3**	**23**	0
4:30 PM	**0**	**3**	**0**	**1**	**0**	**2**	**0**	**1**	**1**	**0**	**3**	**0**	**0**	**0**	**2**	**3**	**16**	0
4:45 PM	**0**	**5**	**0**	**1**	**0**	**1**	**0**	**0**	**0**	**0**	**6**	**0**	**0**	**1**	**5**	**4**	**23**	**85**
5:00 PM	0	3	0	1	0	1	0	0	0	0	5	0	0	0	6	2	18	80
5:15 PM	0	1	0	1	0	4	0	0	0	0	6	0	0	0	5	3	20	77
5:30 PM	0	3	0	0	0	0	0	0	0	0	2	0	0	0	4	1	10	71
5:45 PM	0	1	0	0	0	1	0	0	0	0	3	0	0	0	4	0	9	57
Count Total	0	21	0	8	0	12	0	1	1	1	45	0	1	2	33	17	142	0
Peak Hour	**0**	**13**	**0**	**6**	**0**	**6**	**0**	**1**	**1**	**1**	**29**	**0**	**1**	**2**	**14**	**11**	**85**	**0**

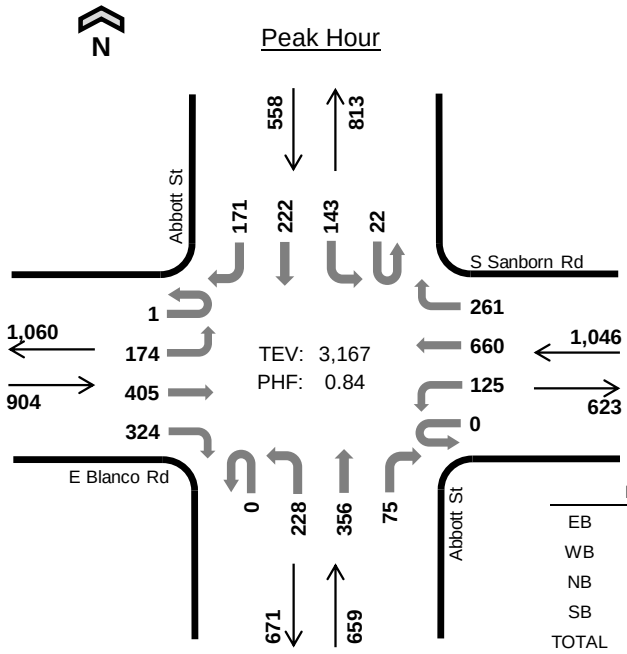
Two-Hour Count Summaries - Bikes

Interval Start	E Romie Ln			driveway			Abbott St			Abbott St			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
4:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
4:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

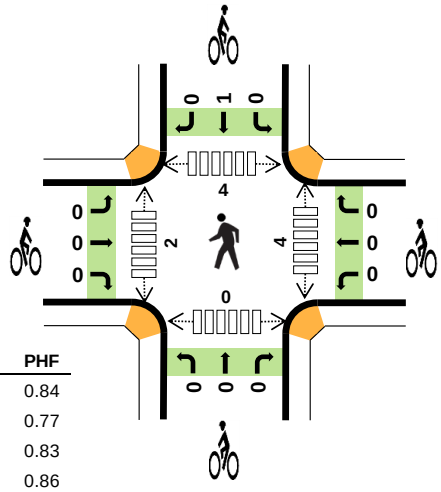
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Abbott St
E Blanco Rd

Date: 11-21-2019
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:30 AM to 8:30 AM



	HV %:	PHF
EB	3.3%	0.84
WB	4.5%	0.77
NB	9.3%	0.83
SB	4.5%	0.86
TOTAL	5.1%	0.84



Two-Hour Count Summaries

Interval Start	E Blanco Rd Eastbound				S Sanborn Rd Westbound				Abbott St Northbound				Abbott St Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	22	71	58	0	14	136	20	0	31	37	19	2	20	40	21	491	0
7:15 AM	0	26	77	72	0	27	148	18	0	35	29	15	1	29	44	32	553	0
7:30 AM	**0**	**33**	**104**	**69**	**0**	**27**	**153**	**56**	**0**	**55**	**80**	**17**	**3**	**30**	**54**	**33**	**714**	0
7:45 AM	**0**	**45**	**129**	**95**	**0**	**35**	**206**	**99**	**0**	**65**	**113**	**20**	**5**	**34**	**61**	**36**	**943**	2,701
8:00 AM	**1**	**57**	**81**	**87**	**0**	**34**	**111**	**54**	**0**	**52**	**86**	**16**	**9**	**40**	**61**	**52**	**741**	2,951
8:15 AM	**0**	**39**	**91**	**73**	**0**	**29**	**190**	**52**	**0**	**56**	**77**	**22**	**5**	**39**	**46**	**50**	**769**	**3,167**
8:30 AM	0	36	99	68	0	25	152	61	0	64	81	27	8	24	28	32	705	3,158
8:45 AM	0	34	66	42	0	30	107	53	0	61	79	20	5	42	45	35	619	2,834
Count Total	1	292	718	564	0	221	1,203	413	0	419	582	156	38	258	379	291	5,535	0
Peak Hour All	**1**	**174**	**405**	**324**	**0**	**125**	**660**	**261**	**0**	**228**	**356**	**75**	**22**	**143**	**222**	**171**	**3,167**	**0**
Peak Hour HV	**0**	**2**	**18**	**10**	**0**	**17**	**20**	**10**	**0**	**20**	**19**	**22**	**0**	**6**	**9**	**10**	**163**	**0**
Peak Hour HV%	**0%**	**1%**	**4%**	**3%**	**-**	**14%**	**3%**	**4%**	**-**	**9%**	**5%**	**29%**	**0%**	**4%**	**4%**	**6%**	**5%**	**0**

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

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	3	5	11	5	*24*	0	0	0	0	*0*	0	0	0	0	*0*
7:15 AM	3	15	14	12	*44*	0	0	0	0	*0*	0	0	1	0	*1*
7:30 AM	**6**	**8**	**21**	**6**	***41***	**0**	**0**	**0**	**1**	***1***	**1**	**1**	**2**	**0**	*4*
7:45 AM	**8**	**13**	**11**	**0**	***32***	**0**	**0**	**0**	**0**	***0***	**1**	**0**	**0**	**0**	*1*
8:00 AM	**4**	**14**	**9**	**5**	***32***	**0**	**0**	**0**	**0**	***0***	**0**	**1**	**2**	**0**	*3*
8:15 AM	**12**	**12**	**20**	**14**	***58***	**0**	**0**	**0**	**0**	***0***	**2**	**0**	**0**	**0**	***2***
8:30 AM	8	14	22	6	*50*	0	0	0	0	*0*	0	0	1	0	*1*
8:45 AM	4	11	11	8	*34*	0	0	0	0	*0*	0	0	0	0	*0*
Count Total	48	92	119	56	*315*	0	0	0	1	*1*	4	2	6	0	*12*
Peak Hour	**30**	**47**	**61**	**25**	***163***	**0**	**0**	**0**	**1**	***1***	**4**	**2**	**4**	**0**	***10***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	E Blanco Rd				S Sanborn Rd				Abbott St				Abbott St				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	3	0	1	3	1	0	5	3	3	0	1	3	1	24	0
7:15 AM	0	1	1	1	0	3	8	4	0	3	5	6	0	3	5	4	44	0
7:30 AM	**0**	**2**	**3**	**1**	**0**	**3**	**3**	**2**	**0**	**10**	**6**	**5**	**0**	**2**	**3**	**1**	**41**	0
7:45 AM	**0**	**0**	**6**	**2**	**0**	**6**	**4**	**3**	**0**	**0**	**4**	**7**	**0**	**0**	**0**	**0**	**32**	141
8:00 AM	**0**	**0**	**2**	**2**	**0**	**4**	**7**	**3**	**0**	**3**	**4**	**2**	**0**	**2**	**1**	**2**	**32**	149
8:15 AM	**0**	**0**	**7**	**5**	**0**	**4**	**6**	**2**	**0**	**7**	**5**	**8**	**0**	**2**	**5**	**7**	**58**	**163**
8:30 AM	0	1	2	5	0	4	8	2	0	6	6	10	1	1	3	1	50	172
8:45 AM	0	1	3	0	0	4	7	0	0	4	4	3	0	4	2	2	34	174
Count Total	0	5	24	19	0	29	46	17	0	38	37	44	1	15	22	18	315	0
Peak Hour	**0**	**2**	**18**	**10**	**0**	**17**	**20**	**10**	**0**	**20**	**19**	**22**	**0**	**6**	**9**	**10**	**163**	**0**

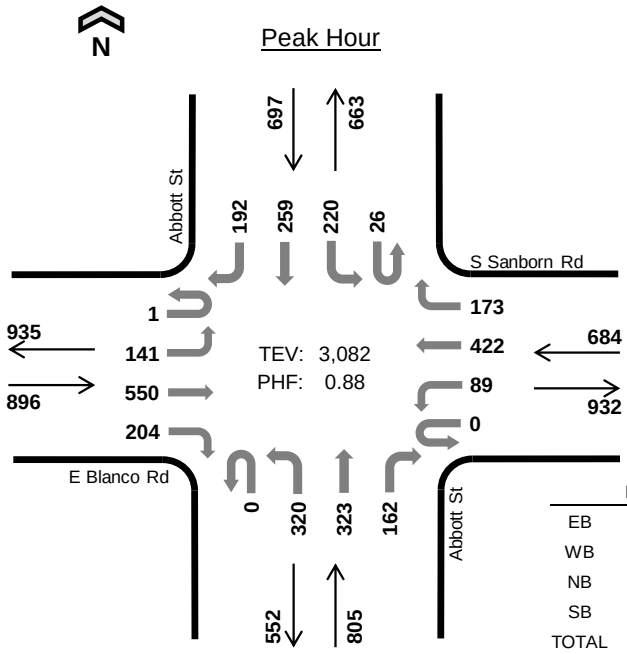
Two-Hour Count Summaries - Bikes

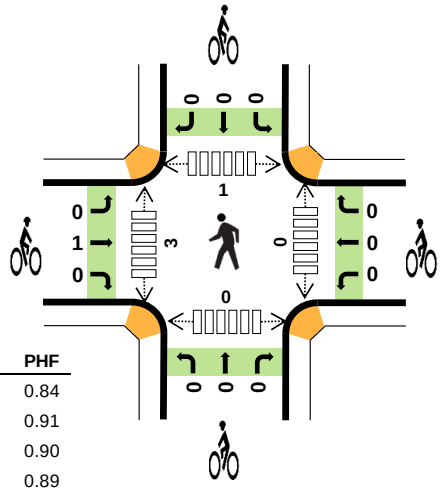
Interval Start	E Blanco Rd			S Sanborn Rd			Abbott St			Abbott St			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**1**	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	1
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	1
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	1	0	1	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**1**	**0**

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

Abbott St
E Blanco Rd

Date: 11-21-2019
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:15 PM to 5:15 PM





	HV %:	PHF
EB	2.7%	0.84
WB	4.8%	0.91
NB	7.0%	0.90
SB	3.7%	0.89
TOTAL	4.5%	0.88

Two-Hour Count Summaries

Interval Start		E Blanco Rd Eastbound				S Sanborn Rd Westbound				Abbott St Northbound				Abbott St Southbound				15-min Total	Rolling One Hour
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM		0	47	145	72	0	23	86	48	0	75	90	46	7	64	73	32	808	0
4:15 PM		**0**	**31**	**128**	**60**	**0**	**27**	**96**	**51**	**0**	**80**	**78**	**36**	**8**	**58**	**70**	**34**	**757**	0
4:30 PM		**0**	**37**	**137**	**48**	**0**	**18**	**93**	**46**	**0**	**73**	**92**	**50**	**4**	**46**	**64**	**49**	**757**	0
4:45 PM		**0**	**28**	**119**	**41**	**0**	**23**	**101**	**42**	**0**	**72**	**71**	**29**	**7**	**59**	**58**	**45**	**695**	3,017
5:00 PM		**1**	**45**	**166**	**55**	**0**	**21**	**132**	**34**	**0**	**95**	**82**	**47**	**7**	**57**	**67**	**64**	**873**	**3,082**
5:15 PM		0	30	122	60	0	12	83	38	0	73	69	24	13	54	67	39	684	3,009
5:30 PM		1	43	143	55	0	15	93	19	0	60	51	19	7	39	42	27	614	2,866
5:45 PM		0	25	115	46	0	16	93	26	0	19	31	23	9	34	37	26	500	2,671
Count Total		2	286	1,075	437	0	155	777	304	0	547	564	274	62	411	478	316	5,688	0
Peak Hour	**All**	**1**	**141**	**550**	**204**	**0**	**89**	**422**	**173**	**0**	**320**	**323**	**162**	**26**	**220**	**259**	**192**	**3,082**	**0**
	HV	**0**	**4**	**11**	**9**	**0**	**17**	**9**	**7**	**0**	**10**	**16**	**30**	**0**	**7**	**16**	**3**	**139**	**0**
	HV%	**0%**	**3%**	**2%**	**4%**	**-**	**19%**	**2%**	**4%**	**-**	**3%**	**5%**	**19%**	**0%**	**3%**	**6%**	**2%**	**5%**	**0**

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

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	8	7	17	9	*41*	1	0	0	0	*1*	0	2	0	0	*2*
4:15 PM	**6**	**7**	**15**	**6**	***34***	**1**	**0**	**0**	**0**	***1***	**0**	**1**	**0**	**0**	*1*
4:30 PM	**9**	**9**	**10**	**6**	***34***	**0**	**0**	**0**	**0**	***0***	**0**	**1**	**0**	**0**	*1*
4:45 PM	**4**	**8**	**16**	**7**	***35***	**0**	**0**	**0**	**0**	***0***	**0**	**1**	**0**	**0**	*1*
5:00 PM	**5**	**9**	**15**	**7**	***36***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**1**	**0**	***1***
5:15 PM	5	6	15	7	*33*	0	0	0	0	*0*	0	0	0	0	*0*
5:30 PM	5	8	6	7	*26*	0	0	0	0	*0*	0	0	0	0	*0*
5:45 PM	4	6	6	6	*22*	0	0	0	0	*0*	2	1	2	0	*5*
Count Total	46	60	100	55	*261*	2	0	0	0	*2*	2	6	3	0	*11*
Peak Hour	**24**	**33**	**56**	**26**	***139***	**1**	**0**	**0**	**0**	***1***	**0**	**3**	**1**	**0**	***4***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	E Blanco Rd				S Sanborn Rd				Abbott St				Abbott St				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	2	4	2	0	4	1	2	0	3	6	8	0	2	7	0	41	0
4:15 PM	**0**	**1**	**3**	**2**	**0**	**2**	**2**	**3**	**0**	**2**	**7**	**6**	**0**	**2**	**3**	**1**	**34**	0
4:30 PM	**0**	**1**	**3**	**5**	**0**	**4**	**3**	**2**	**0**	**3**	**2**	**5**	**0**	**2**	**4**	**0**	**34**	0
4:45 PM	**0**	**1**	**1**	**2**	**0**	**4**	**4**	**0**	**0**	**3**	**5**	**8**	**0**	**1**	**6**	**0**	**35**	144
5:00 PM	**0**	**1**	**4**	**0**	**0**	**7**	**0**	**2**	**0**	**2**	**2**	**11**	**0**	**2**	**3**	**2**	**36**	**139**
5:15 PM	0	0	3	2	0	3	3	0	0	4	5	6	0	3	4	0	33	138
5:30 PM	0	1	4	0	0	8	0	0	0	2	1	3	0	0	7	0	26	130
5:45 PM	0	1	0	3	0	4	2	0	0	1	2	3	0	2	3	1	22	117
Count Total	0	8	22	16	0	36	15	9	0	20	30	50	0	14	37	4	261	0
Peak Hour	**0**	**4**	**11**	**9**	**0**	**17**	**9**	**7**	**0**	**10**	**16**	**30**	**0**	**7**	**16**	**3**	**139**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	E Blanco Rd			S Sanborn Rd			Abbott St			Abbott St			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	1	0
4:15 PM	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	0
4:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	2
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	2	0	0	0	0	0	0	0	0	0	0	2	0
Peak Hour	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**

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

Appendix D

Seasonal

Growth Rate

Calculations

Seasonality
Salinas Ag-Industrial (2008)

Volumes
Non-Season

		Volumes																								
		AM												*PM*												
		Northbound			Southbound			Eastbound			Westbound			Northbound			Southbound			Eastbound			Westbound			
	Intersection	L	T	R	L	T	R	L	T	R	L	T	R	L	T	R	L	T	R	L	T	R	L	T	R	**Overall**
1.	S Main (SR 68) / Blanco Rd	253	802	575	104	425	130	190	499	213	405	372	82	235	593	400	126	761	221	311	323	264	583	447	121	8435
10.	Blanco - Sanborn / Abbott	154	438	243	158	706	237	161	239	208	252	284	50	184	685	161	47	476	153	250	243	150	280	354	119	6232
16.	Harkins Rd / Abbott St	70	172	55	94	207	86	123	197	105	52	425	50	151	189	47	25	143	117	64	311	58	20	266	124	3151
41.	E Romie / Abbott	205	3	191	3	5	0	19	355	95	279	345	5	363	0	281	17	3	0	21	347	77	226	477	5	3322

Peak Season

		Volumes																								
		AM												*PM*												
		Northbound			Southbound			Eastbound			Westbound			Northbound			Southbound			Eastbound			Westbound			
	Intersection	L	T	R	L	T	R	L	T	R	L	T	R	L	T	R	L	T	R	L	T	R	L	T	R	**Overall**
1.	S Main (SR 68) / Blanco Rd	240	756	570	107	511	152	194	505	203	404	353	75	234	673	451	95	740	208	343	348	186	603	485	124	8560
10.	Blanco - Sanborn / Abbott	141	417	236	182	640	222	138	242	235	256	282	63	278	701	204	104	483	212	232	236	188	267	479	289	6727
16.	Harkins Rd / Abbott St	86	174	61	107	241	84	98	234	146	76	453	82	191	234	106	72	129	113	97	321	108	44	372	194	3823
41.	E Romie / Abbott	172	7	202	12	1	1	23	434	99	304	370	9	359	2	258	39	7	2	20	318	61	237	574	9	3520

Net Difference

		Volumes																								
		AM												*PM*												
		Northbound			Southbound			Eastbound			Westbound			Northbound			Southbound			Eastbound			Westbound			
	Intersection	L	T	R	L	T	R	L	T	R	L	T	R	L	T	R	L	T	R	L	T	R	L	T	R	**Overall**
1.	S Main (SR 68) / Blanco Rd	-13	-46	-5	3	86	22	4	6	-10	-1	-19	-7	-1	80	51	-31	-21	-13	32	25	-78	20	38	3	125
10.	Blanco - Sanborn / Abbott	-13	-21	-7	24	-66	-15	-23	3	27	4	-2	13	94	16	43	57	7	59	-18	-7	38	-13	125	170	495
16.	Harkins Rd / Abbott St	16	2	6	13	34	-2	-25	37	41	24	28	32	40	45	59	47	-14	-4	33	10	50	24	106	70	672
41.	E Romie / Abbott	-33	4	11	9	-4	1	4	79	4	25	25	4	-4	2	-23	22	4	2	-1	-29	-16	11	97	4	198

Percentage Growth

		Volumes																									
		AM												*PM*													
		Northbound			Southbound			Eastbound			Westbound			Northbound			Southbound			Eastbound			Westbound				
	Intersection	L	T	R	L	T	R	L	T	R	L	T	R	L	T	R	L	T	R	L	T	R	L	T	R	**Overall**	
1.	S Main (SR 68) / Blanco Rd	-5.14%	-5.74%	-0.87%	2.88%	20.24%	16.92%	2.11%	1.20%	-4.69%	-0.25%	-5.11%	-8.54%	-0.43%	13.49%	12.75%	-24.60%	-2.76%	-5.88%	10.29%	7.74%	-29.55%	3.43%	8.50%	2.48%	1.48%	
10.	Blanco - Sanborn / Abbott	-8.44%	-4.79%	-2.88%	15.19%	-9.35%	-6.33%	-14.29%	1.26%	12.98%	1.59%	-0.70%	26.00%	51.09%	2.34%	26.71%	121.28%	1.47%	38.56%	-7.20%	-2.88%	25.33%	-4.64%	35.31%	142.86%	7.94%	
16.	Harkins Rd / Abbott St	22.86%	1.16%	10.91%	13.83%	16.43%	-2.33%	-20.33%	18.78%	39.05%	46.15%	6.59%	64.00%	26.49%	23.81%	125.53%	188.00%	-9.79%	-3.42%	51.56%	3.22%	86.21%	120.00%	39.85%	56.45%	21.33%	**Average**
41.	E Romie / Abbott	-16.10%	133.33%	5.76%	300.00%	-80.00%	N/A	21.05%	22.25%	4.21%	8.96%	7.25%	80.00%	-1.10%	N/A	-8.19%	129.41%	133.33%	N/A	-4.76%	-8.36%	-20.78%	4.87%	20.34%	80.00%	5.96%	**9.18%**

Sesonality
Effective Adjustment Volume Growth
Salinas Home2 Suites

Volumes
Non-Season

	Volumes																								
	AM												*PM*												
	Northbound			Southbound			Eastbound			Westbound			Northbound			Southbound			Eastbound			Westbound			
Intersection	L	T	R	L	T	R	L	T	R	L	T	R	L	T	R	L	T	R	L	T	R	L	T	R	**Overall**
8. Work / John (SR 68)	111	55	124	30	122	61	49	539	151	196	1,230	91	101	150	246	67	53	47	79	1,049	158	157	806	76	5748
15. Abbott / Alameda	12	557	0	0	944	65	36	0	34	0	0	0	23	1,074	0	0	479	48	57	0	10	0	0	0	3339
17. Abbott / E Romie	341	477	4	18	309	139	241	1	210	6	1	0	231	456	2	15	325	109	354	0	295	20	2	3	3559
18. E Blanco - S Sanborn / Abbott	175	405	324	125	660	261	143	222	171	228	356	75	142	550	204	89	422	173	246	259	192	320	323	162	6227

Seasonal Growth

	Volumes																								
	AM												*PM*												
	Northbound			Southbound			Eastbound			Westbound			Northbound			Southbound			Eastbound			Westbound			
Intersection	L	T	R	L	T	R	L	T	R	L	T	R	L	T	R	L	T	R	L	T	R	L	T	R	**Overall**
8. Work / John (SR 68)	0	0	0	0	0	0	0	10	0	0	40	0	0	0	0	0	0	0	0	60	0	0	25	0	135
15. Abbott / Alameda	0	15	0	0	55	0	0	0	0	0	0	0	0	100	0	0	25	0	0	0	0	0	0	0	195
17. Abbott / E Romie	20	25	5	5	80	0	0	5	10	10	2	0	60	170	15	0	30	0	0	0	25	20	2	5	489
18. E Blanco - S Sanborn / Abbott	25	0	0	20	0	10	25	35	40	5	15	15	90	15	40	50	10	60	0	25	40	0	95	170	785

Percentage Growth

	Volumes																									
	AM												*PM*													
	Northbound			Southbound			Eastbound			Westbound			Northbound			Southbound			Eastbound			Westbound				
Intersection	L	T	R	L	T	R	L	T	R	L	T	R	L	T	R	L	T	R	L	T	R	L	T	R	**Overall**	
8. Work / John (SR 68)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.86%	0.00%	0.00%	3.25%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	5.72%	0.00%	0.00%	3.10%	0.00%	2.35%	
15. Abbott / Alameda	0.00%	2.69%	N/A	N/A	5.83%	0.00%	0.00%	N/A	0.00%	N/A	N/A	N/A	0.00%	9.31%	N/A	N/A	5.22%	0.00%	0.00%	N/A	0.00%	N/A	N/A	N/A	5.84%	
17. Abbott / E Romie	5.87%	5.24%	125.00%	27.78%	25.89%	0.00%	0.00%	500.00%	4.76%	166.67%	200.00%	N/A	25.97%	37.28%	750.00%	0.00%	9.23%	0.00%	0.00%	N/A	8.47%	100.00%	100.00%	166.67%	13.74%	**Average**
18. E Blanco - S Sanborn / Abbott	14.29%	0.00%	0.00%	16.00%	0.00%	3.83%	17.48%	15.77%	23.39%	2.19%	4.21%	20.00%	63.38%	2.73%	19.61%	56.18%	2.37%	34.68%	0.00%	9.65%	20.83%	0.00%	29.41%	104.94%	12.61%	**8.63%**

Appendix E

Level of Service

Calculations

Existing

Conditions

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	541	17	222	18	605	259	186	987	21
Future Volume (vph)	0	0	0	541	17	222	18	605	259	186	987	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor				0.95	0.95	1.00	1.00	0.95	0.88	1.00	0.95	
Frpb, ped/bikes				1.00	1.00	0.98	1.00	1.00	0.98	1.00	1.00	
Flpb, ped/bikes				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt				1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected				0.95	0.96	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)				1498	1507	1388	1577	3154	2427	1593	3174	
Flt Permitted				0.95	0.96	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)				1498	1507	1388	1577	3154	2427	1593	3174	
Peak-hour factor, PHF	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Adj. Flow (vph)	0	0	0	660	21	271	22	738	316	227	1204	26
RTOR Reduction (vph)	0	0	0	0	0	198	0	0	0	0	2	0
Lane Group Flow (vph)	0	0	0	343	338	73	22	738	316	227	1228	0
Confl. Peds. (#/hr)						4			6			2
Heavy Vehicles (%)	2%	2%	2%	3%	3%	3%	3%	3%	3%	2%	2%	2%
Turn Type				Split	NA	Perm	Prot	NA	Free	Prot	NA	
Protected Phases				8	8		5	2		1	6	
Permitted Phases						8			Free			
Actuated Green, G (s)				16.5	16.5	16.5	0.8	21.4	61.1	11.2	31.8	
Effective Green, g (s)				16.5	16.5	16.5	0.8	21.4	61.1	11.2	31.8	
Actuated g/C Ratio				0.27	0.27	0.27	0.01	0.35	1.00	0.18	0.52	
Clearance Time (s)				4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)				3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)				404	406	374	20	1104	2427	292	1651	
v/s Ratio Prot				c0.23	0.22		0.01	0.23		c0.14	c0.39	
v/s Ratio Perm						0.05			0.13			
v/c Ratio				0.85	0.83	0.20	1.10	0.67	0.13	0.78	0.74	
Uniform Delay, d1				21.1	21.0	17.2	30.2	16.8	0.0	23.8	11.5	
Progression Factor				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2				15.2	13.6	0.3	234.8	3.2	0.1	12.2	3.1	
Delay (s)				36.3	34.6	17.4	264.9	20.1	0.1	36.0	14.5	
Level of Service				D	C	B	F	C	A	D	B	
Approach Delay (s)		0.0			30.3			19.2			17.9	
Approach LOS		A			C			B			B	

Intersection Summary

HCM 2000 Control Delay	21.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	61.1	Sum of lost time (s)	12.0
Intersection Capacity Utilization	61.5%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	116	341	62	80	514	118	55	289	66	89	656	162
Future Volume (veh/h)	116	341	62	80	514	118	55	289	66	89	656	162
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1845	1845	1900	1776	1776	1776	1863	1863	1863
Adj Flow Rate, veh/h	140	411	75	96	619	142	66	348	80	107	790	195
Adj No. of Lanes	1	2	1	1	2	0	1	2	1	1	2	1
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	3	3	3	7	7	7	2	2	2
Cap, veh/h	175	1056	466	122	763	175	94	860	383	137	978	435
Arrive On Green	0.10	0.30	0.30	0.07	0.27	0.27	0.06	0.25	0.25	0.08	0.28	0.28
Sat Flow, veh/h	1774	3539	1563	1757	2834	649	1691	3374	1504	1774	3539	1575
Grp Volume(v), veh/h	140	411	75	96	382	379	66	348	80	107	790	195
Grp Sat Flow(s),veh/h/ln	1774	1770	1563	1757	1752	1730	1691	1687	1504	1774	1770	1575
Q Serve(g_s), s	4.6	5.5	2.1	3.2	12.2	12.3	2.3	5.1	2.5	3.6	12.5	6.1
Cycle Q Clear(g_c), s	4.6	5.5	2.1	3.2	12.2	12.3	2.3	5.1	2.5	3.6	12.5	6.1
Prop In Lane	1.00		1.00	1.00		0.38	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	175	1056	466	122	472	466	94	860	383	137	978	435
V/C Ratio(X)	0.80	0.39	0.16	0.79	0.81	0.81	0.70	0.40	0.21	0.78	0.81	0.45
Avail Cap(c_a), veh/h	175	1116	493	147	526	519	141	1019	454	148	1069	475
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	26.5	16.7	15.5	27.5	20.5	20.5	27.8	18.6	17.6	27.2	20.2	17.9
Incr Delay (d2), s/veh	22.9	0.2	0.2	20.5	8.5	8.7	9.1	0.3	0.3	22.0	4.4	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	3.4	2.7	0.9	2.2	7.0	6.9	1.3	2.4	1.1	2.6	6.6	2.7
LnGrp Delay(d),s/veh	49.3	16.9	15.7	47.9	28.9	29.2	36.9	18.9	17.8	49.2	24.6	18.6
LnGrp LOS	D	B	B	D	C	C	D	B	B	D	C	B
Approach Vol, veh/h		626			857			494			1092	
Approach Delay, s/veh		24.0			31.2			21.1			25.9	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.1	19.8	8.7	22.4	7.8	21.1	10.4	20.6
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.0	18.1	5.0	18.9	5.0	18.1	5.9	18.0
Max Q Clear Time (g_c+I1), s	5.6	7.1	5.2	7.5	4.3	14.5	6.6	14.3
Green Ext Time (p_c), s	0.0	1.9	0.0	2.2	0.0	2.0	0.0	1.7

Intersection Summary	
HCM 2010 Ctrl Delay	26.2
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	42	420	80	511	866	57	45	251	244	87	549	9
Future Volume (veh/h)	42	420	80	511	866	57	45	251	244	87	549	9
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1810	1810	1810	1845	1845	1845
Adj Flow Rate, veh/h	47	472	90	574	973	64	51	282	274	98	617	10
Adj No. of Lanes	1	2	1	1	2	0	1	2	1	1	2	1
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	5	5	5	3	3	3
Cap, veh/h	69	600	268	602	1585	104	70	743	331	118	849	379
Arrive On Green	0.04	0.17	0.17	0.34	0.47	0.47	0.04	0.22	0.22	0.07	0.24	0.24
Sat Flow, veh/h	1774	3539	1578	1774	3371	222	1723	3438	1534	1757	3505	1566
Grp Volume(v), veh/h	47	472	90	574	511	526	51	282	274	98	617	10
Grp Sat Flow(s),veh/h/ln	1774	1770	1578	1774	1770	1823	1723	1719	1534	1757	1752	1566
Q Serve(g_s), s	2.3	11.1	4.3	27.4	18.6	18.6	2.5	6.1	14.8	4.8	14.0	0.4
Cycle Q Clear(g_c), s	2.3	11.1	4.3	27.4	18.6	18.6	2.5	6.1	14.8	4.8	14.0	0.4
Prop In Lane	1.00		1.00	1.00		0.12	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	69	600	268	602	832	857	70	743	331	118	849	379
V/C Ratio(X)	0.68	0.79	0.34	0.95	0.61	0.61	0.73	0.38	0.83	0.83	0.73	0.03
Avail Cap(c_a), veh/h	135	736	328	604	836	861	100	743	331	118	849	379
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	41.1	34.4	31.7	27.9	17.1	17.1	41.0	29.0	32.4	39.9	30.2	25.0
Incr Delay (d2), s/veh	11.0	4.6	0.7	25.4	1.3	1.3	14.3	1.5	20.6	37.5	5.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	5.8	2.0	17.6	9.4	9.7	1.5	3.0	8.1	3.5	7.4	0.2
LnGrp Delay(d),s/veh	52.0	39.0	32.4	53.3	18.4	18.4	55.3	30.5	53.0	77.4	35.6	25.2
LnGrp LOS	D	D	C	D	B	B	E	C	D	E	D	C
Approach Vol, veh/h		609			1611			607			725	
Approach Delay, s/veh		39.1			30.8			42.7			41.1	
Approach LOS		D			C			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.3	23.2	33.9	19.2	8.0	25.5	7.9	45.2
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.8	18.7	29.5	18.0	5.0	19.5	6.6	40.9
Max Q Clear Time (g_c+I1), s	6.8	16.8	29.4	13.1	4.5	16.0	4.3	20.6
Green Ext Time (p_c), s	0.0	0.6	0.0	1.5	0.0	1.4	0.0	7.0

Intersection Summary	
HCM 2010 Ctrl Delay	36.4
HCM 2010 LOS	D

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	742	5	5	1425	12	2	0	7	0	0	7
Future Vol, veh/h	4	742	5	5	1425	12	2	0	7	0	0	7
Conflicting Peds, #/hr	2	0	3	3	0	2	1	0	0	0	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	210	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	3	3	3	2	2	2	44	44	44	2	2	2
Mvmt Flow	5	843	6	6	1619	14	2	0	8	0	0	8

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1635	0	0	852	0	0	1682	2506	428	2072	2502	820
Stage 1	-	-	-	-	-	-	859	859	-	1640	1640	-
Stage 2	-	-	-	-	-	-	823	1647	-	432	862	-
Critical Hdwy	4.16	-	-	4.14	-	-	8.38	7.38	7.78	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	7.38	6.38	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	7.38	6.38	-	6.54	5.54	-
Follow-up Hdwy	2.23	-	-	2.22	-	-	3.94	4.44	3.74	3.52	4.02	3.32
Pot Cap-1 Maneuver	388	-	-	783	-	-	40	15	473	31	28	318
Stage 1	-	-	-	-	-	-	242	287	-	104	157	-
Stage 2	-	-	-	-	-	-	257	102	-	572	370	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	387	-	-	781	-	-	38	14	472	30	27	317
Mov Cap-2 Maneuver	-	-	-	-	-	-	38	14	-	30	27	-
Stage 1	-	-	-	-	-	-	236	280	-	101	155	-
Stage 2	-	-	-	-	-	-	248	101	-	549	360	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	0	34.3	16.6
HCM LOS			D	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	133	387	-	-	781	-	-	317
HCM Lane V/C Ratio	0.077	0.012	-	-	0.007	-	-	0.025
HCM Control Delay (s)	34.3	14.4	0.2	-	9.6	-	-	16.6
HCM Lane LOS	D	B	A	-	A	-	-	C
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	66	122	66	305	348	35	36	360	310	50	558	166
Future Volume (veh/h)	66	122	66	305	348	35	36	360	310	50	558	166
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1863	1863	1863	1845	1845	1845	1863	1863	1863
Adj Flow Rate, veh/h	73	134	73	335	382	38	40	396	341	55	613	182
Adj No. of Lanes	1	2	0	1	2	1	1	2	1	1	2	1
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, %	3	3	3	2	2	2	3	3	3	2	2	2
Cap, veh/h	149	328	168	390	999	439	72	970	423	89	1013	450
Arrive On Green	0.08	0.15	0.15	0.22	0.28	0.28	0.04	0.28	0.28	0.05	0.29	0.29
Sat Flow, veh/h	1757	2228	1140	1774	3539	1555	1757	3505	1529	1774	3539	1572
Grp Volume(v), veh/h	73	104	103	335	382	38	40	396	341	55	613	182
Grp Sat Flow(s),veh/h/ln	1757	1752	1616	1774	1770	1555	1757	1752	1529	1774	1770	1572
Q Serve(g_s), s	2.3	3.2	3.4	10.7	5.1	1.1	1.3	5.4	12.2	1.8	8.8	5.5
Cycle Q Clear(g_c), s	2.3	3.2	3.4	10.7	5.1	1.1	1.3	5.4	12.2	1.8	8.8	5.5
Prop In Lane	1.00		0.71	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	149	258	238	390	999	439	72	970	423	89	1013	450
V/C Ratio(X)	0.49	0.40	0.44	0.86	0.38	0.09	0.56	0.41	0.81	0.62	0.60	0.40
Avail Cap(c_a), veh/h	260	536	494	467	1491	655	149	1102	481	151	1112	494
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	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	22.8	22.9	22.1	17.0	15.5	27.7	17.4	19.8	27.4	18.1	17.0
Incr Delay (d2), s/veh	2.5	1.0	1.3	13.0	0.2	0.1	6.6	0.3	8.7	6.7	0.8	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	1.6	1.6	6.6	2.5	0.5	0.8	2.6	6.1	1.0	4.4	2.4
LnGrp Delay(d),s/veh	28.2	23.8	24.1	35.0	17.2	15.6	34.4	17.6	28.6	34.1	18.9	17.5
LnGrp LOS	C	C	C	D	B	B	C	B	C	C	B	B
Approach Vol, veh/h		280			755			777			850	
Approach Delay, s/veh		25.0			25.1			23.3			19.6	
Approach LOS		C			C			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.5	20.8	17.4	13.2	6.9	21.4	9.5	21.1
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.0	18.5	15.5	18.0	5.0	18.5	8.7	24.8
Max Q Clear Time (g_c+I1), s	3.8	14.2	12.7	5.4	3.3	10.8	4.3	7.1
Green Ext Time (p_c), s	0.0	1.6	0.3	0.9	0.0	2.9	0.0	2.4

Intersection Summary	
HCM 2010 Ctrl Delay	22.8
HCM 2010 LOS	C

Intersection												
Int Delay, s/veh	5.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	35	0	76	0	0	0	40	519	0	0	1106	43
Future Vol, veh/h	35	0	76	0	0	0	40	519	0	0	1106	43
Conflicting Peds, #/hr	1	0	1	1	0	1	7	0	7	7	0	7
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	5	5	5	2	2	2
Mvmt Flow	38	0	83	0	0	0	43	564	0	0	1202	47

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1602	1890	633	1259	1913	290	1256	0	0	571	0	0
Stage 1	1233	1233	-	657	657	-	-	-	-	-	-	-
Stage 2	369	657	-	602	1256	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.2	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.25	-	-	2.22	-	-
Pot Cap-1 Maneuver	71	69	422	127	67	707	533	-	-	998	-	-
Stage 1	187	247	-	420	460	-	-	-	-	-	-	-
Stage 2	623	460	-	453	241	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	64	60	419	92	58	702	530	-	-	992	-	-
Mov Cap-2 Maneuver	64	60	-	92	58	-	-	-	-	-	-	-
Stage 1	164	246	-	368	403	-	-	-	-	-	-	-
Stage 2	549	403	-	363	240	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	85.3	0	1.4	0
HCM LOS	F	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	530	-	-	152	-	992	-	-
HCM Lane V/C Ratio	0.082	-	-	0.794	-	-	-	-
HCM Control Delay (s)	12.4	0.6	-	85.3	0	0	-	-
HCM Lane LOS	B	A	-	F	A	A	-	-
HCM 95th %tile Q(veh)	0.3	-	-	5	-	0	-	-

Intersection	
Int Delay, s/veh	2.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	16	31	558	43	110	1053
Future Vol, veh/h	16	31	558	43	110	1053
Conflicting Peds, #/hr	0	0	0	4	4	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	7	7	2	2
Mvmt Flow	17	34	607	47	120	1145

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1448	331	0	0	658	0
Stage 1	635	-	-	-	-	-
Stage 2	813	-	-	-	-	-
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	122	665	-	-	926	-
Stage 1	490	-	-	-	-	-
Stage 2	396	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	78	663	-	-	923	-
Mov Cap-2 Maneuver	78	-	-	-	-	-
Stage 1	314	-	-	-	-	-
Stage 2	396	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	31.3	0	2.2
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	187	923	-
HCM Lane V/C Ratio	-	-	0.273	0.13	-
HCM Control Delay (s)	-	-	31.3	9.5	1.4
HCM Lane LOS	-	-	D	A	A
HCM 95th %tile Q(veh)	-	-	1.1	0.4	-

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	36	34	12	572	999	65
Future Vol, veh/h	36	34	12	572	999	65
Conflicting Peds, #/hr	2	0	2	0	0	2
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	93	93	93	93	93	93
Heavy Vehicles, %	2	2	7	7	2	2
Mvmt Flow	39	37	13	615	1074	70

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1447	574	1146	0	-	0
Stage 1	1111	-	-	-	-	-
Stage 2	336	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.24	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.27	-	-	-
Pot Cap-1 Maneuver	122	462	578	-	-	-
Stage 1	277	-	-	-	-	-
Stage 2	696	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	117	461	577	-	-	-
Mov Cap-2 Maneuver	117	-	-	-	-	-
Stage 1	267	-	-	-	-	-
Stage 2	695	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	37.5	0.4	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	577	-	184	-	-
HCM Lane V/C Ratio	0.022	-	0.409	-	-
HCM Control Delay (s)	11.4	0.2	37.5	-	-
HCM Lane LOS	B	A	E	-	-
HCM 95th %tile Q(veh)	0.1	-	1.8	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	0	3	85	23	45	28	500	121	68	524	279
Future Volume (veh/h)	10	0	3	85	23	45	28	500	121	68	524	279
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.99	0.99		0.99	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1652	1652	1792	1792	1900	1863	1863	1900
Adj Flow Rate, veh/h	11	0	3	92	25	49	30	543	132	74	570	303
Adj No. of Lanes	0	1	0	0	1	1	1	2	0	1	2	0
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	15	15	15	6	6	6	2	2	2
Cap, veh/h	216	17	24	290	51	188	493	1799	436	600	1477	785
Arrive On Green	0.14	0.00	0.14	0.14	0.14	0.14	0.66	0.66	0.66	0.66	0.66	0.66
Sat Flow, veh/h	525	126	177	1075	373	1386	608	2717	658	759	2231	1185
Grp Volume(v), veh/h	14	0	0	117	0	49	30	339	336	74	452	421
Grp Sat Flow(s),veh/h/ln	827	0	0	1449	0	1386	608	1703	1672	759	1770	1646
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	1.4	1.1	3.7	3.8	2.0	5.2	5.2
Cycle Q Clear(g_c), s	3.1	0.0	0.0	3.1	0.0	1.4	6.2	3.7	3.8	5.8	5.2	5.2
Prop In Lane	0.79		0.21	0.79		1.00	1.00		0.39	1.00		0.72
Lane Grp Cap(c), veh/h	257	0	0	341	0	188	493	1128	1107	600	1172	1090
V/C Ratio(X)	0.05	0.00	0.00	0.34	0.00	0.26	0.06	0.30	0.30	0.12	0.39	0.39
Avail Cap(c_a), veh/h	727	0	0	794	0	669	493	1128	1107	600	1172	1090
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.8	0.0	0.0	18.0	0.0	17.2	4.8	3.2	3.2	4.4	3.4	3.4
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.6	0.0	0.7	0.2	0.7	0.7	0.4	1.0	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.0	1.4	0.0	0.6	0.2	1.9	1.9	0.5	2.7	2.5
LnGrp Delay(d),s/veh	16.9	0.0	0.0	18.6	0.0	18.0	5.1	3.9	3.9	4.8	4.4	4.4
LnGrp LOS	B			B		B	A	A	A	A	A	A
Approach Vol, veh/h		14			166			705			947	
Approach Delay, s/veh		16.9			18.4			3.9			4.4	
Approach LOS		B			B			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		34.0		10.5		34.0		10.5
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green Setting (Gmax), s		29.5		21.5		29.5		21.5
Max Q Clear Time (g_c+I1), s		8.2		5.1		7.8		5.1
Green Ext Time (p_c), s		4.6		0.0		6.6		0.7

Intersection Summary	
HCM 2010 Ctrl Delay	5.6
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	241	6	220	16	3	0	361	502	9	23	389	139
Future Volume (vph)	241	6	220	16	3	0	361	502	9	23	389	139
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5		4.5		4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	0.95	0.95	1.00		1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	1.00		1.00		1.00	1.00	0.98	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00		1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85		1.00		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	0.95	1.00		0.96		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1649	1657	1553		1601		1736	3471	1518	1687	3374	1489
Flt Permitted	0.95	0.95	1.00		1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1649	1657	1553		1667		1736	3471	1518	1687	3374	1489
Peak-hour factor, PHF	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Adj. Flow (vph)	287	7	262	19	4	0	430	598	11	27	463	165
RTOR Reduction (vph)	0	0	219	0	0	0	0	0	5	0	0	117
Lane Group Flow (vph)	146	148	43	0	23	0	430	598	6	27	463	48
Confl. Peds. (#/hr)									3			1
Heavy Vehicles (%)	4%	4%	4%	14%	14%	14%	4%	4%	4%	7%	7%	7%
Turn Type	Split	NA	Perm	Perm	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	4	4			7		5	2		1	6	
Permitted Phases			4	7					2			6
Actuated Green, G (s)	12.0	12.0	12.0		1.7		20.4	40.0	40.0	2.0	21.6	21.6
Effective Green, g (s)	12.0	12.0	12.0		1.7		20.4	40.0	40.0	2.0	21.6	21.6
Actuated g/C Ratio	0.16	0.16	0.16		0.02		0.28	0.54	0.54	0.03	0.29	0.29
Clearance Time (s)	4.5	4.5	4.5		4.5		4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0		3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	268	269	252		38		480	1883	823	45	988	436
v/s Ratio Prot	0.09	c0.09					c0.25	0.17		0.02	c0.14	
v/s Ratio Perm			0.03		c0.01				0.00			0.03
v/c Ratio	0.54	0.55	0.17		0.61		0.90	0.32	0.01	0.60	0.47	0.11
Uniform Delay, d1	28.3	28.4	26.6		35.7		25.6	9.3	7.7	35.5	21.3	19.0
Progression Factor	1.00	1.00	1.00		1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.3	2.4	0.3		24.3		18.9	0.4	0.0	19.7	1.6	0.5
Delay (s)	30.6	30.8	26.9		59.9		44.6	9.8	7.8	55.1	22.9	19.5
Level of Service	C	C	C		E		D	A	A	E	C	B
Approach Delay (s)		28.9			59.9			24.1			23.4	
Approach LOS		C			E			C			C	

Intersection Summary			
HCM 2000 Control Delay	25.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	73.7	Sum of lost time (s)	18.0
Intersection Capacity Utilization	54.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	168	257	211	233	371	90	200	405	324	145	660	271
Future Volume (vph)	168	257	211	233	371	90	200	405	324	145	660	271
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
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
Lane Util. Factor	0.91	0.91	1.00	0.91	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00	0.98	1.00	1.00	1.00	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	0.99	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1564	3276	1515	1507	3158	1456	1752	3505	1568	1719	3438	1511
Flt Permitted	0.95	0.99	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1564	3276	1515	1507	3158	1456	1752	3505	1568	1719	3438	1511
Peak-hour factor, PHF	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Adj. Flow (vph)	200	306	251	277	442	107	238	482	386	173	786	323
RTOR Reduction (vph)	0	0	207	0	0	86	0	0	278	0	0	239
Lane Group Flow (vph)	164	342	44	233	486	21	238	482	108	173	786	84
Confl. Peds. (#/hr)			2			4						4
Heavy Vehicles (%)	5%	5%	5%	9%	9%	9%	3%	3%	3%	5%	5%	5%
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	4	4		7	7		5	2		1	6	
Permitted Phases			4			7			2			6
Actuated Green, G (s)	14.9	14.9	14.9	16.9	16.9	16.9	13.4	23.9	23.9	11.7	22.2	22.2
Effective Green, g (s)	14.9	14.9	14.9	16.9	16.9	16.9	13.4	23.9	23.9	11.7	22.2	22.2
Actuated g/C Ratio	0.17	0.17	0.17	0.20	0.20	0.20	0.16	0.28	0.28	0.14	0.26	0.26
Clearance 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
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	272	571	264	298	624	288	274	980	438	235	893	392
v/s Ratio Prot	c0.10	0.10		c0.15	0.15		c0.14	0.14		0.10	c0.23	
v/s Ratio Perm			0.03			0.01			0.07			0.06
v/c Ratio	0.60	0.60	0.17	0.78	0.78	0.07	0.87	0.49	0.25	0.74	0.88	0.21
Uniform Delay, d1	32.5	32.5	30.0	32.5	32.5	27.9	35.1	25.7	23.8	35.4	30.3	24.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	3.7	1.7	0.3	12.5	6.1	0.1	24.0	0.4	0.3	11.4	10.1	0.3
Delay (s)	36.3	34.2	30.3	45.0	38.6	28.0	59.1	26.1	24.1	46.7	40.4	25.0
Level of Service	D	C	C	D	D	C	E	C	C	D	D	C
Approach Delay (s)		33.3			39.0			32.5			37.4	
Approach LOS		C			D			C			D	

Intersection Summary

HCM 2000 Control Delay	35.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	85.4	Sum of lost time (s)	18.0
Intersection Capacity Utilization	64.6%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	357	34	400	21	1126	590	287	546	39
Future Volume (vph)	0	0	0	357	34	400	21	1126	590	287	546	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor				0.95	0.95	1.00	1.00	0.95	0.88	1.00	0.95	
Frpb, ped/bikes				1.00	1.00	0.98	1.00	1.00	0.98	1.00	1.00	
Flpb, ped/bikes				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt				1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected				0.95	0.96	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)				1681	1700	1552	1770	3539	2725	1770	3499	
Flt Permitted				0.95	0.96	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)				1681	1700	1552	1770	3539	2725	1770	3499	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	0	0	376	36	421	22	1185	621	302	575	41
RTOR Reduction (vph)	0	0	0	0	0	219	0	0	0	0	7	0
Lane Group Flow (vph)	0	0	0	207	205	202	22	1185	621	302	609	0
Confl. Peds. (#/hr)						7			4			1
Turn Type				Split	NA	Perm	Prot	NA	Free	Prot	NA	
Protected Phases				8	8		5	2		1	6	
Permitted Phases						8			Free			
Actuated Green, G (s)				13.1	13.1	13.1	0.8	24.4	60.5	11.0	34.6	
Effective Green, g (s)				13.1	13.1	13.1	0.8	24.4	60.5	11.0	34.6	
Actuated g/C Ratio				0.22	0.22	0.22	0.01	0.40	1.00	0.18	0.57	
Clearance Time (s)				4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)				3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)				363	368	336	23	1427	2725	321	2001	
v/s Ratio Prot				0.12	0.12		0.01	c0.33		c0.17	0.17	
v/s Ratio Perm						c0.13			0.23			
v/c Ratio				0.57	0.56	0.60	0.96	0.83	0.23	0.94	0.30	
Uniform Delay, d1				21.2	21.1	21.3	29.8	16.2	0.0	24.4	6.7	
Progression Factor				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2				2.2	1.8	3.0	166.5	5.7	0.2	34.9	0.4	
Delay (s)				23.3	22.9	24.3	196.4	21.9	0.2	59.3	7.1	
Level of Service				C	C	C	F	C	A	E	A	
Approach Delay (s)		0.0			23.8			16.7			24.3	
Approach LOS		A			C			B			C	

Intersection Summary

HCM 2000 Control Delay	20.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	60.5	Sum of lost time (s)	12.0
Intersection Capacity Utilization	68.3%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	231	736	51	67	369	211	58	577	139	154	283	70
Future Volume (veh/h)	231	736	51	67	369	211	58	577	139	154	283	70
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1827	1827	1827
Adj Flow Rate, veh/h	254	809	56	74	405	232	64	634	153	169	311	77
Adj No. of Lanes	1	2	1	1	2	0	1	2	1	1	2	1
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	4	4	4
Cap, veh/h	299	1217	537	96	499	283	90	809	362	208	1033	459
Arrive On Green	0.17	0.34	0.34	0.05	0.23	0.23	0.05	0.23	0.23	0.12	0.30	0.30
Sat Flow, veh/h	1774	3539	1561	1774	2180	1235	1774	3539	1581	1740	3471	1543
Grp Volume(v), veh/h	254	809	56	74	328	309	64	634	153	169	311	77
Grp Sat Flow(s),veh/h/ln	1774	1770	1561	1774	1770	1645	1774	1770	1581	1740	1736	1543
Q Serve(g_s), s	9.8	13.8	1.7	2.9	12.4	12.6	2.5	11.9	5.9	6.7	4.9	2.6
Cycle Q Clear(g_c), s	9.8	13.8	1.7	2.9	12.4	12.6	2.5	11.9	5.9	6.7	4.9	2.6
Prop In Lane	1.00		1.00	1.00		0.75	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	299	1217	537	96	405	377	90	809	362	208	1033	459
V/C Ratio(X)	0.85	0.67	0.10	0.77	0.81	0.82	0.71	0.78	0.42	0.81	0.30	0.17
Avail Cap(c_a), veh/h	363	1318	582	153	449	418	178	949	424	258	1097	488
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	28.6	19.8	15.8	33.1	25.9	25.9	33.1	25.7	23.3	30.4	19.2	18.4
Incr Delay (d2), s/veh	14.7	1.1	0.1	12.2	9.7	11.3	10.0	3.7	0.8	14.7	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.0	6.9	0.8	1.7	7.1	6.9	1.5	6.2	2.6	4.1	2.4	1.1
LnGrp Delay(d),s/veh	43.2	20.9	15.9	45.3	35.6	37.3	43.2	29.4	24.1	45.1	19.4	18.6
LnGrp LOS	D	C	B	D	D	D	D	C	C	D	B	B
Approach Vol, veh/h		1119			711			851			557	
Approach Delay, s/veh		25.7			37.3			29.5			27.1	
Approach LOS		C			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.0	20.7	8.3	28.9	8.1	25.6	16.5	20.7
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	10.5	19.0	6.1	26.4	7.1	22.4	14.5	18.0
Max Q Clear Time (g_c+I1), s	8.7	13.9	4.9	15.8	4.5	6.9	11.8	14.6
Green Ext Time (p_c), s	0.1	2.1	0.0	4.2	0.0	2.0	0.2	1.3

Intersection Summary	
HCM 2010 Ctrl Delay	29.5
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	54	675	54	284	621	71	135	541	598	66	234	12
Future Volume (veh/h)	54	675	54	284	621	71	135	541	598	66	234	12
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1810	1810	1810
Adj Flow Rate, veh/h	59	734	59	309	675	77	147	588	650	72	254	13
Adj No. of Lanes	1	2	1	1	2	0	1	2	1	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	5	5	5
Cap, veh/h	77	815	363	345	1221	139	181	1117	499	91	917	408
Arrive On Green	0.04	0.23	0.23	0.19	0.38	0.38	0.10	0.32	0.32	0.05	0.27	0.27
Sat Flow, veh/h	1774	3539	1575	1774	3202	365	1774	3539	1582	1723	3438	1531
Grp Volume(v), veh/h	59	734	59	309	373	379	147	588	650	72	254	13
Grp Sat Flow(s),veh/h/ln	1774	1770	1575	1774	1770	1797	1774	1770	1582	1723	1719	1531
Q Serve(g_s), s	2.9	17.6	2.6	14.8	14.4	14.4	7.1	11.9	27.5	3.6	5.1	0.5
Cycle Q Clear(g_c), s	2.9	17.6	2.6	14.8	14.4	14.4	7.1	11.9	27.5	3.6	5.1	0.5
Prop In Lane	1.00		1.00	1.00		0.20	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	77	815	363	345	675	685	181	1117	499	91	917	408
V/C Ratio(X)	0.76	0.90	0.16	0.89	0.55	0.55	0.81	0.53	1.30	0.79	0.28	0.03
Avail Cap(c_a), veh/h	149	833	371	377	675	685	222	1117	499	109	917	408
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	41.2	32.6	26.8	34.2	21.1	21.1	38.3	24.5	29.8	40.8	25.3	23.6
Incr Delay (d2), s/veh	14.2	12.7	0.2	21.8	1.0	1.0	17.0	1.8	150.1	26.9	0.8	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	10.0	1.2	9.3	7.2	7.3	4.3	6.1	32.8	2.4	2.5	0.2
LnGrp Delay(d),s/veh	55.5	45.3	27.0	56.0	22.1	22.1	55.4	26.3	179.9	67.7	26.0	23.8
LnGrp LOS	E	D	C	E	C	C	E	C	F	E	C	C
Approach Vol, veh/h		852			1061			1385			339	
Approach Delay, s/veh		44.8			32.0			101.4			34.8	
Approach LOS		D			C			F			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.1	32.0	21.5	24.6	13.4	27.7	8.3	37.7
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	5.5	27.5	18.5	20.5	10.9	22.1	7.3	31.7
Max Q Clear Time (g_c+I1), s	5.6	29.5	16.8	19.6	9.1	7.1	4.9	16.4
Green Ext Time (p_c), s	0.0	0.0	0.2	0.5	0.1	1.4	0.0	4.2

Intersection Summary	
HCM 2010 Ctrl Delay	61.7
HCM 2010 LOS	E

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	1333	2	3	968	8	2	1	8	5	0	6
Future Vol, veh/h	4	1333	2	3	968	8	2	1	8	5	0	6
Conflicting Peds, #/hr	5	0	3	3	0	5	0	0	2	2	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	210	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	36	36	36	9	9	9
Mvmt Flow	4	1433	2	3	1041	9	2	1	9	5	0	6

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1055	0	0	1438	0	0	1972	2506	723	1784	2503	530
Stage 1	-	-	-	-	-	-	1445	1445	-	1057	1057	-
Stage 2	-	-	-	-	-	-	527	1061	-	727	1446	-
Critical Hdwy	4.14	-	-	4.14	-	-	8.22	7.22	7.62	7.68	6.68	7.08
Critical Hdwy Stg 1	-	-	-	-	-	-	7.22	6.22	-	6.68	5.68	-
Critical Hdwy Stg 2	-	-	-	-	-	-	7.22	6.22	-	6.68	5.68	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.86	4.36	3.66	3.59	4.09	3.39
Pot Cap-1 Maneuver	656	-	-	468	-	-	25	17	301	48	26	476
Stage 1	-	-	-	-	-	-	101	144	-	228	285	-
Stage 2	-	-	-	-	-	-	424	235	-	366	183	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	653	-	-	467	-	-	24	16	300	43	25	474
Mov Cap-2 Maneuver	-	-	-	-	-	-	24	16	-	43	25	-
Stage 1	-	-	-	-	-	-	98	139	-	220	282	-
Stage 2	-	-	-	-	-	-	416	233	-	342	177	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0	73.6	54.1
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	64	653	-	-	467	-	-	85
HCM Lane V/C Ratio	0.185	0.007	-	-	0.007	-	-	0.139
HCM Control Delay (s)	73.6	10.6	0.2	-	12.8	-	-	54.1
HCM Lane LOS	F	B	A	-	B	-	-	F
HCM 95th %tile Q(veh)	0.6	0	-	-	0	-	-	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	163	270	93	224	258	22	144	795	506	31	405	172
Future Volume (veh/h)	163	270	93	224	258	22	144	795	506	31	405	172
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.96	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	173	287	99	238	274	23	153	846	538	33	431	183
Adj No. of Lanes	1	2	0	1	2	1	1	2	1	1	2	1
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	225	463	156	284	749	330	192	1232	527	61	971	418
Arrive On Green	0.13	0.18	0.18	0.16	0.21	0.21	0.11	0.35	0.35	0.03	0.27	0.27
Sat Flow, veh/h	1774	2590	873	1774	3539	1561	1774	3539	1515	1774	3539	1523
Grp Volume(v), veh/h	173	194	192	238	274	23	153	846	538	33	431	183
Grp Sat Flow(s),veh/h/ln	1774	1770	1693	1774	1770	1561	1774	1770	1515	1774	1770	1523
Q Serve(g_s), s	6.1	6.5	6.8	8.4	4.3	0.8	5.4	13.2	22.5	1.2	6.5	6.4
Cycle Q Clear(g_c), s	6.1	6.5	6.8	8.4	4.3	0.8	5.4	13.2	22.5	1.2	6.5	6.4
Prop In Lane	1.00		0.52	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	225	316	303	284	749	330	192	1232	527	61	971	418
V/C Ratio(X)	0.77	0.61	0.63	0.84	0.37	0.07	0.80	0.69	1.02	0.54	0.44	0.44
Avail Cap(c_a), veh/h	296	493	472	316	1024	452	233	1232	527	137	1040	448
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	27.3	24.5	24.6	26.3	21.8	20.4	28.1	18.0	21.1	30.7	19.4	19.3
Incr Delay (d2), s/veh	8.5	1.9	2.2	16.4	0.3	0.1	14.5	1.6	44.3	7.1	0.3	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	3.5	3.3	3.3	5.4	2.1	0.3	3.5	6.7	15.7	0.7	3.2	2.8
LnGrp Delay(d),s/veh	35.8	26.4	26.8	42.8	22.1	20.5	42.7	19.7	65.4	37.8	19.7	20.1
LnGrp LOS	D	C	C	D	C	C	D	B	F	D	B	C
Approach Vol, veh/h		559			535			1537			647	
Approach Delay, s/veh		29.4			31.2			38.0			20.7	
Approach LOS		C			C			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.7	27.0	14.8	16.0	11.5	22.2	12.7	18.2
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.0	22.5	11.5	18.0	8.5	19.0	10.8	18.7
Max Q Clear Time (g_c+I1), s	3.2	24.5	10.4	8.8	7.4	8.5	8.1	6.3
Green Ext Time (p_c), s	0.0	0.0	0.1	1.5	0.0	2.6	0.1	1.4

Intersection Summary	
HCM 2010 Ctrl Delay	32.0
HCM 2010 LOS	C

Intersection												
Int Delay, s/veh	2.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	24	0	39	0	0	0	55	1270	0	1	505	40
Future Vol, veh/h	24	0	39	0	0	0	55	1270	0	1	505	40
Conflicting Peds, #/hr	0	0	1	1	0	0	13	0	2	2	0	13
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	5	5	5
Mvmt Flow	26	0	43	0	0	0	60	1396	0	1	555	44

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1410	2110	314	1799	2132	700	612	0	0	1398	0	0
Stage 1	592	592	-	1518	1518	-	-	-	-	-	-	-
Stage 2	818	1518	-	281	614	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.2	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.25	-	-
Pot Cap-1 Maneuver	98	50	682	50	49	382	963	-	-	470	-	-
Stage 1	460	492	-	125	180	-	-	-	-	-	-	-
Stage 2	336	180	-	702	481	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	76	35	674	37	35	381	953	-	-	469	-	-
Mov Cap-2 Maneuver	76	35	-	37	35	-	-	-	-	-	-	-
Stage 1	328	485	-	90	129	-	-	-	-	-	-	-
Stage 2	242	129	-	655	474	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	40.3	0	1.5	0
HCM LOS	E	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	953	-	-	169	-	469	-	-
HCM Lane V/C Ratio	0.063	-	-	0.41	-	0.002	-	-
HCM Control Delay (s)	9	1.2	-	40.3	0	12.7	0	-
HCM Lane LOS	A	A	-	E	A	B	A	-
HCM 95th %tile Q(veh)	0.2	-	-	1.8	-	0	-	-

Intersection	
Int Delay, s/veh	1.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	3	114	1180	54	17	551
Future Vol, veh/h	3	114	1180	54	17	551
Conflicting Peds, #/hr	0	0	0	3	3	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	3	3	4	4
Mvmt Flow	3	124	1283	59	18	599

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1652	674	0	0	1345	0
Stage 1	1316	-	-	-	-	-
Stage 2	336	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.18	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.24	-
Pot Cap-1 Maneuver	89	397	-	-	498	-
Stage 1	215	-	-	-	-	-
Stage 2	696	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	84	396	-	-	497	-
Mov Cap-2 Maneuver	84	-	-	-	-	-
Stage 1	203	-	-	-	-	-
Stage 2	696	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	20.2	0	0.7
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	362	497	-
HCM Lane V/C Ratio	-	-	0.351	0.037	-
HCM Control Delay (s)	-	-	20.2	12.5	0.3
HCM Lane LOS	-	-	C	B	A
HCM 95th %tile Q(veh)	-	-	1.5	0.1	-

Intersection	
Int Delay, s/veh	2.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	57	10	23	1174	504	48
Future Vol, veh/h	57	10	23	1174	504	48
Conflicting Peds, #/hr	4	0	2	0	0	2
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	91	91	91	91	91	91
Heavy Vehicles, %	2	2	3	3	4	4
Mvmt Flow	63	11	25	1290	554	53

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1282	306	609	0	-	0
Stage 1	583	-	-	-	-	-
Stage 2	699	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.16	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.23	-	-	-
Pot Cap-1 Maneuver	157	690	959	-	-	-
Stage 1	521	-	-	-	-	-
Stage 2	454	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	142	689	957	-	-	-
Mov Cap-2 Maneuver	142	-	-	-	-	-
Stage 1	472	-	-	-	-	-
Stage 2	453	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	44.9	0.6	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	957	-	161	-	-
HCM Lane V/C Ratio	0.026	-	0.457	-	-
HCM Control Delay (s)	8.9	0.4	44.9	-	-
HCM Lane LOS	A	A	E	-	-
HCM 95th %tile Q(veh)	0.1	-	2.1	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	246	284	232	320	418	332	232	585	244	139	432	233
Future Volume (vph)	246	284	232	320	418	332	232	585	244	139	432	233
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
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
Lane Util. Factor	0.91	0.91	1.00	0.91	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	0.99	1.00	0.95	0.99	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1579	3291	1528	1535	3206	1509	1752	3505	1568	1719	3438	1518
Flt Permitted	0.95	0.99	1.00	0.95	0.99	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1579	3291	1528	1535	3206	1509	1752	3505	1568	1719	3438	1518
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	280	323	264	364	475	377	264	665	277	158	491	265
RTOR Reduction (vph)	0	0	214	0	0	265	0	0	208	0	0	211
Lane Group Flow (vph)	196	407	50	273	566	112	264	665	69	158	491	54
Confl. Peds. (#/hr)			3									1
Heavy Vehicles (%)	4%	4%	4%	7%	7%	7%	3%	3%	3%	5%	5%	5%
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	4	4		7	7		5	2		1	6	
Permitted Phases			4			7			2			6
Actuated Green, G (s)	16.0	16.0	16.0	18.8	18.8	18.8	15.0	21.2	21.2	11.0	17.2	17.2
Effective Green, g (s)	16.0	16.0	16.0	18.8	18.8	18.8	15.0	21.2	21.2	11.0	17.2	17.2
Actuated g/C Ratio	0.19	0.19	0.19	0.22	0.22	0.22	0.18	0.25	0.25	0.13	0.20	0.20
Clearance 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
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	297	619	287	339	709	333	309	874	391	222	695	307
v/s Ratio Prot	c0.12	0.12		c0.18	0.18		c0.15	c0.19		0.09	0.14	
v/s Ratio Perm			0.03			0.07			0.04			0.04
v/c Ratio	0.66	0.66	0.17	0.81	0.80	0.34	0.85	0.76	0.18	0.71	0.71	0.17
Uniform Delay, d1	32.0	32.0	28.9	31.4	31.3	27.9	33.9	29.6	25.0	35.5	31.6	28.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	5.2	2.5	0.3	13.0	6.3	0.6	19.9	3.9	0.2	10.3	3.3	0.3
Delay (s)	37.2	34.5	29.2	44.4	37.6	28.5	53.9	33.5	25.3	45.8	34.8	28.3
Level of Service	D	C	C	D	D	C	D	C	C	D	C	C
Approach Delay (s)		33.5			36.3			36.1			34.8	
Approach LOS		C			D			D			C	

Intersection Summary			
HCM 2000 Control Delay	35.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	64.3%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	0	3	85	23	45	28	500	121	68	524	279
Future Volume (veh/h)	10	0	3	85	23	45	28	500	121	68	524	279
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.99	0.99		0.99	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1652	1652	1792	1792	1900	1863	1863	1900
Adj Flow Rate, veh/h	11	0	3	92	25	49	30	543	132	74	570	303
Adj No. of Lanes	0	1	0	0	1	1	1	2	0	1	2	0
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	15	15	15	6	6	6	2	2	2
Cap, veh/h	216	17	24	290	51	188	493	1799	436	600	1477	785
Arrive On Green	0.14	0.00	0.14	0.14	0.14	0.14	0.66	0.66	0.66	0.66	0.66	0.66
Sat Flow, veh/h	525	126	177	1075	373	1386	608	2717	658	759	2231	1185
Grp Volume(v), veh/h	14	0	0	117	0	49	30	339	336	74	452	421
Grp Sat Flow(s),veh/h/ln	827	0	0	1449	0	1386	608	1703	1672	759	1770	1646
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	1.4	1.1	3.7	3.8	2.0	5.2	5.2
Cycle Q Clear(g_c), s	3.1	0.0	0.0	3.1	0.0	1.4	6.2	3.7	3.8	5.8	5.2	5.2
Prop In Lane	0.79		0.21	0.79		1.00	1.00		0.39	1.00		0.72
Lane Grp Cap(c), veh/h	257	0	0	341	0	188	493	1128	1107	600	1172	1090
V/C Ratio(X)	0.05	0.00	0.00	0.34	0.00	0.26	0.06	0.30	0.30	0.12	0.39	0.39
Avail Cap(c_a), veh/h	727	0	0	794	0	669	493	1128	1107	600	1172	1090
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.8	0.0	0.0	18.0	0.0	17.2	4.8	3.2	3.2	4.4	3.4	3.4
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.6	0.0	0.7	0.2	0.7	0.7	0.4	1.0	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.0	1.4	0.0	0.6	0.2	1.9	1.9	0.5	2.7	2.5
LnGrp Delay(d),s/veh	16.9	0.0	0.0	18.6	0.0	18.0	5.1	3.9	3.9	4.8	4.4	4.4
LnGrp LOS	B			B		B	A	A	A	A	A	A
Approach Vol, veh/h		14			166			705			947	
Approach Delay, s/veh		16.9			18.4			3.9			4.4	
Approach LOS		B			B			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		34.0		10.5		34.0		10.5
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green Setting (Gmax), s		29.5		21.5		29.5		21.5
Max Q Clear Time (g_c+I1), s		8.2		5.1		7.8		5.1
Green Ext Time (p_c), s		4.6		0.0		6.6		0.7

Intersection Summary	
HCM 2010 Ctrl Delay	5.6
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	241	6	220	16	3	0	361	502	9	23	389	139
Future Volume (vph)	241	6	220	16	3	0	361	502	9	23	389	139
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5		4.5		4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	0.95	0.95	1.00		1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	1.00		1.00		1.00	1.00	0.98	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00		1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85		1.00		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	0.95	1.00		0.96		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1649	1657	1553		1601		1736	3471	1518	1687	3374	1489
Flt Permitted	0.95	0.95	1.00		1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1649	1657	1553		1667		1736	3471	1518	1687	3374	1489
Peak-hour factor, PHF	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Adj. Flow (vph)	287	7	262	19	4	0	430	598	11	27	463	165
RTOR Reduction (vph)	0	0	219	0	0	0	0	0	5	0	0	117
Lane Group Flow (vph)	146	148	43	0	23	0	430	598	6	27	463	48
Confl. Peds. (#/hr)									3			1
Heavy Vehicles (%)	4%	4%	4%	14%	14%	14%	4%	4%	4%	7%	7%	7%
Turn Type	Split	NA	Perm	Perm	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	4	4			7		5	2		1	6	
Permitted Phases			4	7					2			6
Actuated Green, G (s)	12.0	12.0	12.0		1.7		20.4	40.0	40.0	2.0	21.6	21.6
Effective Green, g (s)	12.0	12.0	12.0		1.7		20.4	40.0	40.0	2.0	21.6	21.6
Actuated g/C Ratio	0.16	0.16	0.16		0.02		0.28	0.54	0.54	0.03	0.29	0.29
Clearance Time (s)	4.5	4.5	4.5		4.5		4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0		3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	268	269	252		38		480	1883	823	45	988	436
v/s Ratio Prot	0.09	c0.09					c0.25	0.17		0.02	c0.14	
v/s Ratio Perm			0.03		c0.01				0.00			0.03
v/c Ratio	0.54	0.55	0.17		0.61		0.90	0.32	0.01	0.60	0.47	0.11
Uniform Delay, d1	28.3	28.4	26.6		35.7		25.6	9.3	7.7	35.5	21.3	19.0
Progression Factor	1.00	1.00	1.00		1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.3	2.4	0.3		24.3		18.9	0.4	0.0	19.7	1.6	0.5
Delay (s)	30.6	30.8	26.9		59.9		44.6	9.8	7.8	55.1	22.9	19.5
Level of Service	C	C	C		E		D	A	A	E	C	B
Approach Delay (s)		28.9			59.9			24.1			23.4	
Approach LOS		C			E			C			C	

Intersection Summary

HCM 2000 Control Delay	25.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	73.7	Sum of lost time (s)	18.0
Intersection Capacity Utilization	54.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	246	284	232	320	418	332	232	585	244	139	432	233
Future Volume (vph)	246	284	232	320	418	332	232	585	244	139	432	233
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
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
Lane Util. Factor	0.91	0.91	1.00	0.91	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	0.99	1.00	0.95	0.99	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1579	3291	1528	1535	3206	1509	1752	3505	1568	1719	3438	1518
Flt Permitted	0.95	0.99	1.00	0.95	0.99	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1579	3291	1528	1535	3206	1509	1752	3505	1568	1719	3438	1518
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	280	323	264	364	475	377	264	665	277	158	491	265
RTOR Reduction (vph)	0	0	214	0	0	265	0	0	208	0	0	211
Lane Group Flow (vph)	196	407	50	273	566	112	264	665	69	158	491	54
Confl. Peds. (#/hr)			3									1
Heavy Vehicles (%)	4%	4%	4%	7%	7%	7%	3%	3%	3%	5%	5%	5%
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	4	4		7	7		5	2		1	6	
Permitted Phases			4			7			2			6
Actuated Green, G (s)	16.0	16.0	16.0	18.8	18.8	18.8	15.0	21.2	21.2	11.0	17.2	17.2
Effective Green, g (s)	16.0	16.0	16.0	18.8	18.8	18.8	15.0	21.2	21.2	11.0	17.2	17.2
Actuated g/C Ratio	0.19	0.19	0.19	0.22	0.22	0.22	0.18	0.25	0.25	0.13	0.20	0.20
Clearance 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
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	297	619	287	339	709	333	309	874	391	222	695	307
v/s Ratio Prot	c0.12	0.12		c0.18	0.18		c0.15	c0.19		0.09	0.14	
v/s Ratio Perm			0.03			0.07			0.04			0.04
v/c Ratio	0.66	0.66	0.17	0.81	0.80	0.34	0.85	0.76	0.18	0.71	0.71	0.17
Uniform Delay, d1	32.0	32.0	28.9	31.4	31.3	27.9	33.9	29.6	25.0	35.5	31.6	28.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	5.2	2.5	0.3	13.0	6.3	0.6	19.9	3.9	0.2	10.3	3.3	0.3
Delay (s)	37.2	34.5	29.2	44.4	37.6	28.5	53.9	33.5	25.3	45.8	34.8	28.3
Level of Service	D	C	C	D	D	C	D	C	C	D	C	C
Approach Delay (s)		33.5			36.3			36.1			34.8	
Approach LOS		C			D			D			C	

Intersection Summary			
HCM 2000 Control Delay	35.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	64.3%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	46	416	80	511	866	57	45	251	244	87	549	9
Future Volume (veh/h)	46	416	80	511	866	57	45	251	244	87	549	9
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1810	1810	1810	1845	1845	1845
Adj Flow Rate, veh/h	52	467	90	574	973	64	51	282	274	98	617	10
Adj No. of Lanes	1	2	1	2	2	0	1	2	1	1	2	1
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	5	5	5	3	3	3
Cap, veh/h	81	701	312	672	1172	77	78	946	723	125	1055	471
Arrive On Green	0.05	0.20	0.20	0.20	0.35	0.35	0.05	0.28	0.28	0.07	0.30	0.30
Sat Flow, veh/h	1774	3539	1579	3442	3371	222	1723	3438	1535	1757	3505	1566
Grp Volume(v), veh/h	52	467	90	574	511	526	51	282	274	98	617	10
Grp Sat Flow(s),veh/h/ln	1774	1770	1579	1721	1770	1823	1723	1719	1535	1757	1752	1566
Q Serve(g_s), s	2.0	8.4	3.3	11.1	18.3	18.3	2.0	4.5	7.9	3.8	10.3	0.3
Cycle Q Clear(g_c), s	2.0	8.4	3.3	11.1	18.3	18.3	2.0	4.5	7.9	3.8	10.3	0.3
Prop In Lane	1.00		1.00	1.00		0.12	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	81	701	312	672	615	634	78	946	723	125	1055	471
V/C Ratio(X)	0.64	0.67	0.29	0.85	0.83	0.83	0.66	0.30	0.38	0.79	0.58	0.02
Avail Cap(c_a), veh/h	131	922	411	723	702	723	125	946	723	140	1055	471
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	32.4	25.6	23.6	26.8	20.7	20.7	32.4	19.8	11.8	31.6	20.5	17.0
Incr Delay (d2), s/veh	8.2	1.2	0.5	9.3	7.5	7.3	9.0	0.8	1.5	22.6	2.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	4.2	1.5	6.1	10.1	10.3	1.1	2.2	3.6	2.6	5.3	0.1
LnGrp Delay(d),s/veh	40.6	26.7	24.1	36.1	28.1	27.9	41.4	20.6	13.3	54.2	22.9	17.1
LnGrp LOS	D	C	C	D	C	C	D	C	B	D	C	B
Approach Vol, veh/h		609			1611			607			725	
Approach Delay, s/veh		27.5			30.9			19.0			27.0	
Approach LOS		C			C			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.4	23.5	18.0	18.2	7.6	25.3	7.7	28.5
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.5	19.0	14.5	18.0	5.0	19.5	5.1	27.4
Max Q Clear Time (g_c+I1), s	5.8	9.9	13.1	10.4	4.0	12.3	4.0	20.3
Green Ext Time (p_c), s	0.0	1.9	0.4	2.0	0.0	2.4	0.0	3.7

Intersection Summary	
HCM 2010 Ctrl Delay	27.5
HCM 2010 LOS	C

Intersection												
Int Delay, s/veh	3.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	35	0	76	0	0	0	40	519	0	0	1106	43
Future Vol, veh/h	35	0	76	0	0	0	40	519	0	0	1106	43
Conflicting Peds, #/hr	1	0	1	1	0	1	7	0	7	7	0	7
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	-	0	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	5	5	5	2	2	2
Mvmt Flow	38	0	83	0	0	0	43	564	0	0	1202	47

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1602	1890	633	1259	1913	290	1256	0	0	571	0	0
Stage 1	1233	1233	-	657	657	-	-	-	-	-	-	-
Stage 2	369	657	-	602	1256	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.2	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.25	-	-	2.22	-	-
Pot Cap-1 Maneuver	71	69	422	127	67	707	533	-	-	998	-	-
Stage 1	187	247	-	420	460	-	-	-	-	-	-	-
Stage 2	623	460	-	453	241	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	66	63	419	95	61	702	530	-	-	992	-	-
Mov Cap-2 Maneuver	66	63	-	95	61	-	-	-	-	-	-	-
Stage 1	171	246	-	384	420	-	-	-	-	-	-	-
Stage 2	572	420	-	363	240	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	47.5	0	0.9	0
HCM LOS	E	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	530	-	-	66	419	-	992	-	-
HCM Lane V/C Ratio	0.082	-	-	0.576	0.197	-	-	-	-
HCM Control Delay (s)	12.4	-	-	116.7	15.7	0	0	-	-
HCM Lane LOS	B	-	-	F	C	A	A	-	-
HCM 95th %tile Q(veh)	0.3	-	-	2.4	0.7	-	0	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	58	671	54	284	621	71	135	541	598	71	234	12
Future Volume (veh/h)	58	671	54	284	621	71	135	541	598	71	234	12
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1810	1810	1810
Adj Flow Rate, veh/h	63	729	59	309	675	77	147	588	650	77	254	13
Adj No. of Lanes	1	2	1	2	2	0	1	2	1	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	5	5	5
Cap, veh/h	90	858	382	418	1003	114	180	1141	702	97	954	425
Arrive On Green	0.05	0.24	0.24	0.12	0.31	0.31	0.10	0.32	0.32	0.06	0.28	0.28
Sat Flow, veh/h	1774	3539	1575	3442	3202	365	1774	3539	1582	1723	3438	1531
Grp Volume(v), veh/h	63	729	59	309	373	379	147	588	650	77	254	13
Grp Sat Flow(s),veh/h/ln	1774	1770	1575	1721	1770	1797	1774	1770	1582	1723	1719	1531
Q Serve(g_s), s	2.4	13.7	2.1	6.1	12.8	12.8	5.7	9.4	22.5	3.1	4.0	0.4
Cycle Q Clear(g_c), s	2.4	13.7	2.1	6.1	12.8	12.8	5.7	9.4	22.5	3.1	4.0	0.4
Prop In Lane	1.00		1.00	1.00		0.20	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	90	858	382	418	554	563	180	1141	702	97	954	425
V/C Ratio(X)	0.70	0.85	0.15	0.74	0.67	0.67	0.82	0.52	0.93	0.79	0.27	0.03
Avail Cap(c_a), veh/h	162	911	405	615	610	619	180	1141	702	150	954	425
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	32.7	25.3	20.9	29.7	20.9	20.9	30.8	19.3	18.4	32.6	19.7	18.4
Incr Delay (d2), s/veh	9.6	7.4	0.2	2.6	2.6	2.5	24.4	1.7	20.0	14.2	0.7	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	7.6	0.9	3.0	6.6	6.7	4.0	4.8	15.6	1.9	2.0	0.2
LnGrp Delay(d),s/veh	42.3	32.6	21.0	32.3	23.5	23.4	55.2	20.9	38.4	46.8	20.4	18.6
LnGrp LOS	D	C	C	C	C	C	E	C	D	D	C	B
Approach Vol, veh/h		851			1061			1385			344	
Approach Delay, s/veh		32.6			26.0			32.8			26.2	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.5	27.0	13.0	21.4	11.6	23.9	8.0	26.4
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	6.1	20.4	12.5	18.0	7.1	19.4	6.4	24.1
Max Q Clear Time (g_c+I1), s	5.1	24.5	8.1	15.7	7.7	6.0	4.4	14.8
Green Ext Time (p_c), s	0.0	0.0	0.5	1.1	0.0	1.3	0.0	3.2

Intersection Summary	
HCM 2010 Ctrl Delay	30.1
HCM 2010 LOS	C

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	1338	2	3	970	9	0	0	11	0	0	6
Future Vol, veh/h	0	1338	2	3	970	9	0	0	11	0	0	6
Conflicting Peds, #/hr	5	0	3	3	0	5	0	0	2	2	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	210	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	36	36	36	9	9	9
Mvmt Flow	0	1439	2	3	1043	10	0	0	12	0	0	6

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	1444	0	0	-	-	726	-	-	532
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	4.14	-	-	-	-	7.62	-	-	7.08
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	2.22	-	-	-	-	3.66	-	-	3.39
Pot Cap-1 Maneuver	0	-	-	465	-	-	0	0	299	0	0	474
Stage 1	0	-	-	-	-	-	0	0	-	0	0	-
Stage 2	0	-	-	-	-	-	0	0	-	0	0	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	-	-	-	464	-	-	-	-	298	-	-	472
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	17.6	12.7
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	298	-	-	464	-	-	472
HCM Lane V/C Ratio	0.04	-	-	0.007	-	-	0.014
HCM Control Delay (s)	17.6	-	-	12.8	-	-	12.7
HCM Lane LOS	C	-	-	B	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	0	-	-	0

Intersection												
Int Delay, s/veh	1.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	24	0	39	0	0	0	55	1270	0	1	505	40
Future Vol, veh/h	24	0	39	0	0	0	55	1270	0	1	505	40
Conflicting Peds, #/hr	0	0	1	1	0	0	13	0	2	2	0	13
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	-	0	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	5	5	5
Mvmt Flow	26	0	43	0	0	0	60	1396	0	1	555	44

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1410	2110	314	1799	2132	700	612	0	0	1398	0	0
Stage 1	592	592	-	1518	1518	-	-	-	-	-	-	-
Stage 2	818	1518	-	281	614	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.2	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.25	-	-
Pot Cap-1 Maneuver	98	50	682	50	49	382	963	-	-	470	-	-
Stage 1	460	492	-	125	180	-	-	-	-	-	-	-
Stage 2	336	180	-	702	481	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	92	46	674	44	45	381	953	-	-	469	-	-
Mov Cap-2 Maneuver	92	46	-	44	45	-	-	-	-	-	-	-
Stage 1	426	486	-	117	168	-	-	-	-	-	-	-
Stage 2	315	168	-	655	475	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	29.2	0	0.4	0
HCM LOS	D	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	953	-	-	92	674	-	469	-	-
HCM Lane V/C Ratio	0.063	-	-	0.287	0.064	-	0.002	-	-
HCM Control Delay (s)	9	-	-	59.2	10.7	0	12.7	-	-
HCM Lane LOS	A	-	-	F	B	A	B	-	-
HCM 95th %tile Q(veh)	0.2	-	-	1.1	0.2	-	0	-	-

Appendix F

Level of Service

Calculations

Existing Plus Project

Conditions

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	545	17	222	18	643	263	186	1034	21
Future Volume (vph)	0	0	0	545	17	222	18	643	263	186	1034	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor				0.95	0.95	1.00	1.00	0.95	0.88	1.00	0.95	
Frpb, ped/bikes				1.00	1.00	0.98	1.00	1.00	0.98	1.00	1.00	
Flpb, ped/bikes				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt				1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected				0.95	0.96	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)				1498	1507	1388	1577	3154	2427	1593	3174	
Flt Permitted				0.95	0.96	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)				1498	1507	1388	1577	3154	2427	1593	3174	
Peak-hour factor, PHF	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Adj. Flow (vph)	0	0	0	665	21	271	22	784	321	227	1261	26
RTOR Reduction (vph)	0	0	0	0	0	198	0	0	0	0	2	0
Lane Group Flow (vph)	0	0	0	346	340	73	22	784	321	227	1285	0
Confl. Peds. (#/hr)						4			6			2
Heavy Vehicles (%)	2%	2%	2%	3%	3%	3%	3%	3%	3%	2%	2%	2%
Turn Type				Split	NA	Perm	Prot	NA	Free	Prot	NA	
Protected Phases				8	8		5	2		1	6	
Permitted Phases						8			Free			
Actuated Green, G (s)				16.5	16.5	16.5	0.8	21.4	61.1	11.2	31.8	
Effective Green, g (s)				16.5	16.5	16.5	0.8	21.4	61.1	11.2	31.8	
Actuated g/C Ratio				0.27	0.27	0.27	0.01	0.35	1.00	0.18	0.52	
Clearance Time (s)				4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)				3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)				404	406	374	20	1104	2427	292	1651	
v/s Ratio Prot				c0.23	0.23		0.01	0.25		c0.14	c0.40	
v/s Ratio Perm						0.05			0.13			
v/c Ratio				0.86	0.84	0.20	1.10	0.71	0.13	0.78	0.78	
Uniform Delay, d1				21.2	21.0	17.2	30.2	17.2	0.0	23.8	11.8	
Progression Factor				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2				16.2	14.0	0.3	234.8	3.9	0.1	12.2	3.7	
Delay (s)				37.3	35.0	17.4	264.9	21.0	0.1	36.0	15.5	
Level of Service				D	C	B	F	C	A	D	B	
Approach Delay (s)		0.0			30.9			19.8			18.6	
Approach LOS		A			C			B			B	

Intersection Summary

HCM 2000 Control Delay	22.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	61.1	Sum of lost time (s)	12.0
Intersection Capacity Utilization	63.1%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	116	341	71	84	514	118	62	372	70	89	758	162
Future Volume (veh/h)	116	341	71	84	514	118	62	372	70	89	758	162
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1845	1845	1900	1776	1776	1776	1863	1863	1863
Adj Flow Rate, veh/h	140	411	86	101	619	142	75	448	84	107	913	195
Adj No. of Lanes	1	2	1	1	2	0	1	2	1	1	2	1
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	3	3	3	7	7	7	2	2	2
Cap, veh/h	169	1019	450	129	752	172	99	913	407	137	1023	455
Arrive On Green	0.10	0.29	0.29	0.07	0.27	0.27	0.06	0.27	0.27	0.08	0.29	0.29
Sat Flow, veh/h	1774	3539	1562	1757	2834	649	1691	3374	1504	1774	3539	1575
Grp Volume(v), veh/h	140	411	86	101	382	379	75	448	84	107	913	195
Grp Sat Flow(s),veh/h/ln	1774	1770	1562	1757	1752	1730	1691	1687	1504	1774	1770	1575
Q Serve(g_s), s	4.8	5.8	2.6	3.5	12.7	12.7	2.7	6.9	2.7	3.7	15.3	6.2
Cycle Q Clear(g_c), s	4.8	5.8	2.6	3.5	12.7	12.7	2.7	6.9	2.7	3.7	15.3	6.2
Prop In Lane	1.00		1.00	1.00		0.38	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	169	1019	450	129	465	459	99	913	407	137	1023	455
V/C Ratio(X)	0.83	0.40	0.19	0.79	0.82	0.82	0.76	0.49	0.21	0.78	0.89	0.43
Avail Cap(c_a), veh/h	169	1083	478	142	511	504	137	989	441	144	1037	462
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	27.4	17.7	16.6	28.1	21.3	21.3	28.6	18.9	17.4	28.0	21.0	17.8
Incr Delay (d2), s/veh	27.2	0.3	0.2	22.6	9.7	10.0	14.5	0.4	0.2	23.1	9.9	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	3.6	2.8	1.1	2.5	7.3	7.3	1.6	3.2	1.1	2.7	8.8	2.8
LnGrp Delay(d),s/veh	54.6	18.0	16.8	50.8	31.0	31.3	43.2	19.4	17.7	51.1	30.9	18.5
LnGrp LOS	D	B	B	D	C	C	D	B	B	D	C	B
Approach Vol, veh/h		637			862			607			1215	
Approach Delay, s/veh		25.9			33.4			22.1			30.7	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.3	21.2	9.0	22.3	8.1	22.3	10.4	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	5.0	18.1	5.0	18.9	5.0	18.1	5.9	18.0
Max Q Clear Time (g_c+I1), s	5.7	8.9	5.5	7.8	4.7	17.3	6.8	14.7
Green Ext Time (p_c), s	0.0	2.2	0.0	2.3	0.0	0.6	0.0	1.5

Intersection Summary	
HCM 2010 Ctrl Delay	28.9
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	42	450	105	81	593	866	57	90	345	244	142	609
Future Volume (vph)	42	450	105	81	593	866	57	90	345	244	142	609
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	1.00	0.95	1.00		1.00	0.95		1.00	0.95	1.00	1.00	0.95
Frpb, ped/bikes	1.00	1.00	0.98		1.00	1.00		1.00	1.00	0.98	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85		1.00	0.99		1.00	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1770	3539	1558		1770	3503		1719	3438	1514	1752	3505
Flt Permitted	0.95	1.00	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1770	3539	1558		1770	3503		1719	3438	1514	1752	3505
Peak-hour factor, PHF	0.89	0.89	0.89	0.92	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	47	506	118	88	666	973	64	101	388	274	160	684
RTOR Reduction (vph)	0	0	100	0	0	4	0	0	0	228	0	0
Lane Group Flow (vph)	47	506	18	0	754	1033	0	101	388	46	160	684
Confl. Peds. (#/hr)			2				1			2		
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	5%	5%	5%	3%	3%
Turn Type	Prot	NA	Perm	Prot	Prot	NA		Prot	NA	Perm	Prot	NA
Protected Phases	7	4		3	3	8		5	2		1	6
Permitted Phases			4							2		
Actuated Green, G (s)	6.6	18.9	18.9		51.5	63.8		7.7	20.5	20.5	12.0	24.8
Effective Green, g (s)	6.6	18.9	18.9		51.5	63.8		7.7	20.5	20.5	12.0	24.8
Actuated g/C Ratio	0.05	0.16	0.16		0.43	0.53		0.06	0.17	0.17	0.10	0.21
Clearance Time (s)	4.5	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	96	553	243		753	1848		109	582	256	173	718
v/s Ratio Prot	0.03	c0.14			c0.43	0.29		0.06	0.11		c0.09	c0.20
v/s Ratio Perm			0.01							0.03		
v/c Ratio	0.49	0.92	0.08		1.00	0.56		0.93	0.67	0.18	0.92	0.95
Uniform Delay, d1	55.5	50.2	43.5		34.7	19.1		56.3	47.0	43.0	54.0	47.5
Progression Factor	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	3.9	19.8	0.1		33.1	0.4		62.7	5.9	1.6	46.8	23.8
Delay (s)	59.4	70.0	43.7		67.8	19.5		119.0	53.0	44.6	100.8	71.3
Level of Service	E	E	D		E	B		F	D	D	F	E
Approach Delay (s)		64.6				39.8			58.7			76.4
Approach LOS		E				D			E			E

Intersection Summary			
HCM 2000 Control Delay	55.1	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	120.9	Sum of lost time (s)	18.0
Intersection Capacity Utilization	88.1%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	SBR
Lane Configurations	
Traffic Volume (vph)	9
Future Volume (vph)	9
Ideal Flow (vphpl)	1900
Total Lost time (s)	4.5
Lane Util. Factor	1.00
Frpb, ped/bikes	0.99
Flpb, ped/bikes	1.00
Frt	0.85
Flt Protected	1.00
Satd. Flow (prot)	1546
Flt Permitted	1.00
Satd. Flow (perm)	1546
Peak-hour factor, PHF	0.89
Adj. Flow (vph)	10
RTOR Reduction (vph)	8
Lane Group Flow (vph)	2
Confl. Peds. (#/hr)	1
Heavy Vehicles (%)	3%
Turn Type	Perm
Protected Phases	
Permitted Phases	6
Actuated Green, G (s)	24.8
Effective Green, g (s)	24.8
Actuated g/C Ratio	0.21
Clearance Time (s)	4.5
Vehicle Extension (s)	3.0
Lane Grp Cap (vph)	317
v/s Ratio Prot	
v/s Ratio Perm	0.00
v/c Ratio	0.01
Uniform Delay, d1	38.2
Progression Factor	1.00
Incremental Delay, d2	0.0
Delay (s)	38.3
Level of Service	D
Approach Delay (s)	
Approach LOS	

Intersection Summary

Intersection												
Int Delay, s/veh	1.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	742	171	0	1590	12	0	0	133	0	0	7
Future Vol, veh/h	4	742	171	0	1590	12	0	0	133	0	0	7
Conflicting Peds, #/hr	2	0	3	3	0	2	1	0	0	0	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	3	3	3	2	2	2	44	44	44	2	2	2
Mvmt Flow	5	843	194	0	1807	14	0	0	151	0	0	8

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1823	0	0	-	-	0	-	-	522	2248	2866	914
Stage 1	-	-	-	-	-	-	-	-	-	1816	1816	-
Stage 2	-	-	-	-	-	-	-	-	-	432	1050	-
Critical Hdwy	4.16	-	-	-	-	-	-	-	7.78	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	6.54	5.54	-
Follow-up Hdwy	2.23	-	-	-	-	-	-	-	3.74	3.52	4.02	3.32
Pot Cap-1 Maneuver	328	-	-	0	-	-	0	0	404	23	16	276
Stage 1	-	-	-	0	-	-	0	0	-	81	128	-
Stage 2	-	-	-	0	-	-	0	0	-	572	302	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	327	-	-	-	-	-	-	-	403	14	15	275
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	14	15	-
Stage 1	-	-	-	-	-	-	-	-	-	78	128	-
Stage 2	-	-	-	-	-	-	-	-	-	344	290	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	0	19.2	18.5
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBT	WBR	SBLn1
Capacity (veh/h)	403	327	-	-	-	-	275
HCM Lane V/C Ratio	0.375	0.014	-	-	-	-	0.029
HCM Control Delay (s)	19.2	16.2	0.3	-	-	-	18.5
HCM Lane LOS	C	C	A	-	-	-	C
HCM 95th %tile Q(veh)	1.7	0	-	-	-	-	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	80	136	66	305	365	35	36	360	310	50	558	183
Future Volume (veh/h)	80	136	66	305	365	35	36	360	310	50	558	183
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.97	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1863	1863	1863	1845	1845	1845	1863	1863	1863
Adj Flow Rate, veh/h	88	149	73	335	401	38	40	396	341	55	613	201
Adj No. of Lanes	1	2	0	1	2	1	1	2	1	1	2	1
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, %	3	3	3	2	2	2	3	3	3	2	2	2
Cap, veh/h	148	348	161	390	1012	445	71	967	422	89	1010	449
Arrive On Green	0.08	0.15	0.15	0.22	0.29	0.29	0.04	0.28	0.28	0.05	0.29	0.29
Sat Flow, veh/h	1757	2310	1072	1774	3539	1555	1757	3505	1529	1774	3539	1572
Grp Volume(v), veh/h	88	111	111	335	401	38	40	396	341	55	613	201
Grp Sat Flow(s),veh/h/ln	1757	1752	1630	1774	1770	1555	1757	1752	1529	1774	1770	1572
Q Serve(g_s), s	2.9	3.4	3.7	10.8	5.4	1.1	1.3	5.5	12.3	1.8	8.9	6.2
Cycle Q Clear(g_c), s	2.9	3.4	3.7	10.8	5.4	1.1	1.3	5.5	12.3	1.8	8.9	6.2
Prop In Lane	1.00		0.66	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	148	264	245	390	1012	445	71	967	422	89	1010	449
V/C Ratio(X)	0.59	0.42	0.45	0.86	0.40	0.09	0.56	0.41	0.81	0.62	0.61	0.45
Avail Cap(c_a), veh/h	258	532	495	464	1481	651	148	1094	477	150	1105	491
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	26.2	22.8	22.9	22.2	17.0	15.5	27.9	17.5	20.0	27.6	18.3	17.4
Incr Delay (d2), s/veh	3.8	1.1	1.3	13.2	0.3	0.1	6.7	0.3	9.0	6.8	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	1.5	1.7	1.8	6.6	2.7	0.5	0.8	2.7	6.3	1.1	4.5	2.8
LnGrp Delay(d),s/veh	29.9	23.9	24.2	35.5	17.3	15.6	34.6	17.8	29.0	34.3	19.1	18.1
LnGrp LOS	C	C	C	D	B	B	C	B	C	C	B	B
Approach Vol, veh/h		310			774			777			869	
Approach Delay, s/veh		25.7			25.1			23.6			19.8	
Approach LOS		C			C			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.5	20.8	17.5	13.4	6.9	21.4	9.5	21.4
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.0	18.5	15.5	18.0	5.0	18.5	8.7	24.8
Max Q Clear Time (g_c+I1), s	3.8	14.3	12.8	5.7	3.3	10.9	4.9	7.4
Green Ext Time (p_c), s	0.0	1.6	0.3	0.9	0.0	2.9	0.1	2.5

Intersection Summary	
HCM 2010 Ctrl Delay	23.1
HCM 2010 LOS	C

Intersection												
Int Delay, s/veh	2.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	35	17	76	63	14	139	40	519	77	167	1106	43
Future Vol, veh/h	35	17	76	63	14	139	40	519	77	167	1106	43
Conflicting Peds, #/hr	1	0	1	1	0	1	7	0	7	7	0	7
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	5	5	5	2	2	2
Mvmt Flow	38	18	83	68	15	151	43	564	84	182	1202	47

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1974	2338	633	1674	2319	332	1256	0	0	655	0	0
Stage 1	1597	1597	-	699	699	-	-	-	-	-	-	-
Stage 2	377	741	-	975	1620	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.2	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.25	-	-	2.22	-	-
Pot Cap-1 Maneuver	~ 37	36	422	~ 62	37	664	533	-	-	928	-	-
Stage 1	111	164	-	397	440	-	-	-	-	-	-	-
Stage 2	616	421	-	270	160	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	~ 11	419	-	~ 11	660	530	-	-	923	-	-
Mov Cap-2 Maneuver	-	~ 11	-	-	~ 11	-	-	-	-	-	-	-
Stage 1	96	56	-	344	381	-	-	-	-	-	-	-
Stage 2	397	365	-	~ 50	55	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s			1.4	3.4
HCM LOS	-	-		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	530	-	-	-	-	923	-	-
HCM Lane V/C Ratio	0.082	-	-	-	-	0.197	-	-
HCM Control Delay (s)	12.4	0.7	-	-	-	9.9	2.5	-
HCM Lane LOS	B	A	-	-	-	A	A	-
HCM 95th %tile Q(veh)	0.3	-	-	-	-	0.7	-	-

Notes

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

Intersection	
Int Delay, s/veh	2.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	16	31	635	43	110	1116
Future Vol, veh/h	16	31	635	43	110	1116
Conflicting Peds, #/hr	0	0	0	4	4	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	7	7	2	2
Mvmt Flow	17	34	690	47	120	1213

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1565	373	0	0	741	0
Stage 1	718	-	-	-	-	-
Stage 2	847	-	-	-	-	-
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	102	624	-	-	862	-
Stage 1	444	-	-	-	-	-
Stage 2	381	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	58	622	-	-	859	-
Mov Cap-2 Maneuver	58	-	-	-	-	-
Stage 1	253	-	-	-	-	-
Stage 2	381	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	43.2	0	2.5
HCM LOS	E		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	144	859	-
HCM Lane V/C Ratio	-	-	0.355	0.139	-
HCM Control Delay (s)	-	-	43.2	9.9	1.8
HCM Lane LOS	-	-	E	A	A
HCM 95th %tile Q(veh)	-	-	1.5	0.5	-

Intersection	
Int Delay, s/veh	2.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	40	34	12	645	1058	69
Future Vol, veh/h	40	34	12	645	1058	69
Conflicting Peds, #/hr	2	0	2	0	0	2
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	93	93	93	93	93	93
Heavy Vehicles, %	2	2	7	7	2	2
Mvmt Flow	43	37	13	694	1138	74

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1552	608	1214	0	-	0
Stage 1	1177	-	-	-	-	-
Stage 2	375	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.24	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.27	-	-	-
Pot Cap-1 Maneuver	104	439	543	-	-	-
Stage 1	255	-	-	-	-	-
Stage 2	665	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	100	438	542	-	-	-
Mov Cap-2 Maneuver	100	-	-	-	-	-
Stage 1	245	-	-	-	-	-
Stage 2	664	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	50.5	0.4	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	542	-	155	-	-
HCM Lane V/C Ratio	0.024	-	0.513	-	-
HCM Control Delay (s)	11.8	0.2	50.5	-	-
HCM Lane LOS	B	A	F	-	-
HCM 95th %tile Q(veh)	0.1	-	2.5	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	0	3	85	23	45	28	573	121	68	576	286
Future Volume (veh/h)	10	0	3	85	23	45	28	573	121	68	576	286
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.99	0.99		0.99	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1652	1652	1792	1792	1900	1863	1863	1900
Adj Flow Rate, veh/h	11	0	3	92	25	49	30	623	132	74	626	311
Adj No. of Lanes	0	1	0	0	1	1	1	2	0	1	2	0
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	15	15	15	6	6	6	2	2	2
Cap, veh/h	216	17	24	290	51	188	468	1852	392	560	1515	753
Arrive On Green	0.14	0.00	0.14	0.14	0.14	0.14	0.66	0.66	0.66	0.66	0.66	0.66
Sat Flow, veh/h	525	126	177	1075	373	1386	572	2796	591	705	2288	1137
Grp Volume(v), veh/h	14	0	0	117	0	49	30	379	376	74	484	453
Grp Sat Flow(s),veh/h/ln	827	0	0	1449	0	1386	572	1703	1684	705	1770	1655
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	1.4	1.1	4.3	4.3	2.3	5.7	5.7
Cycle Q Clear(g_c), s	3.1	0.0	0.0	3.1	0.0	1.4	6.8	4.3	4.3	6.6	5.7	5.7
Prop In Lane	0.79		0.21	0.79		1.00	1.00		0.35	1.00		0.69
Lane Grp Cap(c), veh/h	257	0	0	341	0	188	468	1128	1115	560	1172	1096
V/C Ratio(X)	0.05	0.00	0.00	0.34	0.00	0.26	0.06	0.34	0.34	0.13	0.41	0.41
Avail Cap(c_a), veh/h	727	0	0	794	0	669	468	1128	1115	560	1172	1096
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.8	0.0	0.0	18.0	0.0	17.2	5.1	3.3	3.3	4.7	3.5	3.5
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.6	0.0	0.7	0.3	0.8	0.8	0.5	1.1	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.0	1.4	0.0	0.6	0.2	2.3	2.2	0.5	3.0	2.9
LnGrp Delay(d),s/veh	16.9	0.0	0.0	18.6	0.0	18.0	5.3	4.1	4.1	5.2	4.6	4.7
LnGrp LOS	B			B		B	A	A	A	A	A	A
Approach Vol, veh/h		14			166			785			1011	
Approach Delay, s/veh		16.9			18.4			4.1			4.7	
Approach LOS		B			B			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		34.0		10.5		34.0		10.5
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green Setting (Gmax), s		29.5		21.5		29.5		21.5
Max Q Clear Time (g_c+I1), s		8.8		5.1		8.6		5.1
Green Ext Time (p_c), s		5.2		0.0		7.1		0.7

Intersection Summary	
HCM 2010 Ctrl Delay	5.7
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	250	6	220	16	3	0	361	566	9	23	441	139
Future Volume (vph)	250	6	220	16	3	0	361	566	9	23	441	139
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5		4.5		4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	0.95	0.95	1.00		1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	1.00		1.00		1.00	1.00	0.98	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00		1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85		1.00		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	0.95	1.00		0.96		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1649	1657	1553		1601		1736	3471	1518	1687	3374	1489
Flt Permitted	0.95	0.95	1.00		1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1649	1657	1553		1667		1736	3471	1518	1687	3374	1489
Peak-hour factor, PHF	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Adj. Flow (vph)	298	7	262	19	4	0	430	674	11	27	525	165
RTOR Reduction (vph)	0	0	219	0	0	0	0	0	5	0	0	117
Lane Group Flow (vph)	152	153	43	0	23	0	430	674	6	27	525	48
Confl. Peds. (#/hr)									3			1
Heavy Vehicles (%)	4%	4%	4%	14%	14%	14%	4%	4%	4%	7%	7%	7%
Turn Type	Split	NA	Perm	Perm	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	4	4			7		5	2		1	6	
Permitted Phases			4	7					2			6
Actuated Green, G (s)	12.2	12.2	12.2		1.7		20.4	40.0	40.0	2.0	21.6	21.6
Effective Green, g (s)	12.2	12.2	12.2		1.7		20.4	40.0	40.0	2.0	21.6	21.6
Actuated g/C Ratio	0.17	0.17	0.17		0.02		0.28	0.54	0.54	0.03	0.29	0.29
Clearance Time (s)	4.5	4.5	4.5		4.5		4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0		3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	272	273	256		38		479	1878	821	45	986	435
v/s Ratio Prot	0.09	c0.09					c0.25	0.19		0.02	c0.16	
v/s Ratio Perm			0.03		c0.01				0.00			0.03
v/c Ratio	0.56	0.56	0.17		0.61		0.90	0.36	0.01	0.60	0.53	0.11
Uniform Delay, d1	28.4	28.4	26.5		35.8		25.7	9.7	7.8	35.6	21.9	19.1
Progression Factor	1.00	1.00	1.00		1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.5	2.6	0.3		24.3		19.2	0.5	0.0	19.7	2.1	0.5
Delay (s)	30.9	31.0	26.8		60.0		44.9	10.2	7.8	55.2	24.0	19.6
Level of Service	C	C	C		E		D	B	A	E	C	B
Approach Delay (s)		29.0			60.0			23.6			24.2	
Approach LOS		C			E			C			C	

Intersection Summary

HCM 2000 Control Delay	25.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	73.9	Sum of lost time (s)	18.0
Intersection Capacity Utilization	54.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	185	257	211	233	371	99	200	443	324	152	691	285
Future Volume (vph)	185	257	211	233	371	99	200	443	324	152	691	285
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
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
Lane Util. Factor	0.91	0.91	1.00	0.91	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00	0.98	1.00	1.00	1.00	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	0.99	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1564	3270	1515	1507	3158	1456	1752	3505	1568	1719	3438	1511
Flt Permitted	0.95	0.99	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1564	3270	1515	1507	3158	1456	1752	3505	1568	1719	3438	1511
Peak-hour factor, PHF	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Adj. Flow (vph)	220	306	251	277	442	118	238	527	386	181	823	339
RTOR Reduction (vph)	0	0	206	0	0	95	0	0	278	0	0	250
Lane Group Flow (vph)	169	357	45	233	486	23	238	527	108	181	823	89
Confl. Peds. (#/hr)			2			4						4
Heavy Vehicles (%)	5%	5%	5%	9%	9%	9%	3%	3%	3%	5%	5%	5%
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	4	4		7	7		5	2		1	6	
Permitted Phases			4			7			2			6
Actuated Green, G (s)	15.4	15.4	15.4	16.9	16.9	16.9	13.4	24.1	24.1	11.9	22.6	22.6
Effective Green, g (s)	15.4	15.4	15.4	16.9	16.9	16.9	13.4	24.1	24.1	11.9	22.6	22.6
Actuated g/C Ratio	0.18	0.18	0.18	0.20	0.20	0.20	0.16	0.28	0.28	0.14	0.26	0.26
Clearance 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
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	279	583	270	295	618	285	272	978	437	237	900	395
v/s Ratio Prot	0.11	c0.11		c0.15	0.15		c0.14	0.15		0.11	c0.24	
v/s Ratio Perm			0.03			0.02			0.07			0.06
v/c Ratio	0.61	0.61	0.17	0.79	0.79	0.08	0.88	0.54	0.25	0.76	0.91	0.22
Uniform Delay, d1	32.7	32.7	30.0	33.0	33.0	28.4	35.6	26.4	24.1	35.8	30.9	25.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	3.7	1.9	0.3	13.1	6.5	0.1	25.3	0.6	0.3	13.6	13.5	0.3
Delay (s)	36.3	34.6	30.3	46.1	39.5	28.5	60.9	27.0	24.4	49.4	44.4	25.3
Level of Service	D	C	C	D	D	C	E	C	C	D	D	C
Approach Delay (s)		33.6			39.8			33.1			40.3	
Approach LOS		C			D			C			D	

Intersection Summary

HCM 2000 Control Delay	36.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	86.3	Sum of lost time (s)	18.0
Intersection Capacity Utilization	65.7%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	363	34	400	21	1197	596	287	616	39
Future Volume (vph)	0	0	0	363	34	400	21	1197	596	287	616	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor				0.95	0.95	1.00	1.00	0.95	0.88	1.00	0.95	
Frpb, ped/bikes				1.00	1.00	0.98	1.00	1.00	0.98	1.00	1.00	
Flpb, ped/bikes				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt				1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected				0.95	0.96	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)				1681	1699	1552	1770	3539	2725	1770	3503	
Flt Permitted				0.95	0.96	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)				1681	1699	1552	1770	3539	2725	1770	3503	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	0	0	382	36	421	22	1260	627	302	648	41
RTOR Reduction (vph)	0	0	0	0	0	217	0	0	0	0	6	0
Lane Group Flow (vph)	0	0	0	206	212	204	22	1260	627	302	683	0
Confl. Peds. (#/hr)						7			4			1
Turn Type				Split	NA	Perm	Prot	NA	Free	Prot	NA	
Protected Phases				8	8		5	2		1	6	
Permitted Phases						8			Free			
Actuated Green, G (s)				13.2	13.2	13.2	0.8	24.4	60.6	11.0	34.6	
Effective Green, g (s)				13.2	13.2	13.2	0.8	24.4	60.6	11.0	34.6	
Actuated g/C Ratio				0.22	0.22	0.22	0.01	0.40	1.00	0.18	0.57	
Clearance Time (s)				4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)				3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)				366	370	338	23	1424	2725	321	2000	
v/s Ratio Prot				0.12	0.12		0.01	c0.36		c0.17	0.19	
v/s Ratio Perm						c0.13			0.23			
v/c Ratio				0.56	0.57	0.60	0.96	0.88	0.23	0.94	0.34	
Uniform Delay, d1				21.1	21.2	21.3	29.9	16.8	0.0	24.5	6.9	
Progression Factor				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2				2.0	2.1	3.0	166.5	8.4	0.2	34.9	0.5	
Delay (s)				23.1	23.3	24.3	196.4	25.2	0.2	59.4	7.4	
Level of Service				C	C	C	F	C	A	E	A	
Approach Delay (s)		0.0			23.8			18.9			23.2	
Approach LOS		A			C			B			C	

Intersection Summary

HCM 2000 Control Delay	21.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	60.6	Sum of lost time (s)	12.0
Intersection Capacity Utilization	70.4%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	231	736	64	73	369	211	71	731	145	154	434	70
Future Volume (veh/h)	231	736	64	73	369	211	71	731	145	154	434	70
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1827	1827	1827
Adj Flow Rate, veh/h	254	809	70	80	405	232	78	803	159	169	477	77
Adj No. of Lanes	1	2	1	1	2	0	1	2	1	1	2	1
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	4	4	4
Cap, veh/h	297	1176	519	103	486	275	100	888	397	207	1087	483
Arrive On Green	0.17	0.33	0.33	0.06	0.22	0.22	0.06	0.25	0.25	0.12	0.31	0.31
Sat Flow, veh/h	1774	3539	1560	1774	2180	1235	1774	3539	1581	1740	3471	1544
Grp Volume(v), veh/h	254	809	70	80	328	309	78	803	159	169	477	77
Grp Sat Flow(s),veh/h/ln	1774	1770	1560	1774	1770	1645	1774	1770	1581	1740	1736	1544
Q Serve(g_s), s	10.4	14.8	2.3	3.3	13.2	13.5	3.3	16.5	6.3	7.1	8.2	2.7
Cycle Q Clear(g_c), s	10.4	14.8	2.3	3.3	13.2	13.5	3.3	16.5	6.3	7.1	8.2	2.7
Prop In Lane	1.00		1.00	1.00		0.75	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	297	1176	519	103	395	367	100	888	397	207	1087	483
V/C Ratio(X)	0.86	0.69	0.13	0.78	0.83	0.84	0.78	0.90	0.40	0.82	0.44	0.16
Avail Cap(c_a), veh/h	343	1247	550	144	425	395	168	897	401	244	1087	483
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	30.3	21.6	17.5	34.8	27.8	27.8	34.9	27.2	23.4	32.2	20.5	18.6
Incr Delay (d2), s/veh	17.0	1.5	0.1	16.1	12.4	14.4	12.1	12.4	0.7	16.9	0.3	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.5	7.4	1.0	2.1	7.8	7.6	1.9	9.6	2.8	4.4	4.0	1.2
LnGrp Delay(d),s/veh	47.3	23.1	17.6	50.9	40.1	42.2	47.0	39.6	24.0	49.1	20.8	18.8
LnGrp LOS	D	C	B	D	D	D	D	D	C	D	C	B
Approach Vol, veh/h		1133			717			1040			723	
Approach Delay, s/veh		28.2			42.2			37.8			27.2	
Approach LOS		C			D			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.4	23.3	8.8	29.4	8.7	28.0	17.0	21.2
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	10.5	19.0	6.1	26.4	7.1	22.4	14.5	18.0
Max Q Clear Time (g_c+I1), s	9.1	18.5	5.3	16.8	5.3	10.2	12.4	15.5
Green Ext Time (p_c), s	0.1	0.3	0.0	4.0	0.0	2.7	0.2	1.0

Intersection Summary	
HCM 2010 Ctrl Delay	33.5
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	54	719	93	121	406	621	71	264	714	598	147	323
Future Volume (vph)	54	719	93	121	406	621	71	264	714	598	147	323
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	1.00	0.95	1.00		1.00	0.95		1.00	0.95	1.00	1.00	0.95
Frpb, ped/bikes	1.00	1.00	0.98		1.00	1.00		1.00	1.00	0.99	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85		1.00	0.98		1.00	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1770	3539	1551		1770	3478		1770	3539	1561	1719	3438
Flt Permitted	0.95	1.00	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1770	3539	1551		1770	3478		1770	3539	1561	1719	3438
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	59	782	101	132	441	675	77	287	776	650	160	351
RTOR Reduction (vph)	0	0	79	0	0	6	0	0	0	235	0	0
Lane Group Flow (vph)	59	782	22	0	573	746	0	287	776	415	160	351
Confl. Peds. (#/hr)			4				3			1		
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	5%	5%
Turn Type	Prot	NA	Perm	Prot	Prot	NA		Prot	NA	Perm	Prot	NA
Protected Phases	7	4		3	3	8		5	2		1	6
Permitted Phases			4							2		
Actuated Green, G (s)	7.5	28.4	28.4		39.5	60.4		22.6	33.1	33.1	11.9	22.4
Effective Green, g (s)	7.5	28.4	28.4		39.5	60.4		22.6	33.1	33.1	11.9	22.4
Actuated g/C Ratio	0.06	0.22	0.22		0.30	0.46		0.17	0.25	0.25	0.09	0.17
Clearance Time (s)	4.5	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	101	767	336		534	1604		305	894	394	156	588
v/s Ratio Prot	0.03	c0.22			c0.32	0.21		c0.16	0.22		0.09	0.10
v/s Ratio Perm			0.01							c0.27		
v/c Ratio	0.58	1.02	0.07		1.07	0.46		0.94	0.87	1.05	1.03	0.60
Uniform Delay, d1	60.2	51.2	40.7		45.7	24.2		53.5	46.8	48.9	59.5	50.1
Progression Factor	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	8.3	37.5	0.1		60.0	0.2		36.1	11.1	60.4	79.0	4.4
Delay (s)	68.5	88.8	40.8		105.7	24.4		89.6	58.0	109.3	138.5	54.5
Level of Service	E	F	D		F	C		F	E	F	F	D
Approach Delay (s)		82.3				59.5			82.7			79.9
Approach LOS		F				E			F			E

Intersection Summary			
HCM 2000 Control Delay	75.5	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.06		
Actuated Cycle Length (s)	130.9	Sum of lost time (s)	18.0
Intersection Capacity Utilization	109.4%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBR
Lane Configurations	
Traffic Volume (vph)	12
Future Volume (vph)	12
Ideal Flow (vphpl)	1900
Total Lost time (s)	4.5
Lane Util. Factor	1.00
Frpb, ped/bikes	0.98
Flpb, ped/bikes	1.00
Frt	0.85
Flt Protected	1.00
Satd. Flow (prot)	1506
Flt Permitted	1.00
Satd. Flow (perm)	1506
Peak-hour factor, PHF	0.92
Adj. Flow (vph)	13
RTOR Reduction (vph)	11
Lane Group Flow (vph)	2
Confl. Peds. (#/hr)	4
Heavy Vehicles (%)	5%
Turn Type	Perm
Protected Phases	
Permitted Phases	6
Actuated Green, G (s)	22.4
Effective Green, g (s)	22.4
Actuated g/C Ratio	0.17
Clearance Time (s)	4.5
Vehicle Extension (s)	3.0
Lane Grp Cap (vph)	257
v/s Ratio Prot	
v/s Ratio Perm	0.00
v/c Ratio	0.01
Uniform Delay, d1	45.0
Progression Factor	1.00
Incremental Delay, d2	0.1
Delay (s)	45.1
Level of Service	D
Approach Delay (s)	
Approach LOS	

Intersection Summary

Intersection

Int Delay, s/veh 11.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	1333	246	0	1211	8	0	0	244	5	0	6
Future Vol, veh/h	4	1333	246	0	1211	8	0	0	244	5	0	6
Conflicting Peds, #/hr	5	0	3	3	0	5	0	0	2	2	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	36	36	36	9	9	9
Mvmt Flow	4	1433	265	0	1302	9	0	0	262	5	0	6

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1316	0	0	-	-	0	-	-	854	2039	3021	661
Stage 1	-	-	-	-	-	-	-	-	-	1312	1312	-
Stage 2	-	-	-	-	-	-	-	-	-	727	1709	-
Critical Hdwy	4.14	-	-	-	-	-	-	-	7.62	7.68	6.68	7.08
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	6.68	5.68	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	6.68	5.68	-
Follow-up Hdwy	2.22	-	-	-	-	-	-	-	3.66	3.59	4.09	3.39
Pot Cap-1 Maneuver	521	-	-	0	-	-	0	0	~ 241	30	11	389
Stage 1	-	-	-	0	-	-	0	0	-	158	214	-
Stage 2	-	-	-	0	-	-	0	0	-	366	135	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	519	-	-	-	-	-	-	-	~ 240	-	8	387
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	8	-
Stage 1	-	-	-	-	-	-	-	-	-	113	213	-
Stage 2	-	-	-	-	-	-	-	-	-	-	97	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.5	0	129.4	
HCM LOS			F	-

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBT	WBR	SBLn1
Capacity (veh/h)	240	519	-	-	-	-	-
HCM Lane V/C Ratio	1.093	0.008	-	-	-	-	-
HCM Control Delay (s)	129.4	12	1.7	-	-	-	-
HCM Lane LOS	F	B	A	-	-	-	-
HCM 95th %tile Q(veh)	11.4	0	-	-	-	-	-

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	189	296	93	224	284	22	144	795	506	31	405	198
Future Volume (veh/h)	189	296	93	224	284	22	144	795	506	31	405	198
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.96	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	201	315	99	238	302	23	153	846	538	33	431	211
Adj No. of Lanes	1	2	0	1	2	1	1	2	1	1	2	1
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	251	491	151	284	718	317	192	1221	522	61	960	413
Arrive On Green	0.14	0.18	0.18	0.16	0.20	0.20	0.11	0.34	0.34	0.03	0.27	0.27
Sat Flow, veh/h	1774	2655	819	1774	3539	1560	1774	3539	1514	1774	3539	1522
Grp Volume(v), veh/h	201	208	206	238	302	23	153	846	538	33	431	211
Grp Sat Flow(s),veh/h/ln	1774	1770	1704	1774	1770	1560	1774	1770	1514	1774	1770	1522
Q Serve(g_s), s	7.2	7.1	7.3	8.5	4.9	0.8	5.5	13.4	22.5	1.2	6.6	7.7
Cycle Q Clear(g_c), s	7.2	7.1	7.3	8.5	4.9	0.8	5.5	13.4	22.5	1.2	6.6	7.7
Prop In Lane	1.00		0.48	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	251	327	315	284	718	317	192	1221	522	61	960	413
V/C Ratio(X)	0.80	0.64	0.65	0.84	0.42	0.07	0.80	0.69	1.03	0.54	0.45	0.51
Avail Cap(c_a), veh/h	294	488	470	313	1015	447	231	1221	522	136	1031	443
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	27.1	24.6	24.7	26.6	22.7	21.0	28.4	18.4	21.4	31.0	19.7	20.1
Incr Delay (d2), s/veh	12.6	2.1	2.3	16.8	0.4	0.1	14.9	1.7	47.3	7.2	0.3	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	4.4	3.7	3.6	5.5	2.4	0.3	3.5	6.8	16.1	0.7	3.3	3.3
LnGrp Delay(d),s/veh	39.7	26.6	27.0	43.4	23.0	21.1	43.3	20.1	68.6	38.2	20.1	21.1
LnGrp LOS	D	C	C	D	C	C	D	C	F	D	C	C
Approach Vol, veh/h		615			563			1537			675	
Approach Delay, s/veh		31.0			31.6			39.4			21.3	
Approach LOS		C			C			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.8	27.0	14.9	16.6	11.6	22.2	13.7	17.7
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.0	22.5	11.5	18.0	8.5	19.0	10.8	18.7
Max Q Clear Time (g_c+I1), s	3.2	24.5	10.5	9.3	7.5	9.7	9.2	6.9
Green Ext Time (p_c), s	0.0	0.0	0.1	1.6	0.0	2.5	0.1	1.5

Intersection Summary	
HCM 2010 Ctrl Delay	33.0
HCM 2010 LOS	C

Intersection												
Int Delay, s/veh	9927											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	24	26	39	116	26	257	55	1270	115	250	505	40
Future Vol, veh/h	24	26	39	116	26	257	55	1270	115	250	505	40
Conflicting Peds, #/hr	0	0	1	1	0	0	13	0	2	2	0	13
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	5	5	5
Mvmt Flow	26	29	43	127	29	282	60	1396	126	275	555	44

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1973	2784	314	2424	2743	763	612	0	0	1524	0	0
Stage 1	1140	1140	-	1581	1581	-	-	-	-	-	-	-
Stage 2	833	1644	-	843	1162	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.2	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.25	-	-
Pot Cap-1 Maneuver	37	~ 19	682	~ 17	~ 20	347	963	-	-	419	-	-
Stage 1	214	274	-	~ 114	167	-	-	-	-	-	-	-
Stage 2	329	156	-	325	267	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	0	0	674	~ 1	0	346	953	-	-	418	-	-
Mov Cap-2 Maneuver	0	0	-	~ 1	0	-	-	-	-	-	-	-
Stage 1	117	~ 2	-	~ 63	92	-	-	-	-	-	-	-
Stage 2	~ 23	86	-	-	~ 2	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11.2	$ 67710.9	2	13.5
HCM LOS	B	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	953	-	-	674	3	418	-	-
HCM Lane V/C Ratio	0.063	-	-	0.145	46.154	0.657	-	-
HCM Control Delay (s)	9	1.9	-	11.2	$ 67710.9	28.7	7.1	-
HCM Lane LOS	A	A	-	B	F	D	A	-
HCM 95th %tile Q(veh)	0.2	-	-	0.5	57.3	4.6	-	-

Notes

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

Intersection												
Int Delay, s/veh	9927											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	24	26	39	116	26	257	55	1270	115	250	505	40
Future Vol, veh/h	24	26	39	116	26	257	55	1270	115	250	505	40
Conflicting Peds, #/hr	0	0	1	1	0	0	13	0	2	2	0	13
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	5	5	5
Mvmt Flow	26	29	43	127	29	282	60	1396	126	275	555	44

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1973	2784	314	2424	2743	763	612	0	0	1524	0	0
Stage 1	1140	1140	-	1581	1581	-	-	-	-	-	-	-
Stage 2	833	1644	-	843	1162	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.2	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.25	-	-
Pot Cap-1 Maneuver	37	~ 19	682	~ 17	~ 20	347	963	-	-	419	-	-
Stage 1	214	274	-	~ 114	167	-	-	-	-	-	-	-
Stage 2	329	156	-	325	267	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	0	0	674	~ 1	0	346	953	-	-	418	-	-
Mov Cap-2 Maneuver	0	0	-	~ 1	0	-	-	-	-	-	-	-
Stage 1	117	~ 2	-	~ 63	92	-	-	-	-	-	-	-
Stage 2	~ 23	86	-	-	~ 2	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11.2	$ 67710.9	2	13.5
HCM LOS	B	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	953	-	-	674	3	418	-	-
HCM Lane V/C Ratio	0.063	-	-	0.145	46.154	0.657	-	-
HCM Control Delay (s)	9	1.9	-	11.2	$ 67710.9	28.7	7.1	-
HCM Lane LOS	A	A	-	B	F	D	A	-
HCM 95th %tile Q(veh)	0.2	-	-	0.5	57.3	4.6	-	-

Notes

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

Intersection	
Int Delay, s/veh	1.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	3	114	1295	54	17	667
Future Vol, veh/h	3	114	1295	54	17	667
Conflicting Peds, #/hr	0	0	0	3	3	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	3	3	4	4
Mvmt Flow	3	124	1408	59	18	725

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1840	737	0	0	1470	0
Stage 1	1441	-	-	-	-	-
Stage 2	399	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.18	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.24	-
Pot Cap-1 Maneuver	67	361	-	-	445	-
Stage 1	184	-	-	-	-	-
Stage 2	647	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	62	360	-	-	444	-
Mov Cap-2 Maneuver	62	-	-	-	-	-
Stage 1	171	-	-	-	-	-
Stage 2	647	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	23.4	0	0.7
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	321	444	-
HCM Lane V/C Ratio	-	-	0.396	0.042	-
HCM Control Delay (s)	-	-	23.4	13.5	0.4
HCM Lane LOS	-	-	C	B	A
HCM 95th %tile Q(veh)	-	-	1.8	0.1	-

Intersection	
Int Delay, s/veh	3.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	63	10	23	1283	614	54
Future Vol, veh/h	63	10	23	1283	614	54
Conflicting Peds, #/hr	4	0	2	0	0	2
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	91	91	91	91	91	91
Heavy Vehicles, %	2	2	3	3	4	4
Mvmt Flow	69	11	25	1410	675	59

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1466	369	736	0	-	0
Stage 1	707	-	-	-	-	-
Stage 2	759	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.16	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.23	-	-	-
Pot Cap-1 Maneuver	119	628	859	-	-	-
Stage 1	450	-	-	-	-	-
Stage 2	423	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	103	627	858	-	-	-
Mov Cap-2 Maneuver	103	-	-	-	-	-
Stage 1	389	-	-	-	-	-
Stage 2	422	-	-	-	-	-

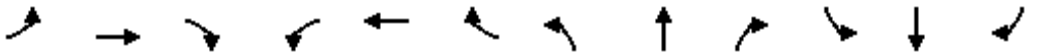
Approach	EB	NB	SB
HCM Control Delay, s	86.9	0.8	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	858	-	116	-	-
HCM Lane V/C Ratio	0.029	-	0.692	-	-
HCM Control Delay (s)	9.3	0.6	86.9	-	-
HCM Lane LOS	A	A	F	-	-
HCM 95th %tile Q(veh)	0.1	-	3.7	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	52	1	12	128	45	105	25	993	109	26	419	129
Future Volume (veh/h)	52	1	12	128	45	105	25	993	109	26	419	129
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1792	1792	1827	1827	1900	1845	1845	1900
Adj Flow Rate, veh/h	58	1	13	144	51	118	28	1116	122	29	471	145
Adj No. of Lanes	0	1	0	0	1	1	1	2	0	1	2	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	6	6	6	4	4	4	3	3	3
Cap, veh/h	221	16	24	344	92	309	563	1954	213	323	1636	500
Arrive On Green	0.20	0.20	0.20	0.20	0.20	0.20	0.62	0.62	0.62	0.62	0.62	0.62
Sat Flow, veh/h	458	77	118	1084	452	1515	787	3156	344	443	2643	808
Grp Volume(v), veh/h	72	0	0	195	0	118	28	613	625	29	311	305
Grp Sat Flow(s),veh/h/ln	652	0	0	1536	0	1515	787	1736	1764	443	1752	1698
Q Serve(g_s), s	2.1	0.0	0.0	0.0	0.0	3.4	0.9	10.6	10.6	2.1	4.2	4.2
Cycle Q Clear(g_c), s	7.8	0.0	0.0	5.7	0.0	3.4	5.1	10.6	10.6	12.7	4.2	4.2
Prop In Lane	0.81		0.18	0.74		1.00	1.00		0.20	1.00		0.48
Lane Grp Cap(c), veh/h	261	0	0	436	0	309	563	1075	1092	323	1085	1051
V/C Ratio(X)	0.28	0.00	0.00	0.45	0.00	0.38	0.05	0.57	0.57	0.09	0.29	0.29
Avail Cap(c_a), veh/h	488	0	0	693	0	581	563	1075	1092	323	1085	1051
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.4	0.0	0.0	18.4	0.0	17.5	5.7	5.7	5.7	9.5	4.5	4.5
Incr Delay (d2), s/veh	0.6	0.0	0.0	0.7	0.0	0.8	0.2	2.2	2.2	0.5	0.7	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.0	0.0	2.6	0.0	1.5	0.2	5.6	5.7	0.3	2.2	2.2
LnGrp Delay(d),s/veh	21.0	0.0	0.0	19.1	0.0	18.3	5.9	7.9	7.9	10.0	5.2	5.2
LnGrp LOS	C			B		B	A	A	A	B	A	A
Approach Vol, veh/h		72			313			1266			645	
Approach Delay, s/veh		21.0			18.8			7.9			5.4	
Approach LOS		C			B			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		36.0		14.9		36.0		14.9
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green Setting (Gmax), s		31.5		19.5		31.5		19.5
Max Q Clear Time (g_c+I1), s		12.6		9.8		14.7		7.7
Green Ext Time (p_c), s		8.7		0.2		4.0		1.1

Intersection Summary	
HCM 2010 Ctrl Delay	9.1
HCM 2010 LOS	A



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	367	0	320	40	4	8	291	722	17	15	452	109
Future Volume (vph)	367	0	320	40	4	8	291	722	17	15	452	109
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5		4.5		4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	0.95	0.95	1.00		1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	1.00		1.00		1.00	1.00	0.98	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00		1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85		0.98		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	0.95	1.00		0.96		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1665	1665	1568		1398		1719	3438	1500	1703	3406	1524
Flt Permitted	0.95	0.95	1.00		0.86		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1665	1665	1568		1252		1719	3438	1500	1703	3406	1524
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	399	0	348	43	4	9	316	785	18	16	491	118
RTOR Reduction (vph)	0	0	284	0	9	0	0	0	9	0	0	81
Lane Group Flow (vph)	199	200	64	0	47	0	316	785	9	16	491	37
Confl. Peds. (#/hr)									5			
Heavy Vehicles (%)	3%	3%	3%	28%	28%	28%	5%	5%	5%	6%	6%	6%
Turn Type	Split	NA	Perm	Perm	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	4	4			7		5	2		1	6	
Permitted Phases			4	7					2			6
Actuated Green, G (s)	14.3	14.3	14.3		4.1		16.5	39.9	39.9	0.9	24.3	24.3
Effective Green, g (s)	14.3	14.3	14.3		4.1		16.5	39.9	39.9	0.9	24.3	24.3
Actuated g/C Ratio	0.19	0.19	0.19		0.05		0.21	0.52	0.52	0.01	0.31	0.31
Clearance Time (s)	4.5	4.5	4.5		4.5		4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0		3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	308	308	290		66		367	1776	775	19	1072	479
v/s Ratio Prot	0.12	c0.12					c0.18	c0.23		0.01	0.14	
v/s Ratio Perm			0.04		c0.04				0.01			0.02
v/c Ratio	0.65	0.65	0.22		0.72		0.86	0.44	0.01	0.84	0.46	0.08
Uniform Delay, d1	29.1	29.1	26.7		36.0		29.2	11.7	9.1	38.1	21.2	18.6
Progression Factor	1.00	1.00	1.00		1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	4.6	4.7	0.4		31.1		18.3	0.8	0.0	131.7	1.4	0.3
Delay (s)	33.7	33.8	27.1		67.1		47.5	12.5	9.1	169.8	22.6	18.9
Level of Service	C	C	C		E		D	B	A	F	C	B
Approach Delay (s)		30.7			67.1			22.3			25.7	
Approach LOS		C			E			C			C	

Intersection Summary			
HCM 2000 Control Delay	26.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	77.2	Sum of lost time (s)	18.0
Intersection Capacity Utilization	52.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	272	284	232	320	418	345	232	622	244	152	490	259
Future Volume (vph)	272	284	232	320	418	345	232	622	244	152	490	259
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
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
Lane Util. Factor	0.91	0.91	1.00	0.91	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	0.99	1.00	0.95	0.99	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1579	3286	1528	1535	3206	1509	1752	3505	1568	1719	3438	1517
Flt Permitted	0.95	0.99	1.00	0.95	0.99	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1579	3286	1528	1535	3206	1509	1752	3505	1568	1719	3438	1517
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	309	323	264	364	475	392	264	707	277	173	557	294
RTOR Reduction (vph)	0	0	214	0	0	255	0	0	207	0	0	233
Lane Group Flow (vph)	207	425	50	273	566	137	264	707	70	173	557	61
Confl. Peds. (#/hr)			3									1
Heavy Vehicles (%)	4%	4%	4%	7%	7%	7%	3%	3%	3%	5%	5%	5%
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	4	4		7	7		5	2		1	6	
Permitted Phases			4			7			2			6
Actuated Green, G (s)	16.5	16.5	16.5	18.8	18.8	18.8	15.0	21.8	21.8	11.2	18.0	18.0
Effective Green, g (s)	16.5	16.5	16.5	18.8	18.8	18.8	15.0	21.8	21.8	11.2	18.0	18.0
Actuated g/C Ratio	0.19	0.19	0.19	0.22	0.22	0.22	0.17	0.25	0.25	0.13	0.21	0.21
Clearance 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
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	301	628	292	334	698	328	304	885	396	223	717	316
v/s Ratio Prot	c0.13	0.13		c0.18	0.18		c0.15	c0.20		0.10	0.16	
v/s Ratio Perm			0.03			0.09			0.04			0.04
v/c Ratio	0.69	0.68	0.17	0.82	0.81	0.42	0.87	0.80	0.18	0.78	0.78	0.19
Uniform Delay, d1	32.5	32.4	29.2	32.1	32.1	29.0	34.7	30.2	25.2	36.3	32.3	28.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	6.4	2.9	0.3	14.3	7.1	0.9	22.1	5.1	0.2	15.5	5.3	0.3
Delay (s)	38.9	35.3	29.5	46.4	39.2	29.9	56.8	35.3	25.4	51.8	37.5	28.5
Level of Service	D	D	C	D	D	C	E	D	C	D	D	C
Approach Delay (s)		34.4			37.8			37.7			37.3	
Approach LOS		C			D			D			D	

Intersection Summary

HCM 2000 Control Delay	37.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	86.3	Sum of lost time (s)	18.0
Intersection Capacity Utilization	66.3%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	47	445	105	81	593	866	57	90	345	244	147	609
Future Volume (vph)	47	445	105	81	593	866	57	90	345	244	147	609
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	1.00	0.95	1.00		0.97	0.95		1.00	0.95	1.00	1.00	0.95
Frpb, ped/bikes	1.00	1.00	0.99		1.00	1.00		1.00	1.00	0.99	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85		1.00	0.99		1.00	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1770	3539	1560		3433	3504		1719	3438	1516	1752	3505
Flt Permitted	0.95	1.00	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1770	3539	1560		3433	3504		1719	3438	1516	1752	3505
Peak-hour factor, PHF	0.89	0.89	0.89	0.92	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	53	500	118	88	666	973	64	101	388	274	165	684
RTOR Reduction (vph)	0	0	91	0	0	6	0	0	0	212	0	0
Lane Group Flow (vph)	53	500	27	0	754	1031	0	101	388	62	165	684
Confl. Peds. (#/hr)			2				1			2		
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	5%	5%	5%	3%	3%
Turn Type	Prot	NA	Perm	Prot	Prot	NA		Prot	NA	Perm	Prot	NA
Protected Phases	7	4		3	3	8		5	2		1	6
Permitted Phases			4							2		
Actuated Green, G (s)	3.0	18.0	18.0		17.7	32.7		5.7	18.1	18.1	8.2	20.6
Effective Green, g (s)	3.0	18.0	18.0		17.7	32.7		5.7	18.1	18.1	8.2	20.6
Actuated g/C Ratio	0.04	0.22	0.22		0.22	0.41		0.07	0.23	0.23	0.10	0.26
Clearance Time (s)	4.5	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	66	796	351		759	1432		122	777	342	179	902
v/s Ratio Prot	0.03	0.14			c0.22	c0.29		0.06	0.11		c0.09	c0.20
v/s Ratio Perm			0.02							0.04		
v/c Ratio	0.80	0.63	0.08		0.99	0.72		0.83	0.50	0.18	0.92	0.76
Uniform Delay, d1	38.2	28.0	24.4		31.1	19.8		36.7	27.0	25.0	35.6	27.4
Progression Factor	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	48.8	1.6	0.1		30.9	1.8		34.8	2.3	1.2	45.2	5.9
Delay (s)	87.0	29.5	24.5		61.9	21.6		71.5	29.3	26.1	80.8	33.3
Level of Service	F	C	C		E	C		E	C	C	F	C
Approach Delay (s)		33.2				38.6			33.7			42.3
Approach LOS		C				D			C			D

Intersection Summary			
HCM 2000 Control Delay	37.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	70.2%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	SBR
Lane Configurations	
Traffic Volume (vph)	9
Future Volume (vph)	9
Ideal Flow (vphpl)	1900
Total Lost time (s)	4.5
Lane Util. Factor	1.00
Frpb, ped/bikes	0.99
Flpb, ped/bikes	1.00
Frt	0.85
Flt Protected	1.00
Satd. Flow (prot)	1547
Flt Permitted	1.00
Satd. Flow (perm)	1547
Peak-hour factor, PHF	0.89
Adj. Flow (vph)	10
RTOR Reduction (vph)	7
Lane Group Flow (vph)	3
Confl. Peds. (#/hr)	1
Heavy Vehicles (%)	3%
Turn Type	Perm
Protected Phases	
Permitted Phases	6
Actuated Green, G (s)	20.6
Effective Green, g (s)	20.6
Actuated g/C Ratio	0.26
Clearance Time (s)	4.5
Vehicle Extension (s)	3.0
Lane Grp Cap (vph)	398
v/s Ratio Prot	
v/s Ratio Perm	0.00
v/c Ratio	0.01
Uniform Delay, d1	22.1
Progression Factor	1.00
Incremental Delay, d2	0.0
Delay (s)	22.1
Level of Service	C
Approach Delay (s)	
Approach LOS	

Intersection Summary

Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	46	446	105	81	593	866	57	90	345	244	142	609
Future Volume (vph)	46	446	105	81	593	866	57	90	345	244	142	609
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	1.00	0.95	1.00		0.97	0.95		1.00	0.95	0.88	1.00	0.95
Frpb, ped/bikes	1.00	1.00	0.99		1.00	1.00		1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85		1.00	0.99		1.00	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1770	3539	1560		3433	3504		1719	3438	2707	1752	3505
Flt Permitted	0.95	1.00	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1770	3539	1560		3433	3504		1719	3438	2707	1752	3505
Peak-hour factor, PHF	0.89	0.89	0.89	0.92	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	52	501	118	88	666	973	64	101	388	274	160	684
RTOR Reduction (vph)	0	0	91	0	0	6	0	0	0	211	0	0
Lane Group Flow (vph)	52	501	27	0	754	1031	0	101	388	63	160	684
Confl. Peds. (#/hr)			2				1			2		
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	5%	5%	5%	3%	3%
Turn Type	Prot	NA	Perm	Prot	Prot	NA		Prot	NA	Prot	Prot	NA
Protected Phases	7	4		3	3	8		5	2	2	1	6
Permitted Phases			4									
Actuated Green, G (s)	3.0	18.0	18.0		17.7	32.7		5.7	18.4	18.4	7.9	20.6
Effective Green, g (s)	3.0	18.0	18.0		17.7	32.7		5.7	18.4	18.4	7.9	20.6
Actuated g/C Ratio	0.04	0.22	0.22		0.22	0.41		0.07	0.23	0.23	0.10	0.26
Clearance Time (s)	4.5	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	66	796	351		759	1432		122	790	622	173	902
v/s Ratio Prot	0.03	0.14			c0.22	c0.29		0.06	0.11	0.02	c0.09	c0.20
v/s Ratio Perm			0.02									
v/c Ratio	0.79	0.63	0.08		0.99	0.72		0.83	0.49	0.10	0.92	0.76
Uniform Delay, d1	38.2	28.0	24.4		31.1	19.8		36.7	26.7	24.3	35.8	27.4
Progression Factor	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	44.9	1.6	0.1		30.9	1.8		34.8	2.2	0.3	46.8	5.9
Delay (s)	83.1	29.6	24.5		61.9	21.6		71.5	28.9	24.6	82.6	33.3
Level of Service	F	C	C		E	C		E	C	C	F	C
Approach Delay (s)		32.8				38.6			33.0			42.4
Approach LOS		C				D			C			D

Intersection Summary			
HCM 2000 Control Delay	37.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	69.6%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	SBR
Lane Configurations	
Traffic Volume (vph)	9
Future Volume (vph)	9
Ideal Flow (vphpl)	1900
Total Lost time (s)	4.5
Lane Util. Factor	1.00
Frpb, ped/bikes	0.99
Flpb, ped/bikes	1.00
Frt	0.85
Flt Protected	1.00
Satd. Flow (prot)	1547
Flt Permitted	1.00
Satd. Flow (perm)	1547
Peak-hour factor, PHF	0.89
Adj. Flow (vph)	10
RTOR Reduction (vph)	7
Lane Group Flow (vph)	3
Confl. Peds. (#/hr)	1
Heavy Vehicles (%)	3%
Turn Type	Perm
Protected Phases	
Permitted Phases	6
Actuated Green, G (s)	20.6
Effective Green, g (s)	20.6
Actuated g/C Ratio	0.26
Clearance Time (s)	4.5
Vehicle Extension (s)	3.0
Lane Grp Cap (vph)	398
v/s Ratio Prot	
v/s Ratio Perm	0.00
v/c Ratio	0.01
Uniform Delay, d1	22.1
Progression Factor	1.00
Incremental Delay, d2	0.0
Delay (s)	22.1
Level of Service	C
Approach Delay (s)	
Approach LOS	

Intersection Summary

Intersection												
Int Delay, s/veh	1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	747	171	0	1590	12	0	0	133	0	0	7
Future Vol, veh/h	0	747	171	0	1590	12	0	0	133	0	0	7
Conflicting Peds, #/hr	2	0	3	3	0	2	1	0	0	0	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	3	3	3	2	2	2	44	44	44	2	2	2
Mvmt Flow	0	849	194	0	1807	14	0	0	151	0	0	8

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	-	-	0	-	-	525	-	-	914
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	-	-	7.78	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	-	-	3.74	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	0	-	-	0	0	402	0	0	276
Stage 1	0	-	-	0	-	-	0	0	-	0	0	-
Stage 2	0	-	-	0	-	-	0	0	-	0	0	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	-	-	-	-	-	-	-	-	401	-	-	275
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	19.3	18.5
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT	WBR	SBLn1
Capacity (veh/h)	401	-	-	-	-	275
HCM Lane V/C Ratio	0.377	-	-	-	-	0.029
HCM Control Delay (s)	19.3	-	-	-	-	18.5
HCM Lane LOS	C	-	-	-	-	C
HCM 95th %tile Q(veh)	1.7	-	-	-	-	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	35	17	76	63	14	139	40	519	77	167	1106	43
Future Volume (veh/h)	35	17	76	63	14	139	40	519	77	167	1106	43
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1863	1810	1810	1900	1863	1863	1900
Adj Flow Rate, veh/h	38	18	83	68	15	151	43	564	84	182	1202	47
Adj No. of Lanes	0	1	1	0	1	1	1	2	0	1	2	0
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	5	5	5	2	2	2
Cap, veh/h	113	33	473	122	15	680	61	1037	154	232	1533	60
Arrive On Green	0.30	0.30	0.30	0.30	0.30	0.30	0.04	0.35	0.35	0.13	0.44	0.44
Sat Flow, veh/h	0	110	1582	0	51	1582	1723	2999	445	1774	3471	136
Grp Volume(v), veh/h	56	0	83	83	0	151	43	323	325	182	612	637
Grp Sat Flow(s),veh/h/ln	110	0	1582	51	0	1582	1723	1719	1726	1774	1770	1838
Q Serve(g_s), s	0.0	0.0	2.1	0.0	0.0	3.2	1.3	8.1	8.1	5.3	15.8	15.8
Cycle Q Clear(g_c), s	16.0	0.0	2.1	16.0	0.0	3.2	1.3	8.1	8.1	5.3	15.8	15.8
Prop In Lane	0.68		1.00	0.82		1.00	1.00		0.26	1.00		0.07
Lane Grp Cap(c), veh/h	146	0	473	138	0	680	61	594	597	232	781	811
V/C Ratio(X)	0.38	0.00	0.18	0.60	0.00	0.22	0.71	0.54	0.55	0.78	0.78	0.78
Avail Cap(c_a), veh/h	146	0	473	138	0	680	129	642	645	398	926	961
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	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.6	0.0	13.9	23.8	0.0	9.6	25.5	14.1	14.1	22.5	12.8	12.8
Incr Delay (d2), s/veh	1.7	0.0	0.2	7.2	0.0	0.2	13.9	0.8	0.8	5.7	3.8	3.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	0.9	1.5	0.0	1.4	0.9	3.9	4.0	2.9	8.5	8.8
LnGrp Delay(d),s/veh	19.3	0.0	14.1	31.0	0.0	9.8	39.5	14.9	14.9	28.2	16.5	16.4
LnGrp LOS	B		B	C		A	D	B	B	C	B	B
Approach Vol, veh/h		139			234			691			1431	
Approach Delay, s/veh		16.2			17.3			16.4			18.0	
Approach LOS		B			B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	11.0	22.5		20.0	5.9	27.6		20.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	12.0	20.0		16.0	4.0	28.0		16.0
Max Q Clear Time (g_c+I1), s	7.3	10.1		18.0	3.3	17.8		18.0
Green Ext Time (p_c), s	0.2	2.9		0.0	0.0	5.8		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	17.4
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	58	715	93	121	406	621	71	264	714	598	152	323
Future Volume (vph)	58	715	93	121	406	621	71	264	714	598	152	323
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	1.00	0.95	1.00		0.97	0.95		1.00	0.95	1.00	1.00	0.95
Frpb, ped/bikes	1.00	1.00	0.98		1.00	1.00		1.00	1.00	0.99	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85		1.00	0.98		1.00	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1770	3539	1555		3433	3479		1770	3539	1562	1719	3438
Flt Permitted	0.95	1.00	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1770	3539	1555		3433	3479		1770	3539	1562	1719	3438
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	63	777	101	132	441	675	77	287	776	650	165	351
RTOR Reduction (vph)	0	0	79	0	0	9	0	0	0	123	0	0
Lane Group Flow (vph)	63	777	22	0	573	743	0	287	776	527	165	351
Confl. Peds. (#/hr)			4				3			1		
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	5%	5%
Turn Type	Prot	NA	Perm	Prot	Prot	NA		Prot	NA	Perm	Prot	NA
Protected Phases	7	4		3	3	8		5	2		1	6
Permitted Phases			4							2		
Actuated Green, G (s)	4.9	19.8	19.8		14.6	29.5		17.1	29.6	29.6	8.9	21.4
Effective Green, g (s)	4.9	19.8	19.8		14.6	29.5		17.1	29.6	29.6	8.9	21.4
Actuated g/C Ratio	0.05	0.22	0.22		0.16	0.32		0.19	0.33	0.33	0.10	0.24
Clearance Time (s)	4.5	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	95	770	338		551	1129		332	1152	508	168	809
v/s Ratio Prot	0.04	c0.22			c0.17	0.21		c0.16	0.22		0.10	0.10
v/s Ratio Perm			0.01							c0.34		
v/c Ratio	0.66	1.01	0.07		1.04	0.66		0.86	0.67	1.04	0.98	0.43
Uniform Delay, d1	42.2	35.6	28.2		38.2	26.4		35.8	26.5	30.7	40.9	29.6
Progression Factor	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	16.1	34.7	0.1		49.1	1.4		20.2	3.2	50.1	63.8	1.7
Delay (s)	58.2	70.2	28.3		87.3	27.8		55.9	29.6	80.7	104.7	31.3
Level of Service	E	E	C		F	C		E	C	F	F	C
Approach Delay (s)		64.9				53.5			53.4			54.1
Approach LOS		E				D			D			D

Intersection Summary			
HCM 2000 Control Delay	55.9	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.03		
Actuated Cycle Length (s)	90.9	Sum of lost time (s)	18.0
Intersection Capacity Utilization	95.4%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBR
Lane Configurations	
Traffic Volume (vph)	12
Future Volume (vph)	12
Ideal Flow (vphpl)	1900
Total Lost time (s)	4.5
Lane Util. Factor	1.00
Frpb, ped/bikes	0.98
Flpb, ped/bikes	1.00
Frt	0.85
Flt Protected	1.00
Satd. Flow (prot)	1511
Flt Permitted	1.00
Satd. Flow (perm)	1511
Peak-hour factor, PHF	0.92
Adj. Flow (vph)	13
RTOR Reduction (vph)	10
Lane Group Flow (vph)	3
Confl. Peds. (#/hr)	4
Heavy Vehicles (%)	5%
Turn Type	Perm
Protected Phases	
Permitted Phases	6
Actuated Green, G (s)	21.4
Effective Green, g (s)	21.4
Actuated g/C Ratio	0.24
Clearance Time (s)	4.5
Vehicle Extension (s)	3.0
Lane Grp Cap (vph)	355
v/s Ratio Prot	
v/s Ratio Perm	0.00
v/c Ratio	0.01
Uniform Delay, d1	26.6
Progression Factor	1.00
Incremental Delay, d2	0.0
Delay (s)	26.7
Level of Service	C
Approach Delay (s)	
Approach LOS	

Intersection Summary

Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	58	715	93	121	406	621	71	264	714	598	147	323
Future Volume (vph)	58	715	93	121	406	621	71	264	714	598	147	323
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	1.00	0.95	1.00		0.97	0.95		1.00	0.95	0.88	1.00	0.95
Frpb, ped/bikes	1.00	1.00	0.98		1.00	1.00		1.00	1.00	0.98	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85		1.00	0.98		1.00	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1770	3539	1555		3433	3479		1770	3539	2724	1719	3438
Flt Permitted	0.95	1.00	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1770	3539	1555		3433	3479		1770	3539	2724	1719	3438
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	63	777	101	132	441	675	77	287	776	650	160	351
RTOR Reduction (vph)	0	0	77	0	0	9	0	0	0	194	0	0
Lane Group Flow (vph)	63	777	24	0	573	743	0	287	776	456	160	351
Confl. Peds. (#/hr)			4				3			1		
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	5%	5%
Turn Type	Prot	NA	Perm	Prot	Prot	NA		Prot	NA	Perm	Prot	NA
Protected Phases	7	4		3	3	8		5	2		1	6
Permitted Phases			4							2		
Actuated Green, G (s)	6.7	21.7	21.7		16.0	31.0		15.6	25.7	25.7	9.5	19.6
Effective Green, g (s)	6.7	21.7	21.7		16.0	31.0		15.6	25.7	25.7	9.5	19.6
Actuated g/C Ratio	0.07	0.24	0.24		0.18	0.34		0.17	0.28	0.28	0.10	0.22
Clearance Time (s)	4.5	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	130	844	371		604	1186		303	1000	770	179	741
v/s Ratio Prot	0.04	c0.22			c0.17	0.21		c0.16	c0.22		0.09	0.10
v/s Ratio Perm			0.02							0.17		
v/c Ratio	0.48	0.92	0.06		0.95	0.63		0.95	0.78	0.59	0.89	0.47
Uniform Delay, d1	40.4	33.8	26.8		37.0	25.1		37.2	30.0	28.1	40.2	31.1
Progression Factor	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.8	15.1	0.1		24.3	1.0		37.4	5.9	3.3	38.6	2.2
Delay (s)	43.3	48.9	26.8		61.3	26.1		74.7	35.8	31.4	78.8	33.3
Level of Service	D	D	C		E	C		E	D	C	E	C
Approach Delay (s)		46.2				41.4			40.7			47.1
Approach LOS		D				D			D			D

Intersection Summary			
HCM 2000 Control Delay	42.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	90.9	Sum of lost time (s)	18.0
Intersection Capacity Utilization	79.4%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBR
Lane Configurations	
Traffic Volume (vph)	12
Future Volume (vph)	12
Ideal Flow (vphpl)	1900
Total Lost time (s)	4.5
Lane Util. Factor	1.00
Frpb, ped/bikes	0.98
Flpb, ped/bikes	1.00
Frt	0.85
Flt Protected	1.00
Satd. Flow (prot)	1511
Flt Permitted	1.00
Satd. Flow (perm)	1511
Peak-hour factor, PHF	0.92
Adj. Flow (vph)	13
RTOR Reduction (vph)	10
Lane Group Flow (vph)	3
Confl. Peds. (#/hr)	4
Heavy Vehicles (%)	5%
Turn Type	Perm
Protected Phases	
Permitted Phases	6
Actuated Green, G (s)	19.6
Effective Green, g (s)	19.6
Actuated g/C Ratio	0.22
Clearance Time (s)	4.5
Vehicle Extension (s)	3.0
Lane Grp Cap (vph)	325
v/s Ratio Prot	
v/s Ratio Perm	0.00
v/c Ratio	0.01
Uniform Delay, d1	28.0
Progression Factor	1.00
Incremental Delay, d2	0.0
Delay (s)	28.1
Level of Service	C
Approach Delay (s)	
Approach LOS	

Intersection Summary

Intersection												
Int Delay, s/veh	5.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	1338	246	0	1211	8	0	0	244	0	0	6
Future Vol, veh/h	0	1338	246	0	1211	8	0	0	244	0	0	6
Conflicting Peds, #/hr	5	0	3	3	0	5	0	0	2	2	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	9	9	9
Mvmt Flow	0	1439	265	0	1302	9	0	0	262	0	0	6

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	-	-	0	-	-	857	-	-	661
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	-	-	6.94	-	-	7.08
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	-	-	3.32	-	-	3.39
Pot Cap-1 Maneuver	0	-	-	0	-	-	0	0	301	0	0	389
Stage 1	0	-	-	0	-	-	0	0	-	0	0	-
Stage 2	0	-	-	0	-	-	0	0	-	0	0	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	-	-	-	-	-	-	-	-	300	-	-	387
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	63.1	14.5
HCM LOS			F	B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT	WBR	SBLn1
Capacity (veh/h)	300	-	-	-	-	387
HCM Lane V/C Ratio	0.875	-	-	-	-	0.017
HCM Control Delay (s)	63.1	-	-	-	-	14.5
HCM Lane LOS	F	-	-	-	-	B
HCM 95th %tile Q(veh)	7.8	-	-	-	-	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	24	26	39	116	26	257	55	1270	115	250	505	40
Future Volume (veh/h)	24	26	39	116	26	257	55	1270	115	250	505	40
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1863	1863	1863	1900	1810	1810	1900
Adj Flow Rate, veh/h	26	29	43	127	29	282	60	1396	126	275	555	44
Adj No. of Lanes	0	1	1	0	1	1	1	2	0	1	2	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	5	5	5
Cap, veh/h	67	52	320	83	11	601	77	1536	138	306	1942	154
Arrive On Green	0.20	0.20	0.20	0.20	0.20	0.20	0.04	0.47	0.47	0.18	0.60	0.60
Sat Flow, veh/h	0	258	1581	0	53	1581	1774	3281	295	1723	3225	255
Grp Volume(v), veh/h	55	0	43	156	0	282	60	750	772	275	295	304
Grp Sat Flow(s),veh/h/ln	258	0	1581	53	0	1581	1774	1770	1806	1723	1719	1761
Q Serve(g_s), s	0.0	0.0	1.8	0.0	0.0	10.6	2.6	30.9	31.4	12.3	6.5	6.5
Cycle Q Clear(g_c), s	16.0	0.0	1.8	16.0	0.0	10.6	2.6	30.9	31.4	12.3	6.5	6.5
Prop In Lane	0.47		1.00	0.81		1.00	1.00		0.16	1.00		0.14
Lane Grp Cap(c), veh/h	119	0	320	93	0	601	77	828	845	306	1035	1061
V/C Ratio(X)	0.46	0.00	0.13	1.67	0.00	0.47	0.78	0.90	0.91	0.90	0.29	0.29
Avail Cap(c_a), veh/h	119	0	320	93	0	601	157	852	869	306	1035	1061
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	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.1	0.0	25.8	37.7	0.0	18.5	37.4	19.4	19.5	31.8	7.5	7.6
Incr Delay (d2), s/veh	2.7	0.0	0.2	343.0	0.0	0.6	15.7	12.9	13.8	27.7	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	1.1	0.0	0.8	10.9	0.0	4.7	1.6	18.0	18.7	8.2	3.1	3.2
LnGrp Delay(d),s/veh	29.8	0.0	26.0	380.7	0.0	19.0	53.1	32.3	33.3	59.5	7.7	7.7
LnGrp LOS	C		C	F		B	D	C	C	E	A	A
Approach Vol, veh/h		98			438			1582			874	
Approach Delay, s/veh		28.1			147.8			33.6			24.0	
Approach LOS		C			F			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	18.0	41.0		20.0	7.4	51.5		20.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	14.0	38.0		16.0	7.0	45.0		16.0
Max Q Clear Time (g_c+I1), s	14.3	33.4		18.0	4.6	8.5		18.0
Green Ext Time (p_c), s	0.0	3.6		0.0	0.0	4.1		0.0

Intersection Summary		
HCM 2010 Ctrl Delay		47.3
HCM 2010 LOS		D

Appendix G

Level of Service

Calculations

Cumulative Without Project

Conditions

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	574	17	204	18	880	300	211	1377	21
Future Volume (vph)	0	0	0	574	17	204	18	880	300	211	1377	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor				0.95	0.95	1.00	1.00	0.95	0.88	1.00	0.95	
Frpb, ped/bikes				1.00	1.00	0.98	1.00	1.00	0.98	1.00	1.00	
Flpb, ped/bikes				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt				1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected				0.95	0.95	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)				1498	1506	1388	1577	3154	2427	1593	3177	
Flt Permitted				0.95	0.95	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)				1498	1506	1388	1577	3154	2427	1593	3177	
Peak-hour factor, PHF	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Adj. Flow (vph)	0	0	0	683	20	243	21	1048	357	251	1639	25
RTOR Reduction (vph)	0	0	0	0	0	177	0	0	0	0	1	0
Lane Group Flow (vph)	0	0	0	348	355	66	21	1048	357	251	1663	0
Confl. Peds. (#/hr)						4			6			2
Heavy Vehicles (%)	2%	2%	2%	3%	3%	3%	3%	3%	3%	2%	2%	2%
Turn Type				Split	NA	Perm	Prot	NA	Free	Prot	NA	
Protected Phases				8	8		5	2		1	6	
Permitted Phases						8			Free			
Actuated Green, G (s)				16.7	16.7	16.7	0.8	21.3	61.5	11.5	32.0	
Effective Green, g (s)				16.7	16.7	16.7	0.8	21.3	61.5	11.5	32.0	
Actuated g/C Ratio				0.27	0.27	0.27	0.01	0.35	1.00	0.19	0.52	
Clearance Time (s)				4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)				3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)				406	408	376	20	1092	2427	297	1653	
v/s Ratio Prot				0.23	c0.24		0.01	0.33		c0.16	c0.52	
v/s Ratio Perm						0.05			0.15			
v/c Ratio				0.86	0.87	0.18	1.05	0.96	0.15	0.85	1.01	
Uniform Delay, d1				21.3	21.4	17.1	30.4	19.7	0.0	24.1	14.8	
Progression Factor				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2				16.2	17.9	0.2	217.8	19.1	0.1	19.3	23.5	
Delay (s)				37.4	39.3	17.4	248.1	38.8	0.1	43.4	38.3	
Level of Service				D	D	B	F	D	A	D	D	
Approach Delay (s)		0.0			33.0			32.2			39.0	
Approach LOS		A			C			C			D	

Intersection Summary

HCM 2000 Control Delay	35.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	61.5	Sum of lost time (s)	12.0
Intersection Capacity Utilization	74.5%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	130	416	244	134	563	92	108	577	56	58	838	153
Future Volume (veh/h)	130	416	244	134	563	92	108	577	56	58	838	153
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1845	1845	1900	1776	1776	1776	1863	1863	1863
Adj Flow Rate, veh/h	153	489	287	158	662	108	127	679	66	68	986	180
Adj No. of Lanes	1	2	1	1	2	0	1	2	1	1	2	1
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	3	3	3	7	7	7	2	2	2
Cap, veh/h	164	977	431	138	791	129	133	1038	463	97	1006	448
Arrive On Green	0.09	0.28	0.28	0.08	0.26	0.26	0.08	0.31	0.31	0.05	0.28	0.28
Sat Flow, veh/h	1774	3539	1561	1757	3018	492	1691	3374	1505	1774	3539	1575
Grp Volume(v), veh/h	153	489	287	158	384	386	127	679	66	68	986	180
Grp Sat Flow(s),veh/h/ln	1774	1770	1561	1757	1752	1758	1691	1687	1505	1774	1770	1575
Q Serve(g_s), s	5.5	7.4	10.4	5.0	13.2	13.2	4.8	11.1	2.0	2.4	17.6	5.9
Cycle Q Clear(g_c), s	5.5	7.4	10.4	5.0	13.2	13.2	4.8	11.1	2.0	2.4	17.6	5.9
Prop In Lane	1.00		1.00	1.00		0.28	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	164	977	431	138	459	461	133	1038	463	97	1006	448
V/C Ratio(X)	0.93	0.50	0.67	1.15	0.84	0.84	0.96	0.65	0.14	0.70	0.98	0.40
Avail Cap(c_a), veh/h	164	1050	463	138	495	497	133	1038	463	139	1006	448
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	28.7	19.4	20.4	29.3	22.2	22.2	29.2	19.1	16.0	29.6	22.6	18.4
Incr Delay (d2), s/veh	50.3	0.4	3.3	121.1	11.3	11.4	64.6	1.5	0.1	8.7	23.6	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	4.9	3.7	4.9	7.0	7.7	7.8	4.6	5.3	0.8	1.4	11.8	2.6
LnGrp Delay(d),s/veh	79.0	19.8	23.7	150.4	33.5	33.6	93.8	20.6	16.1	38.2	46.2	19.0
LnGrp LOS	E	B	C	F	C	C	F	C	B	D	D	B
Approach Vol, veh/h		929			928			872			1234	
Approach Delay, s/veh		30.7			53.4			30.9			41.8	
Approach LOS		C			D			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	24.1	9.5	22.1	9.5	22.6	10.4	21.2
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.0	18.1	5.0	18.9	5.0	18.1	5.9	18.0
Max Q Clear Time (g_c+I1), s	4.4	13.1	7.0	12.4	6.8	19.6	7.5	15.2
Green Ext Time (p_c), s	0.0	2.1	0.0	2.4	0.0	0.0	0.0	1.3

Intersection Summary	
HCM 2010 Ctrl Delay	39.5
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	469	85	656	832	91	50	560	220	154	920	12
Future Volume (veh/h)	45	469	85	656	832	91	50	560	220	154	920	12
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1810	1810	1810	1845	1845	1845
Adj Flow Rate, veh/h	50	521	94	729	924	101	56	622	244	171	1022	13
Adj No. of Lanes	1	2	1	1	2	0	1	2	1	1	2	1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	5	5	5	3	3	3
Cap, veh/h	71	637	284	596	1531	167	73	732	327	116	829	371
Arrive On Green	0.04	0.18	0.18	0.34	0.48	0.48	0.04	0.21	0.21	0.07	0.24	0.24
Sat Flow, veh/h	1774	3539	1578	1774	3218	352	1723	3438	1534	1757	3505	1566
Grp Volume(v), veh/h	50	521	94	729	508	517	56	622	244	171	1022	13
Grp Sat Flow(s),veh/h/ln	1774	1770	1578	1774	1770	1800	1723	1719	1534	1757	1752	1566
Q Serve(g_s), s	2.4	12.4	4.6	29.5	18.5	18.5	2.8	15.3	13.1	5.8	20.8	0.6
Cycle Q Clear(g_c), s	2.4	12.4	4.6	29.5	18.5	18.5	2.8	15.3	13.1	5.8	20.8	0.6
Prop In Lane	1.00		1.00	1.00		0.20	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	71	637	284	596	842	857	73	732	327	116	829	371
V/C Ratio(X)	0.70	0.82	0.33	1.22	0.60	0.60	0.77	0.85	0.75	1.47	1.23	0.04
Avail Cap(c_a), veh/h	133	726	324	596	842	857	98	732	327	116	829	371
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	41.6	34.6	31.4	29.1	16.9	16.9	41.6	33.2	32.3	41.0	33.5	25.8
Incr Delay (d2), s/veh	11.8	6.6	0.7	114.8	1.2	1.2	21.8	11.8	14.4	253.5	114.9	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	1.4	6.7	2.0	33.2	9.3	9.5	1.8	8.5	6.8	10.9	23.1	0.3
LnGrp Delay(d),s/veh	53.5	41.2	32.1	143.9	18.1	18.1	63.4	45.0	46.8	294.5	148.4	26.0
LnGrp LOS	D	D	C	F	B	B	E	D	D	F	F	C
Approach Vol, veh/h		665			1754			922			1206	
Approach Delay, s/veh		40.8			70.4			46.6			167.8	
Approach LOS		D			E			D			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.3	23.2	34.0	20.3	8.2	25.3	8.0	46.3
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.8	18.7	29.5	18.0	5.0	19.5	6.6	40.9
Max Q Clear Time (g_c+I1), s	7.8	17.3	31.5	14.4	4.8	22.8	4.4	20.5
Green Ext Time (p_c), s	0.0	0.8	0.0	1.3	0.0	0.0	0.0	7.0

Intersection Summary	
HCM 2010 Ctrl Delay	87.1
HCM 2010 LOS	F

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	834	5	5	1570	12	2	0	7	0	0	7
Future Vol, veh/h	4	834	5	5	1570	12	2	0	7	0	0	7
Conflicting Peds, #/hr	2	0	3	3	0	2	1	0	0	0	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	210	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	3	3	3	2	2	2	44	44	44	2	2	2
Mvmt Flow	4	927	6	6	1744	13	2	0	8	0	0	8

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1759	0	0	936	0	0	1826	2712	470	2237	2709	882
Stage 1	-	-	-	-	-	-	941	941	-	1765	1765	-
Stage 2	-	-	-	-	-	-	885	1771	-	472	944	-
Critical Hdwy	4.16	-	-	4.14	-	-	8.38	7.38	7.78	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	7.38	6.38	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	7.38	6.38	-	6.54	5.54	-
Follow-up Hdwy	2.23	-	-	2.22	-	-	3.94	4.44	3.74	3.52	4.02	3.32
Pot Cap-1 Maneuver	347	-	-	727	-	-	30	11	441	23	21	289
Stage 1	-	-	-	-	-	-	213	259	-	87	136	-
Stage 2	-	-	-	-	-	-	232	86	-	542	339	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	346	-	-	725	-	-	28	11	440	22	20	288
Mov Cap-2 Maneuver	-	-	-	-	-	-	28	11	-	22	20	-
Stage 1	-	-	-	-	-	-	207	252	-	85	135	-
Stage 2	-	-	-	-	-	-	224	85	-	520	330	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	0	43.7	17.8
HCM LOS			E	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	103	346	-	-	725	-	-	288
HCM Lane V/C Ratio	0.097	0.013	-	-	0.008	-	-	0.027
HCM Control Delay (s)	43.7	15.5	0.2	-	10	-	-	17.8
HCM Lane LOS	E	C	A	-	B	-	-	C
HCM 95th %tile Q(veh)	0.3	0	-	-	0	-	-	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	167	170	110	425	400	30	110	417	420	70	638	331
Future Volume (veh/h)	167	170	110	425	400	30	110	417	420	70	638	331
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1863	1863	1863	1845	1845	1845	1863	1863	1863
Adj Flow Rate, veh/h	180	183	118	457	430	32	118	448	452	75	686	356
Adj No. of Lanes	1	2	0	1	2	1	1	2	1	1	2	1
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, %	3	3	3	2	2	2	3	3	3	2	2	2
Cap, veh/h	227	341	208	408	939	412	130	989	432	99	934	414
Arrive On Green	0.13	0.16	0.16	0.23	0.27	0.27	0.07	0.28	0.28	0.06	0.26	0.26
Sat Flow, veh/h	1757	2079	1267	1774	3539	1553	1757	3505	1530	1774	3539	1571
Grp Volume(v), veh/h	180	153	148	457	430	32	118	448	452	75	686	356
Grp Sat Flow(s),veh/h/ln	1757	1752	1593	1774	1770	1553	1757	1752	1530	1774	1770	1571
Q Serve(g_s), s	6.7	5.4	5.8	15.5	6.8	1.0	4.5	7.1	19.0	2.8	11.9	14.5
Cycle Q Clear(g_c), s	6.7	5.4	5.8	15.5	6.8	1.0	4.5	7.1	19.0	2.8	11.9	14.5
Prop In Lane	1.00		0.80	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	227	288	262	408	939	412	130	989	432	99	934	414
V/C Ratio(X)	0.79	0.53	0.57	1.12	0.46	0.08	0.90	0.45	1.05	0.75	0.73	0.86
Avail Cap(c_a), veh/h	227	469	426	408	1304	572	130	989	432	132	973	432
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	28.4	25.8	25.9	25.9	20.7	18.5	30.9	19.9	24.2	31.3	22.6	23.6
Incr Delay (d2), s/veh	17.3	1.5	1.9	80.9	0.3	0.1	50.8	0.3	56.2	15.8	2.8	15.4
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	4.3	2.7	2.7	16.7	3.4	0.5	4.0	3.5	14.7	1.8	6.2	8.1
LnGrp Delay(d),s/veh	45.8	27.3	27.9	106.8	21.0	18.6	81.7	20.2	80.4	47.1	25.4	39.0
LnGrp LOS	D	C	C	F	C	B	F	C	F	D	C	D
Approach Vol, veh/h		481			919			1018			1117	
Approach Delay, s/veh		34.4			63.6			54.1			31.2	
Approach LOS		C			E			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.3	23.5	20.0	15.6	9.5	22.3	13.2	22.4
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.0	18.5	15.5	18.0	5.0	18.5	8.7	24.8
Max Q Clear Time (g_c+I1), s	4.8	21.0	17.5	7.8	6.5	16.5	8.7	8.8
Green Ext Time (p_c), s	0.0	0.0	0.0	1.2	0.0	1.2	0.0	2.6

Intersection Summary	
HCM 2010 Ctrl Delay	46.6
HCM 2010 LOS	D

Intersection												
Int Delay, s/veh	52.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	45	0	82	0	0	0	45	785	0	0	1589	52
Future Vol, veh/h	45	0	82	0	0	0	45	785	0	0	1589	52
Conflicting Peds, #/hr	1	0	1	1	0	1	7	0	7	7	0	7
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2	5	5	5	2	2	2
Mvmt Flow	48	0	87	0	0	0	48	835	0	0	1690	55

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2240	2663	881	1784	2690	426	1752	0	0	842	0	0
Stage 1	1725	1725	-	938	938	-	-	-	-	-	-	-
Stage 2	515	938	-	846	1752	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.2	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.25	-	-	2.22	-	-
Pot Cap-1 Maneuver	~ 23	22	290	52	21	577	341	-	-	789	-	-
Stage 1	92	142	-	284	341	-	-	-	-	-	-	-
Stage 2	511	341	-	323	138	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 18	16	288	29	15	573	339	-	-	784	-	-
Mov Cap-2 Maneuver	~ 18	16	-	29	15	-	-	-	-	-	-	-
Stage 1	67	141	-	208	250	-	-	-	-	-	-	-
Stage 2	376	250	-	225	137	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	$ 1060.8	0	2.9	0
HCM LOS	F	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	339	-	-	46	-	784	-	-
HCM Lane V/C Ratio	0.141	-	-	2.937	-	-	-	-
HCM Control Delay (s)	17.4	2.1	-	$ 1060.8	0	0	-	-
HCM Lane LOS	C	A	-	F	A	A	-	-
HCM 95th %tile Q(veh)	0.5	-	-	14.6	-	0	-	-

Notes

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

Intersection	
Int Delay, s/veh	3.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	20	35	805	40	140	1550
Future Vol, veh/h	20	35	805	40	140	1550
Conflicting Peds, #/hr	0	0	0	4	4	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	94	94	94	94	94	94
Heavy Vehicles, %	2	2	7	7	2	2
Mvmt Flow	21	37	856	43	149	1649

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2005	454	0	0	903	0
Stage 1	882	-	-	-	-	-
Stage 2	1123	-	-	-	-	-
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	52	553	-	-	749	-
Stage 1	365	-	-	-	-	-
Stage 2	273	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	0	551	-	-	747	-
Mov Cap-2 Maneuver	0	-	-	-	-	-
Stage 1	0	-	-	-	-	-
Stage 2	273	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.3	0	5.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	551	747	-
HCM Lane V/C Ratio	-	-	0.106	0.199	-
HCM Control Delay (s)	-	-	12.3	11	4.7
HCM Lane LOS	-	-	B	B	A
HCM 95th %tile Q(veh)	-	-	0.4	0.7	-

Intersection						
Int Delay, s/veh	10.5					

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	45	44	15	800	1485	85
Future Vol, veh/h	45	44	15	800	1485	85
Conflicting Peds, #/hr	2	0	2	0	0	2
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	95	95	95	95	95	95
Heavy Vehicles, %	2	2	7	7	2	2
Mvmt Flow	47	46	16	842	1563	89

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2065	828	1654	0	-	0
Stage 1	1610	-	-	-	-	-
Stage 2	455	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.24	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.27	-	-	-
Pot Cap-1 Maneuver	~ 47	314	364	-	-	-
Stage 1	149	-	-	-	-	-
Stage 2	606	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 43	313	363	-	-	-
Mov Cap-2 Maneuver	~ 43	-	-	-	-	-
Stage 1	136	-	-	-	-	-
Stage 2	605	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	282.6	0.9	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	363	-	75	-	-
HCM Lane V/C Ratio	0.043	-	1.249	-	-
HCM Control Delay (s)	15.4	0.6	282.6	-	-
HCM Lane LOS	C	A	F	-	-
HCM 95th %tile Q(veh)	0.1	-	7.2	-	-

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	12	0	5	90	25	50	30	713	125	120	690	400
Future Volume (veh/h)	12	0	5	90	25	50	30	713	125	120	690	400
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.99	0.99		0.99	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1652	1652	1792	1792	1900	1863	1863	1900
Adj Flow Rate, veh/h	13	0	5	96	27	53	32	759	133	128	734	426
Adj No. of Lanes	0	1	0	0	1	1	1	2	0	1	2	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	15	15	15	6	6	6	2	2	2
Cap, veh/h	206	22	34	294	54	196	384	1905	334	493	1419	821
Arrive On Green	0.14	0.00	0.14	0.14	0.14	0.14	0.66	0.66	0.66	0.66	0.66	0.66
Sat Flow, veh/h	482	153	244	1067	384	1386	464	2895	507	620	2157	1247
Grp Volume(v), veh/h	18	0	0	123	0	53	32	446	446	128	602	558
Grp Sat Flow(s),veh/h/ln	878	0	0	1451	0	1386	464	1703	1700	620	1770	1635
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	1.5	1.7	5.4	5.4	5.4	7.9	8.0
Cycle Q Clear(g_c), s	3.3	0.0	0.0	3.2	0.0	1.5	9.7	5.4	5.4	10.9	7.9	8.0
Prop In Lane	0.72		0.28	0.78		1.00	1.00		0.30	1.00		0.76
Lane Grp Cap(c), veh/h	262	0	0	348	0	196	384	1121	1118	493	1164	1076
V/C Ratio(X)	0.07	0.00	0.00	0.35	0.00	0.27	0.08	0.40	0.40	0.26	0.52	0.52
Avail Cap(c_a), veh/h	724	0	0	790	0	665	384	1121	1118	493	1164	1076
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.8	0.0	0.0	17.9	0.0	17.2	6.5	3.6	3.6	6.1	4.0	4.0
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.6	0.0	0.7	0.4	1.1	1.1	1.3	1.6	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.0	1.5	0.0	0.6	0.3	2.8	2.8	1.1	4.2	3.9
LnGrp Delay(d),s/veh	16.9	0.0	0.0	18.5	0.0	17.9	6.9	4.6	4.6	7.3	5.6	5.8
LnGrp LOS	B			B		B	A	A	A	A	A	A
Approach Vol, veh/h		18			176			924			1288	
Approach Delay, s/veh		16.9			18.3			4.7			5.9	
Approach LOS		B			B			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		34.0		10.8		34.0		10.8
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green Setting (Gmax), s		29.5		21.5		29.5		21.5
Max Q Clear Time (g_c+I1), s		11.7		5.3		12.9		5.2
Green Ext Time (p_c), s		6.0		0.0		8.6		0.7

Intersection Summary	
HCM 2010 Ctrl Delay	6.4
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	249	6	269	16	3	0	488	624	9	23	524	136
Future Volume (vph)	249	6	269	16	3	0	488	624	9	23	524	136
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5		4.5		4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	0.95	0.95	1.00		1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	1.00		1.00		1.00	1.00	0.98	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00		1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85		1.00		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	0.95	1.00		0.96		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1649	1657	1553		1598		1736	3471	1518	1687	3374	1489
Flt Permitted	0.95	0.95	1.00		1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1649	1657	1553		1667		1736	3471	1518	1687	3374	1489
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	290	7	313	19	3	0	567	726	10	27	609	158
RTOR Reduction (vph)	0	0	262	0	0	0	0	0	5	0	0	112
Lane Group Flow (vph)	148	149	51	0	22	0	567	726	5	27	609	46
Confl. Peds. (#/hr)									3			1
Heavy Vehicles (%)	4%	4%	4%	14%	14%	14%	4%	4%	4%	7%	7%	7%
Turn Type	Split	NA	Perm	Perm	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	4	4			7		5	2		1	6	
Permitted Phases			4	7					2			6
Actuated Green, G (s)	12.1	12.1	12.1		1.7		21.1	40.6	40.6	2.0	21.5	21.5
Effective Green, g (s)	12.1	12.1	12.1		1.7		21.1	40.6	40.6	2.0	21.5	21.5
Actuated g/C Ratio	0.16	0.16	0.16		0.02		0.28	0.55	0.55	0.03	0.29	0.29
Clearance Time (s)	4.5	4.5	4.5		4.5		4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0		3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	268	269	252		38		492	1894	828	45	975	430
v/s Ratio Prot	0.09	c0.09					c0.33	0.21		0.02	c0.18	
v/s Ratio Perm			0.03		c0.01				0.00			0.03
v/c Ratio	0.55	0.55	0.20		0.58		1.15	0.38	0.01	0.60	0.62	0.11
Uniform Delay, d1	28.7	28.7	27.0		36.0		26.7	9.7	7.7	35.8	22.9	19.4
Progression Factor	1.00	1.00	1.00		1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.5	2.5	0.4		19.6		89.7	0.6	0.0	19.7	3.0	0.5
Delay (s)	31.1	31.1	27.4		55.6		116.4	10.3	7.7	55.5	26.0	19.9
Level of Service	C	C	C		E		F	B	A	E	C	B
Approach Delay (s)		29.2			55.6			56.4			25.8	
Approach LOS		C			E			E			C	

Intersection Summary

HCM 2000 Control Delay	41.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	74.4	Sum of lost time (s)	18.0
Intersection Capacity Utilization	61.0%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	238	733	230	249	548	322	224	452	256	219	520	210
Future Volume (vph)	238	733	230	249	548	322	224	452	256	219	520	210
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
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
Lane Util. Factor	0.91	0.91	1.00	0.91	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00	0.98	1.00	1.00	1.00	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1564	3288	1515	1507	3166	1455	1752	3505	1568	1719	3438	1511
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1564	3288	1515	1507	3166	1455	1752	3505	1568	1719	3438	1511
Peak-hour factor, PHF	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Adj. Flow (vph)	280	862	271	293	645	379	264	532	301	258	612	247
RTOR Reduction (vph)	0	0	154	0	0	277	0	0	227	0	0	189
Lane Group Flow (vph)	252	890	117	264	674	102	264	532	74	258	612	58
Confl. Peds. (#/hr)			2			4						4
Heavy Vehicles (%)	5%	5%	5%	9%	9%	9%	3%	3%	3%	5%	5%	5%
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	4	4		7	7		5	2		1	6	
Permitted Phases			4			7			2			6
Actuated Green, G (s)	18.0	18.0	18.0	18.0	18.0	18.0	13.5	21.6	21.6	12.6	20.7	20.7
Effective Green, g (s)	18.0	18.0	18.0	18.0	18.0	18.0	13.5	21.6	21.6	12.6	20.7	20.7
Actuated g/C Ratio	0.20	0.20	0.20	0.20	0.20	0.20	0.15	0.24	0.24	0.14	0.23	0.23
Clearance 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
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	319	671	309	307	646	296	268	858	384	245	806	354
v/s Ratio Prot	0.16	c0.27		0.18	c0.21		c0.15	0.15		0.15	c0.18	
v/s Ratio Perm			0.08			0.07			0.05			0.04
v/c Ratio	0.79	1.33	0.38	0.86	1.04	0.34	0.99	0.62	0.19	1.05	0.76	0.16
Uniform Delay, d1	33.3	35.1	30.3	33.9	35.1	30.1	37.2	29.6	26.4	37.8	31.4	26.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	12.2	157.1	0.8	20.6	47.2	0.7	50.4	1.4	0.2	72.1	4.1	0.2
Delay (s)	45.6	192.2	31.0	54.5	82.3	30.8	87.7	31.0	26.6	109.9	35.6	27.1
Level of Service	D	F	C	D	F	C	F	C	C	F	D	C
Approach Delay (s)		135.1			61.9			43.5			50.9	
Approach LOS		F			E			D			D	

Intersection Summary

HCM 2000 Control Delay	76.2	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	88.2	Sum of lost time (s)	18.0
Intersection Capacity Utilization	77.3%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	423	34	446	21	1745	696	327	871	39
Future Volume (vph)	0	0	0	423	34	446	21	1745	696	327	871	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor				0.95	0.95	1.00	1.00	0.95	0.88	1.00	0.95	
Frpb, ped/bikes				1.00	1.00	0.98	1.00	1.00	0.98	1.00	1.00	
Flpb, ped/bikes				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt				1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected				0.95	0.96	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)				1681	1697	1552	1770	3539	2725	1770	3513	
Flt Permitted				0.95	0.96	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)				1681	1697	1552	1770	3539	2725	1770	3513	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	0	0	0	436	35	460	22	1799	718	337	898	40
RTOR Reduction (vph)	0	0	0	0	0	212	0	0	0	0	4	0
Lane Group Flow (vph)	0	0	0	235	236	248	22	1799	718	337	934	0
Confl. Peds. (#/hr)						7			4			1
Turn Type				Split	NA	Perm	Prot	NA	Free	Prot	NA	
Protected Phases				8	8		5	2		1	6	
Permitted Phases						8			Free			
Actuated Green, G (s)				13.6	13.6	13.6	0.8	24.4	61.0	11.0	34.6	
Effective Green, g (s)				13.6	13.6	13.6	0.8	24.4	61.0	11.0	34.6	
Actuated g/C Ratio				0.22	0.22	0.22	0.01	0.40	1.00	0.18	0.57	
Clearance Time (s)				4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)				3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)				374	378	346	23	1415	2725	319	1992	
v/s Ratio Prot				0.14	0.14		0.01	c0.51		c0.19	0.27	
v/s Ratio Perm						c0.16			0.26			
v/c Ratio				0.63	0.62	0.72	0.96	1.27	0.26	1.06	0.47	
Uniform Delay, d1				21.4	21.4	21.9	30.1	18.3	0.0	25.0	7.8	
Progression Factor				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2				3.3	3.2	6.9	166.5	127.8	0.2	66.0	0.8	
Delay (s)				24.7	24.6	28.8	196.6	146.1	0.2	91.0	8.6	
Level of Service				C	C	C	F	F	A	F	A	
Approach Delay (s)		0.0			26.7			105.3			30.4	
Approach LOS		A			C			F			C	

Intersection Summary

HCM 2000 Control Delay	69.7	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.07		
Actuated Cycle Length (s)	61.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	89.1%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	87	799	137	241	570	194	129	870	82	153	634	308
Future Volume (veh/h)	87	799	137	241	570	194	129	870	82	153	634	308
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1827	1827	1827
Adj Flow Rate, veh/h	94	859	147	259	613	209	139	935	88	165	682	331
Adj No. of Lanes	1	2	1	1	2	0	1	2	1	1	2	1
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	4	4	4
Cap, veh/h	122	1070	471	146	819	279	170	907	405	203	961	427
Arrive On Green	0.07	0.30	0.30	0.08	0.32	0.32	0.10	0.26	0.26	0.12	0.28	0.28
Sat Flow, veh/h	1774	3539	1558	1774	2593	883	1774	3539	1581	1740	3471	1543
Grp Volume(v), veh/h	94	859	147	259	418	404	139	935	88	165	682	331
Grp Sat Flow(s),veh/h/ln	1774	1770	1558	1774	1770	1707	1774	1770	1581	1740	1736	1543
Q Serve(g_s), s	3.9	16.6	5.4	6.1	15.7	15.7	5.7	19.0	3.3	6.9	13.1	14.6
Cycle Q Clear(g_c), s	3.9	16.6	5.4	6.1	15.7	15.7	5.7	19.0	3.3	6.9	13.1	14.6
Prop In Lane	1.00		1.00	1.00		0.52	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	122	1070	471	146	559	539	170	907	405	203	961	427
V/C Ratio(X)	0.77	0.80	0.31	1.77	0.75	0.75	0.82	1.03	0.22	0.81	0.71	0.77
Avail Cap(c_a), veh/h	347	1260	555	146	559	539	170	907	405	246	1048	466
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	33.9	23.8	19.9	34.0	22.7	22.8	32.9	27.6	21.7	32.0	24.1	24.7
Incr Delay (d2), s/veh	9.6	3.3	0.4	375.0	5.5	5.8	25.9	38.2	0.3	15.8	2.0	7.4
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	2.2	8.6	2.4	18.2	8.5	8.3	4.0	14.0	1.5	4.2	6.5	7.1
LnGrp Delay(d),s/veh	43.5	27.1	20.3	409.0	28.3	28.5	58.8	65.7	22.0	47.8	26.2	32.1
LnGrp LOS	D	C	C	F	C	C	E	F	C	D	C	C
Approach Vol, veh/h		1100			1081			1162			1178	
Approach Delay, s/veh		27.6			119.6			61.6			30.9	
Approach LOS		C			F			E			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.1	23.5	10.6	26.9	11.6	25.0	9.6	27.9
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	10.5	19.0	6.1	26.4	7.1	22.4	14.5	18.0
Max Q Clear Time (g_c+I1), s	8.9	21.0	8.1	18.6	7.7	16.6	5.9	17.7
Green Ext Time (p_c), s	0.1	0.0	0.0	3.8	0.0	2.8	0.1	0.1

Intersection Summary	
HCM 2010 Ctrl Delay	59.2
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	57	691	60	398	624	135	140	865	686	172	765	15
Future Volume (veh/h)	57	691	60	398	624	135	140	865	686	172	765	15
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1810	1810	1810
Adj Flow Rate, veh/h	61	743	65	428	671	145	151	930	738	185	823	16
Adj No. of Lanes	1	2	1	1	2	0	1	2	1	1	2	1
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	5	5	5
Cap, veh/h	78	806	359	365	1126	243	184	1082	483	105	904	403
Arrive On Green	0.04	0.23	0.23	0.21	0.39	0.39	0.10	0.31	0.31	0.06	0.26	0.26
Sat Flow, veh/h	1774	3539	1575	1774	2895	625	1774	3539	1582	1723	3438	1531
Grp Volume(v), veh/h	61	743	65	428	410	406	151	930	738	185	823	16
Grp Sat Flow(s),veh/h/ln	1774	1770	1575	1774	1770	1751	1774	1770	1582	1723	1719	1531
Q Serve(g_s), s	3.1	18.5	3.0	18.5	16.6	16.6	7.5	22.3	27.5	5.5	20.9	0.7
Cycle Q Clear(g_c), s	3.1	18.5	3.0	18.5	16.6	16.6	7.5	22.3	27.5	5.5	20.9	0.7
Prop In Lane	1.00		1.00	1.00		0.36	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	78	806	359	365	688	681	184	1082	483	105	904	403
V/C Ratio(X)	0.78	0.92	0.18	1.17	0.60	0.60	0.82	0.86	1.53	1.76	0.91	0.04
Avail Cap(c_a), veh/h	144	806	359	365	688	681	215	1082	483	105	904	403
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	42.6	34.0	28.0	35.7	21.9	21.9	39.5	29.4	31.2	42.2	32.1	24.7
Incr Delay (d2), s/veh	15.1	15.9	0.2	103.3	1.4	1.4	19.3	8.9	247.4	376.2	14.8	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	1.8	10.8	1.3	19.5	8.4	8.3	4.7	12.2	45.2	13.6	11.7	0.3
LnGrp Delay(d),s/veh	57.7	49.9	28.2	139.0	23.3	23.3	58.8	38.4	278.6	418.5	46.9	24.9
LnGrp LOS	E	D	C	F	C	C	E	D	F	F	D	C
Approach Vol, veh/h		869			1244			1819			1024	
Approach Delay, s/veh		48.8			63.1			137.5			113.7	
Approach LOS		D			E			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.0	32.0	23.0	25.0	13.8	28.2	8.5	39.5
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.5	27.5	18.5	20.5	10.9	22.1	7.3	31.7
Max Q Clear Time (g_c+I1), s	7.5	29.5	20.5	20.5	9.5	22.9	5.1	18.6
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.1	0.0	0.0	4.4

Intersection Summary	
HCM 2010 Ctrl Delay	98.4
HCM 2010 LOS	F

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	1543	2	3	1149	8	2	1	8	5	0	6
Future Vol, veh/h	4	1543	2	3	1149	8	2	1	8	5	0	6
Conflicting Peds, #/hr	5	0	3	3	0	5	0	0	2	2	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	210	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	36	36	36	9	9	9
Mvmt Flow	4	1624	2	3	1209	8	2	1	8	5	0	6

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1222	0	0	1629	0	0	2247	2864	818	2047	2861	614
Stage 1	-	-	-	-	-	-	1636	1636	-	1224	1224	-
Stage 2	-	-	-	-	-	-	611	1228	-	823	1637	-
Critical Hdwy	4.14	-	-	4.14	-	-	8.22	7.22	7.62	7.68	6.68	7.08
Critical Hdwy Stg 1	-	-	-	-	-	-	7.22	6.22	-	6.68	5.68	-
Critical Hdwy Stg 2	-	-	-	-	-	-	7.22	6.22	-	6.68	5.68	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.86	4.36	3.66	3.59	4.09	3.39
Pot Cap-1 Maneuver	566	-	-	395	-	-	15	9	256	30	15	418
Stage 1	-	-	-	-	-	-	74	112	-	179	236	-
Stage 2	-	-	-	-	-	-	373	190	-	319	147	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	564	-	-	394	-	-	14	8	255	24	14	416
Mov Cap-2 Maneuver	-	-	-	-	-	-	14	8	-	24	14	-
Stage 1	-	-	-	-	-	-	68	103	-	165	233	-
Stage 2	-	-	-	-	-	-	365	188	-	282	136	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.4	0	141.6	99.9
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	37	564	-	-	394	-	-	49
HCM Lane V/C Ratio	0.313	0.007	-	-	0.008	-	-	0.236
HCM Control Delay (s)	141.6	11.4	0.4	-	14.2	-	-	99.9
HCM Lane LOS	F	B	A	-	B	-	-	F
HCM 95th %tile Q(veh)	1	0	-	-	0	-	-	0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	302	350	70	281	266	30	340	859	645	40	437	290
Future Volume (veh/h)	302	350	70	281	266	30	340	859	645	40	437	290
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		0.96	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	315	365	73	293	277	31	354	895	672	42	455	302
Adj No. of Lanes	1	2	0	1	2	1	1	2	1	1	2	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	282	547	108	301	695	306	222	1200	513	71	899	386
Arrive On Green	0.16	0.19	0.19	0.17	0.20	0.20	0.13	0.34	0.34	0.04	0.25	0.25
Sat Flow, veh/h	1774	2938	581	1774	3539	1559	1774	3539	1513	1774	3539	1518
Grp Volume(v), veh/h	315	218	220	293	277	31	354	895	672	42	455	302
Grp Sat Flow(s),veh/h/ln	1774	1770	1750	1774	1770	1559	1774	1770	1513	1774	1770	1518
Q Serve(g_s), s	10.8	7.8	7.9	11.2	4.6	1.1	8.5	15.2	23.0	1.6	7.5	12.6
Cycle Q Clear(g_c), s	10.8	7.8	7.9	11.2	4.6	1.1	8.5	15.2	23.0	1.6	7.5	12.6
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	329	326	301	695	306	222	1200	513	71	899	386
V/C Ratio(X)	1.12	0.66	0.67	0.97	0.40	0.10	1.59	0.75	1.31	0.59	0.51	0.78
Avail Cap(c_a), veh/h	282	469	464	301	975	430	222	1200	513	131	991	425
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	28.5	25.6	25.7	28.0	23.8	22.4	29.7	19.8	22.4	32.0	21.7	23.6
Incr Delay (d2), s/veh	88.4	2.3	2.4	44.9	0.4	0.1	287.3	2.6	153.0	7.5	0.4	8.5
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	12.1	4.0	4.1	9.1	2.3	0.5	21.8	7.8	31.3	0.9	3.7	6.2
LnGrp Delay(d),s/veh	116.9	27.9	28.2	72.9	24.1	22.5	316.9	22.4	175.4	39.5	22.1	32.0
LnGrp LOS	F	C	C	E	C	C	F	C	F	D	C	C
Approach Vol, veh/h		753			601			1921			799	
Approach Delay, s/veh		65.2			47.8			130.2			26.8	
Approach LOS		E			D			F			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.2	27.5	16.0	17.1	13.0	21.7	15.3	17.8
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.0	22.5	11.5	18.0	8.5	19.0	10.8	18.7
Max Q Clear Time (g_c+I1), s	3.6	25.0	13.2	9.9	10.5	14.6	12.8	6.6
Green Ext Time (p_c), s	0.0	0.0	0.0	1.6	0.0	1.7	0.0	1.4

Intersection Summary	
HCM 2010 Ctrl Delay	85.8
HCM 2010 LOS	F

Intersection												
Int Delay, s/veh	3.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	39	0	45	0	0	0	60	1652	0	1	1148	54
Future Vol, veh/h	39	0	45	0	0	0	60	1652	0	1	1148	54
Conflicting Peds, #/hr	0	0	1	1	0	0	13	0	2	2	0	13
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	5	5	5
Mvmt Flow	42	0	48	0	0	0	65	1776	0	1	1234	58

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2296	3186	660	2528	3215	890	1305	0	0	1778	0	0
Stage 1	1278	1278	-	1908	1908	-	-	-	-	-	-	-
Stage 2	1018	1908	-	620	1307	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.2	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.25	-	-
Pot Cap-1 Maneuver	~ 21	10	406	14	10	286	526	-	-	333	-	-
Stage 1	176	235	-	71	115	-	-	-	-	-	-	-
Stage 2	254	115	-	442	228	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	0	401	-	0	286	520	-	-	332	-	-
Mov Cap-2 Maneuver	-	0	-	-	0	-	-	-	-	-	-	-
Stage 1	176	230	-	71	0	-	-	-	-	-	-	-
Stage 2	-	0	-	384	223	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s		0	6.2	0.1
HCM LOS	-	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	520	-	-	-	-	332	-	-
HCM Lane V/C Ratio	0.124	-	-	-	-	0.003	-	-
HCM Control Delay (s)	12.9	6	-	-	0	15.9	0.1	-
HCM Lane LOS	B	A	-	-	A	C	A	-
HCM 95th %tile Q(veh)	0.4	-	-	-	-	0	-	-

Notes

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

Intersection	
Int Delay, s/veh	13.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	10	195	1527	60	35	1180
Future Vol, veh/h	10	195	1527	60	35	1180
Conflicting Peds, #/hr	0	0	0	3	3	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	94	94	94	94	94	94
Heavy Vehicles, %	2	2	3	3	4	4
Mvmt Flow	11	207	1624	64	37	1255

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2361	847	0	0	1691	0
Stage 1	1659	-	-	-	-	-
Stage 2	702	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.18	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.24	-
Pot Cap-1 Maneuver	30	305	-	-	365	-
Stage 1	140	-	-	-	-	-
Stage 2	453	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	20	304	-	-	364	-
Mov Cap-2 Maneuver	20	-	-	-	-	-
Stage 1	93	-	-	-	-	-
Stage 2	453	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	187.4	0	2.9
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	180	364	-
HCM Lane V/C Ratio	-	-	1.212	0.102	-
HCM Control Delay (s)	-	-	187.4	16	2.5
HCM Lane LOS	-	-	F	C	A
HCM 95th %tile Q(veh)	-	-	11.7	0.3	-

Intersection						
Int Delay, s/veh	76.6					

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	93	15	26	1494	1138	52
Future Vol, veh/h	93	15	26	1494	1138	52
Conflicting Peds, #/hr	4	0	2	0	0	2
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	93	93	93	93	93	93
Heavy Vehicles, %	2	2	3	3	4	4
Mvmt Flow	100	16	28	1606	1224	56

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2117	642	1282	0	-	0
Stage 1	1254	-	-	-	-	-
Stage 2	863	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.16	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.23	-	-	-
Pot Cap-1 Maneuver	~ 43	417	532	-	-	-
Stage 1	232	-	-	-	-	-
Stage 2	373	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 22	416	531	-	-	-
Mov Cap-2 Maneuver	~ 22	-	-	-	-	-
Stage 1	118	-	-	-	-	-
Stage 2	372	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	$ 1955.9	3.1	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	531	-	25	-	-
HCM Lane V/C Ratio	0.053	-	4.645	-	-
HCM Control Delay (s)	12.2	2.3	$ 1955.9	-	-
HCM Lane LOS	B	A	F	-	-
HCM 95th %tile Q(veh)	0.2	-	14.4	-	-

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	55	1	15	135	48	200	30	1115	120	50	683	140
Future Volume (veh/h)	55	1	15	135	48	200	30	1115	120	50	683	140
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1792	1792	1827	1827	1900	1845	1845	1900
Adj Flow Rate, veh/h	60	1	16	148	53	220	33	1225	132	55	751	154
Adj No. of Lanes	0	1	0	0	1	1	1	2	0	1	2	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	6	6	6	4	4	4	3	3	3
Cap, veh/h	213	17	28	348	96	324	425	1932	208	284	1770	363
Arrive On Green	0.21	0.21	0.21	0.21	0.21	0.21	0.61	0.61	0.61	0.61	0.61	0.61
Sat Flow, veh/h	413	80	129	1060	450	1515	601	3161	340	396	2896	594
Grp Volume(v), veh/h	77	0	0	201	0	220	33	671	686	55	454	451
Grp Sat Flow(s),veh/h/ln	622	0	0	1510	0	1515	601	1736	1765	396	1752	1737
Q Serve(g_s), s	2.3	0.0	0.0	0.0	0.0	6.9	1.6	12.6	12.7	5.3	7.0	7.0
Cycle Q Clear(g_c), s	8.4	0.0	0.0	6.1	0.0	6.9	8.6	12.6	12.7	18.0	7.0	7.0
Prop In Lane	0.78		0.21	0.74		1.00	1.00		0.19	1.00		0.34
Lane Grp Cap(c), veh/h	257	0	0	445	0	324	425	1061	1079	284	1071	1062
V/C Ratio(X)	0.30	0.00	0.00	0.45	0.00	0.68	0.08	0.63	0.64	0.19	0.42	0.42
Avail Cap(c_a), veh/h	451	0	0	680	0	573	425	1061	1079	284	1071	1062
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.3	0.0	0.0	18.3	0.0	18.6	7.5	6.3	6.4	12.1	5.3	5.3
Incr Delay (d2), s/veh	0.6	0.0	0.0	0.7	0.0	2.5	0.4	2.9	2.9	1.5	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	1.1	0.0	0.0	2.7	0.0	3.1	0.3	6.8	7.0	0.7	3.6	3.6
LnGrp Delay(d),s/veh	21.0	0.0	0.0	19.0	0.0	21.1	7.9	9.2	9.2	13.6	6.5	6.5
LnGrp LOS	C			B		C	A	A	A	B	A	A
Approach Vol, veh/h		77			421			1390			960	
Approach Delay, s/veh		21.0			20.1			9.2			6.9	
Approach LOS		C			C			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		36.0		15.5		36.0		15.5
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green Setting (Gmax), s		31.5		19.5		31.5		19.5
Max Q Clear Time (g_c+I1), s		14.7		10.4		20.0		8.9
Green Ext Time (p_c), s		9.2		0.2		5.1		1.4

Intersection Summary	
HCM 2010 Ctrl Delay	10.4
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	556	0	463	40	4	8	262	588	17	15	531	158
Future Volume (vph)	556	0	463	40	4	8	262	588	17	15	531	158
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5		4.5		4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	0.95	0.95	1.00		1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	1.00		1.00		1.00	1.00	0.98	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00		1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85		0.98		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	0.95	1.00		0.96		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1665	1665	1568		1398		1719	3438	1500	1703	3406	1524
Flt Permitted	0.95	0.95	1.00		0.86		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1665	1665	1568		1252		1719	3438	1500	1703	3406	1524
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	591	0	493	43	4	9	279	626	18	16	565	168
RTOR Reduction (vph)	0	0	262	0	9	0	0	0	9	0	0	117
Lane Group Flow (vph)	295	296	231	0	47	0	279	626	9	16	565	51
Confl. Peds. (#/hr)									5			
Heavy Vehicles (%)	3%	3%	3%	28%	28%	28%	5%	5%	5%	6%	6%	6%
Turn Type	Split	NA	Perm	Perm	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	4	4			7		5	2		1	6	
Permitted Phases			4	7					2			6
Actuated Green, G (s)	16.8	16.8	16.8		4.1		15.9	39.1	39.1	0.9	24.1	24.1
Effective Green, g (s)	16.8	16.8	16.8		4.1		15.9	39.1	39.1	0.9	24.1	24.1
Actuated g/C Ratio	0.21	0.21	0.21		0.05		0.20	0.50	0.50	0.01	0.31	0.31
Clearance Time (s)	4.5	4.5	4.5		4.5		4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0		3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	354	354	333		65		346	1703	743	19	1040	465
v/s Ratio Prot	0.18	c0.18					c0.16	0.18		0.01	c0.17	
v/s Ratio Perm			0.15		c0.04				0.01			0.03
v/c Ratio	0.83	0.84	0.69		0.73		0.81	0.37	0.01	0.84	0.54	0.11
Uniform Delay, d1	29.7	29.7	28.7		36.9		30.0	12.3	10.1	38.9	22.8	19.7
Progression Factor	1.00	1.00	1.00		1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	15.4	15.6	6.1		34.1		12.8	0.6	0.0	131.7	2.0	0.5
Delay (s)	45.1	45.3	34.8		70.9		42.9	12.9	10.1	170.7	24.9	20.2
Level of Service	D	D	C		E		D	B	B	F	C	C
Approach Delay (s)		40.5			70.9			21.9			26.9	
Approach LOS		D			E			C			C	

Intersection Summary

HCM 2000 Control Delay	31.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	78.9	Sum of lost time (s)	18.0
Intersection Capacity Utilization	58.9%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	311	479	210	190	245	205	282	710	298	264	603	300
Future Volume (vph)	311	479	210	190	245	205	282	710	298	264	603	300
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
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
Lane Util. Factor	0.91	0.91	1.00	0.91	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	0.99	1.00	0.95	0.99	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1579	3308	1528	1535	3205	1509	1752	3505	1568	1719	3438	1517
Flt Permitted	0.95	0.99	1.00	0.95	0.99	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1579	3308	1528	1535	3205	1509	1752	3505	1568	1719	3438	1517
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	349	538	236	213	275	230	317	798	335	297	678	337
RTOR Reduction (vph)	0	0	187	0	0	189	0	0	246	0	0	262
Lane Group Flow (vph)	286	601	49	158	330	41	317	798	89	297	678	75
Confl. Peds. (#/hr)			3									1
Heavy Vehicles (%)	4%	4%	4%	7%	7%	7%	3%	3%	3%	5%	5%	5%
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	4	4		7	7		5	2		1	6	
Permitted Phases			4			7			2			6
Actuated Green, G (s)	18.0	18.0	18.0	15.4	15.4	15.4	15.5	22.7	22.7	11.8	19.0	19.0
Effective Green, g (s)	18.0	18.0	18.0	15.4	15.4	15.4	15.5	22.7	22.7	11.8	19.0	19.0
Actuated g/C Ratio	0.21	0.21	0.21	0.18	0.18	0.18	0.18	0.26	0.26	0.14	0.22	0.22
Clearance 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
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	330	693	320	275	574	270	316	926	414	236	760	335
v/s Ratio Prot	0.18	c0.18		0.10	c0.10		0.18	c0.23		c0.17	0.20	
v/s Ratio Perm			0.03			0.03			0.06			0.05
v/c Ratio	0.87	0.87	0.15	0.57	0.57	0.15	1.00	0.86	0.21	1.26	0.89	0.22
Uniform Delay, d1	32.8	32.8	27.7	32.3	32.3	29.7	35.2	30.1	24.6	37.1	32.5	27.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	20.5	11.1	0.2	2.9	1.4	0.3	51.4	8.3	0.3	145.9	12.8	0.3
Delay (s)	53.3	43.9	28.0	35.1	33.7	30.0	86.6	38.4	24.9	183.0	45.2	27.7
Level of Service	D	D	C	D	C	C	F	D	C	F	D	C
Approach Delay (s)		42.9			32.8			45.8			71.9	
Approach LOS		D			C			D			E	

Intersection Summary

HCM 2000 Control Delay	50.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	85.9	Sum of lost time (s)	18.0
Intersection Capacity Utilization	72.3%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	574	17	204	18	880	300	211	1377	21
Future Volume (vph)	0	0	0	574	17	204	18	880	300	211	1377	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor				0.95	0.95	1.00	1.00	0.95	0.88	1.00	0.95	
Frpb, ped/bikes				1.00	1.00	0.99	1.00	1.00	0.98	1.00	1.00	
Flpb, ped/bikes				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt				1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected				0.95	0.95	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)				1498	1506	1396	1577	3154	2427	1593	3177	
Flt Permitted				0.95	0.95	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)				1498	1506	1396	1577	3154	2427	1593	3177	
Peak-hour factor, PHF	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Adj. Flow (vph)	0	0	0	683	20	243	21	1048	357	251	1639	25
RTOR Reduction (vph)	0	0	0	0	0	17	0	0	0	0	1	0
Lane Group Flow (vph)	0	0	0	348	355	226	21	1048	357	251	1663	0
Confl. Peds. (#/hr)						4			6			2
Heavy Vehicles (%)	2%	2%	2%	3%	3%	3%	3%	3%	3%	2%	2%	2%
Turn Type				Split	NA	pm+ov	Prot	NA	Free	Prot	NA	
Protected Phases				8	8	1	5	2		1	6	
Permitted Phases						8			Free			
Actuated Green, G (s)				22.8	22.8	39.4	1.6	38.6	90.0	16.6	53.6	
Effective Green, g (s)				22.8	22.8	39.4	1.6	38.6	90.0	16.6	53.6	
Actuated g/C Ratio				0.25	0.25	0.44	0.02	0.43	1.00	0.18	0.60	
Clearance Time (s)				4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)				3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)				379	381	673	28	1352	2427	293	1892	
v/s Ratio Prot				0.23	c0.24	0.06	0.01	0.33		c0.16	c0.52	
v/s Ratio Perm						0.10			0.15			
v/c Ratio				0.92	0.93	0.34	0.75	0.78	0.15	0.86	0.88	
Uniform Delay, d1				32.7	32.8	16.7	44.0	22.0	0.0	35.5	15.4	
Progression Factor				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2				26.5	29.3	0.3	71.8	4.4	0.1	21.0	6.2	
Delay (s)				59.2	62.1	17.0	115.8	26.4	0.1	56.6	21.6	
Level of Service				E	E	B	F	C	A	E	C	
Approach Delay (s)		0.0			49.5			21.1			26.2	
Approach LOS		A			D			C			C	

Intersection Summary

HCM 2000 Control Delay	29.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	74.5%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	130	416	244	134	563	92	108	577	56	58	838	153
Future Volume (veh/h)	130	416	244	134	563	92	108	577	56	58	838	153
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1845	1845	1900	1776	1776	1776	1863	1863	1863
Adj Flow Rate, veh/h	153	489	287	158	662	108	127	679	66	68	986	180
Adj No. of Lanes	1	2	1	1	2	0	1	2	1	1	2	1
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	3	3	3	7	7	7	2	2	2
Cap, veh/h	181	850	518	186	738	120	154	1208	539	91	1126	501
Arrive On Green	0.10	0.24	0.24	0.11	0.24	0.24	0.09	0.36	0.36	0.05	0.32	0.32
Sat Flow, veh/h	1774	3539	1558	1757	3018	492	1691	3374	1506	1774	3539	1576
Grp Volume(v), veh/h	153	489	287	158	384	386	127	679	66	68	986	180
Grp Sat Flow(s),veh/h/ln	1774	1770	1558	1757	1752	1758	1691	1687	1506	1774	1770	1576
Q Serve(g_s), s	6.2	9.0	11.1	6.5	15.6	15.6	5.4	11.9	2.2	2.8	19.4	6.5
Cycle Q Clear(g_c), s	6.2	9.0	11.1	6.5	15.6	15.6	5.4	11.9	2.2	2.8	19.4	6.5
Prop In Lane	1.00		1.00	1.00		0.28	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	181	850	518	186	428	430	154	1208	539	91	1126	501
V/C Ratio(X)	0.85	0.58	0.55	0.85	0.90	0.90	0.82	0.56	0.12	0.75	0.88	0.36
Avail Cap(c_a), veh/h	181	866	525	186	436	437	154	1208	539	125	1178	525
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	32.5	24.6	20.2	32.3	26.9	26.9	32.9	19.0	15.9	34.5	23.7	19.3
Incr Delay (d2), s/veh	29.3	0.9	1.2	29.0	20.6	20.8	29.2	0.6	0.1	15.0	7.4	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	4.5	4.5	4.9	4.7	10.0	10.1	3.8	5.6	0.9	1.7	10.6	2.9
LnGrp Delay(d),s/veh	61.7	25.6	21.4	61.3	47.5	47.7	62.0	19.6	16.0	49.4	31.1	19.7
LnGrp LOS	E	C	C	E	D	D	E	B	B	D	C	B
Approach Vol, veh/h		929			928			872			1234	
Approach Delay, s/veh		30.2			50.0			25.5			30.5	
Approach LOS		C			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.3	30.9	12.3	22.2	11.2	27.9	12.0	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	5.2	26.0	7.8	18.0	6.7	24.5	7.5	18.3
Max Q Clear Time (g_c+I1), s	4.8	13.9	8.5	13.1	7.4	21.4	8.2	17.6
Green Ext Time (p_c), s	0.0	3.9	0.0	1.9	0.0	2.0	0.0	0.3

Intersection Summary	
HCM 2010 Ctrl Delay	33.9
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	49	465	85	656	832	91	50	560	220	154	920	12
Future Volume (veh/h)	49	465	85	656	832	91	50	560	220	154	920	12
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1810	1810	1810	1845	1845	1845
Adj Flow Rate, veh/h	54	517	94	729	924	101	56	622	244	171	1022	13
Adj No. of Lanes	1	2	1	2	2	0	1	2	1	1	2	1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	5	5	5	3	3	3
Cap, veh/h	75	640	285	802	1196	131	74	888	396	207	1167	521
Arrive On Green	0.04	0.18	0.18	0.23	0.37	0.37	0.04	0.26	0.26	0.12	0.33	0.33
Sat Flow, veh/h	1774	3539	1578	3442	3218	352	1723	3438	1535	1757	3505	1567
Grp Volume(v), veh/h	54	517	94	729	508	517	56	622	244	171	1022	13
Grp Sat Flow(s),veh/h/ln	1774	1770	1578	1721	1770	1800	1723	1719	1535	1757	1752	1567
Q Serve(g_s), s	2.6	12.0	4.4	17.6	21.7	21.7	2.8	14.0	12.0	8.1	23.5	0.5
Cycle Q Clear(g_c), s	2.6	12.0	4.4	17.6	21.7	21.7	2.8	14.0	12.0	8.1	23.5	0.5
Prop In Lane	1.00		1.00	1.00		0.20	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	75	640	285	802	658	669	74	888	396	207	1167	521
V/C Ratio(X)	0.72	0.81	0.33	0.91	0.77	0.77	0.76	0.70	0.62	0.83	0.88	0.02
Avail Cap(c_a), veh/h	106	744	332	824	690	702	101	888	396	252	1167	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	40.5	33.6	30.5	31.9	23.7	23.7	40.5	28.8	28.0	36.9	26.9	19.2
Incr Delay (d2), s/veh	13.1	5.8	0.7	13.7	5.2	5.1	19.5	4.6	7.0	17.0	9.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	6.4	2.0	9.9	11.5	11.7	1.7	7.2	5.8	4.9	12.9	0.2
LnGrp Delay(d),s/veh	53.6	39.4	31.2	45.7	28.9	28.8	60.0	33.3	35.0	53.9	36.2	19.3
LnGrp LOS	D	D	C	D	C	C	E	C	C	D	D	B
Approach Vol, veh/h		665			1754			922			1206	
Approach Delay, s/veh		39.4			35.8			35.4			38.6	
Approach LOS		D			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.6	26.6	24.5	20.0	8.2	33.0	8.1	36.3
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	12.3	21.2	20.5	18.0	5.0	28.5	5.1	33.4
Max Q Clear Time (g_c+I1), s	10.1	16.0	19.6	14.0	4.8	25.5	4.6	23.7
Green Ext Time (p_c), s	0.1	2.3	0.3	1.4	0.0	1.9	0.0	4.6

Intersection Summary	
HCM 2010 Ctrl Delay	37.0
HCM 2010 LOS	D

Intersection												
Int Delay, s/veh	0.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	839	5	0	1570	12	0	0	9	0	0	7
Future Vol, veh/h	0	839	5	0	1570	12	0	0	9	0	0	7
Conflicting Peds, #/hr	2	0	3	3	0	2	1	0	0	0	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	3	3	3	2	2	2	44	44	44	2	2	2
Mvmt Flow	0	932	6	0	1744	13	0	0	10	0	0	8

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	-	-	0	-	-	472	-	-	882
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	-	-	7.78	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	-	-	3.74	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	0	-	-	0	0	439	0	0	289
Stage 1	0	-	-	0	-	-	0	0	-	0	0	-
Stage 2	0	-	-	0	-	-	0	0	-	0	0	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	-	-	-	-	-	-	-	-	438	-	-	288
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	13.4	17.8
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT	WBR	SBLn1
Capacity (veh/h)	438	-	-	-	-	288
HCM Lane V/C Ratio	0.023	-	-	-	-	0.027
HCM Control Delay (s)	13.4	-	-	-	-	17.8
HCM Lane LOS	B	-	-	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	-	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	167	170	110	425	400	30	110	417	420	70	638	331
Future Volume (veh/h)	167	170	110	425	400	30	110	417	420	70	638	331
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1863	1863	1863	1845	1845	1845	1863	1863	1863
Adj Flow Rate, veh/h	180	183	118	457	430	32	118	448	452	75	686	356
Adj No. of Lanes	1	2	0	1	2	1	1	2	1	1	2	1
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, %	3	3	3	2	2	2	3	3	3	2	2	2
Cap, veh/h	225	317	193	500	1084	477	148	1001	879	96	904	401
Arrive On Green	0.13	0.15	0.15	0.28	0.31	0.31	0.08	0.29	0.29	0.05	0.26	0.26
Sat Flow, veh/h	1757	2078	1266	1774	3539	1557	1757	3505	1530	1774	3539	1570
Grp Volume(v), veh/h	180	153	148	457	430	32	118	448	452	75	686	356
Grp Sat Flow(s),veh/h/ln	1757	1752	1591	1774	1770	1557	1757	1752	1530	1774	1770	1570
Q Serve(g_s), s	7.9	6.4	6.9	19.9	7.6	1.2	5.3	8.3	14.5	3.3	14.3	17.4
Cycle Q Clear(g_c), s	7.9	6.4	6.9	19.9	7.6	1.2	5.3	8.3	14.5	3.3	14.3	17.4
Prop In Lane	1.00		0.80	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	225	268	243	500	1084	477	148	1001	879	96	904	401
V/C Ratio(X)	0.80	0.57	0.61	0.91	0.40	0.07	0.80	0.45	0.51	0.78	0.76	0.89
Avail Cap(c_a), veh/h	386	396	359	568	1155	508	165	1001	879	145	933	414
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	33.7	31.3	31.5	27.7	21.8	19.6	35.8	23.3	10.6	37.2	27.4	28.6
Incr Delay (d2), s/veh	6.4	1.9	2.5	18.2	0.2	0.1	21.2	0.3	0.5	14.1	3.6	19.9
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	4.3	3.2	3.2	12.2	3.7	0.5	3.4	4.1	6.2	2.0	7.4	9.8
LnGrp Delay(d),s/veh	40.2	33.3	34.0	45.9	22.1	19.6	57.0	23.6	11.1	51.3	31.0	48.4
LnGrp LOS	D	C	C	D	C	B	E	C	B	D	C	D
Approach Vol, veh/h		481			919			1018			1117	
Approach Delay, s/veh		36.1			33.8			21.9			37.9	
Approach LOS		D			C			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.8	27.3	26.9	16.7	11.2	24.9	14.7	28.9
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	6.5	22.0	25.5	18.0	7.5	21.0	17.5	26.0
Max Q Clear Time (g_c+I1), s	5.3	16.5	21.9	8.9	7.3	19.4	9.9	9.6
Green Ext Time (p_c), s	0.0	2.3	0.6	1.1	0.0	1.0	0.3	2.7

Intersection Summary	
HCM 2010 Ctrl Delay	32.0
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	0	82	0	0	0	45	785	0	0	1589	52
Future Volume (veh/h)	45	0	82	0	0	0	45	785	0	0	1589	52
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1810	1810	1900	1863	1863	1900
Adj Flow Rate, veh/h	48	0	87	0	0	0	48	835	0	0	1690	55
Adj No. of Lanes	0	1	1	0	1	0	1	2	0	1	2	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	5	5	5	2	2	2
Cap, veh/h	277	0	140	0	165	0	68	2551	0	4	2161	70
Arrive On Green	0.09	0.00	0.09	0.00	0.00	0.00	0.04	0.74	0.00	0.00	0.62	0.62
Sat Flow, veh/h	1401	0	1578	0	1863	0	1723	3529	0	1774	3498	113
Grp Volume(v), veh/h	48	0	87	0	0	0	48	835	0	0	852	893
Grp Sat Flow(s),veh/h/ln	1401	0	1578	0	1863	0	1723	1719	0	1774	1770	1842
Q Serve(g_s), s	1.5	0.0	2.5	0.0	0.0	0.0	1.3	3.9	0.0	0.0	16.8	17.0
Cycle Q Clear(g_c), s	1.5	0.0	2.5	0.0	0.0	0.0	1.3	3.9	0.0	0.0	16.8	17.0
Prop In Lane	1.00		1.00	0.00		0.00	1.00		0.00	1.00		0.06
Lane Grp Cap(c), veh/h	277	0	140	0	165	0	68	2551	0	4	1093	1138
V/C Ratio(X)	0.17	0.00	0.62	0.00	0.00	0.00	0.70	0.33	0.00	0.00	0.78	0.78
Avail Cap(c_a), veh/h	627	0	535	0	631	0	146	2551	0	150	1237	1288
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	20.3	0.0	20.8	0.0	0.0	0.0	22.4	2.1	0.0	0.0	6.7	6.7
Incr Delay (d2), s/veh	0.3	0.0	4.5	0.0	0.0	0.0	12.4	0.1	0.0	0.0	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	0.6	0.0	1.3	0.0	0.0	0.0	0.8	1.8	0.0	0.0	8.7	9.4
LnGrp Delay(d),s/veh	20.6	0.0	25.2	0.0	0.0	0.0	34.8	2.1	0.0	0.0	9.5	9.6
LnGrp LOS	C		C				C	A			A	A
Approach Vol, veh/h		135			0			883			1745	
Approach Delay, s/veh		23.6			0.0			3.9			9.6	
Approach LOS		C						A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	0.0	39.0		8.2	5.9	33.2		8.2
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	33.0		16.0	4.0	33.0		16.0
Max Q Clear Time (g_c+I1), s	0.0	5.9		4.5	3.3	19.0		0.0
Green Ext Time (p_c), s	0.0	6.6		0.3	0.0	10.2		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	8.5
HCM 2010 LOS	A

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	45	44	15	800	1485	85
Future Vol, veh/h	45	44	15	800	1485	85
Conflicting Peds, #/hr	2	0	2	0	0	2
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	150	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	7	7	2	2
Mvmt Flow	47	46	16	842	1563	89

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2065	828	1654	0	-	0
Stage 1	1610	-	-	-	-	-
Stage 2	455	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.24	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.27	-	-	-
Pot Cap-1 Maneuver	~ 47	314	364	-	-	-
Stage 1	149	-	-	-	-	-
Stage 2	606	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 45	313	363	-	-	-
Mov Cap-2 Maneuver	117	-	-	-	-	-
Stage 1	142	-	-	-	-	-
Stage 2	605	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	37.1	0.3	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	363	-	117	313	-	-
HCM Lane V/C Ratio	0.043	-	0.405	0.148	-	-
HCM Control Delay (s)	15.4	-	55.3	18.5	-	-
HCM Lane LOS	C	-	F	C	-	-
HCM 95th %tile Q(veh)	0.1	-	1.7	0.5	-	-

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	238	733	230	249	548	322	224	452	256	219	520	210
Future Volume (veh/h)	238	733	230	249	548	322	224	452	256	219	520	210
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1810	1810	1810	1743	1743	1743	1845	1845	1845	1810	1810	1810
Adj Flow Rate, veh/h	280	862	271	293	645	379	264	532	301	258	612	247
Adj No. of Lanes	2	2	1	2	2	1	1	2	1	1	2	1
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, %	5	5	5	9	9	9	3	3	3	5	5	5
Cap, veh/h	381	916	409	390	906	404	294	778	348	288	763	340
Arrive On Green	0.11	0.27	0.27	0.12	0.27	0.27	0.17	0.22	0.22	0.17	0.22	0.22
Sat Flow, veh/h	3343	3438	1535	3221	3312	1475	1757	3505	1568	1723	3438	1530
Grp Volume(v), veh/h	280	862	271	293	645	379	264	532	301	258	612	247
Grp Sat Flow(s),veh/h/ln	1672	1719	1535	1610	1656	1475	1757	1752	1568	1723	1719	1530
Q Serve(g_s), s	6.5	19.8	12.7	7.1	14.2	20.3	11.9	11.2	14.9	11.8	13.6	12.1
Cycle Q Clear(g_c), s	6.5	19.8	12.7	7.1	14.2	20.3	11.9	11.2	14.9	11.8	13.6	12.1
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	381	916	409	390	906	404	294	778	348	288	763	340
V/C Ratio(X)	0.73	0.94	0.66	0.75	0.71	0.94	0.90	0.68	0.86	0.89	0.80	0.73
Avail Cap(c_a), veh/h	746	916	409	718	906	404	294	825	369	288	809	360
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	34.6	29.0	26.4	34.3	26.4	28.6	32.9	28.8	30.2	32.9	29.7	29.1
Incr Delay (d2), s/veh	2.8	17.3	4.0	2.9	2.6	29.8	28.1	2.2	18.1	27.9	5.5	6.8
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	3.1	11.5	5.8	3.3	6.8	11.5	8.0	5.6	8.2	7.8	7.0	5.7
LnGrp Delay(d),s/veh	37.3	46.2	30.3	37.2	29.1	58.4	61.1	31.0	48.3	60.8	35.3	35.9
LnGrp LOS	D	D	C	D	C	E	E	C	D	E	D	D
Approach Vol, veh/h		1413			1317			1097			1117	
Approach Delay, s/veh		41.4			39.3			43.0			41.3	
Approach LOS		D			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.0	22.4	14.3	26.0	18.0	22.4	13.7	26.6
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	13.5	19.0	18.0	21.5	13.5	19.0	18.0	21.5
Max Q Clear Time (g_c+I1), s	13.8	16.9	9.1	21.8	13.9	15.6	8.5	22.3
Green Ext Time (p_c), s	0.0	1.0	0.7	0.0	0.0	1.6	0.7	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	41.2
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	423	34	446	21	1745	696	327	871	39
Future Volume (vph)	0	0	0	423	34	446	21	1745	696	327	871	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor				0.95	0.95	1.00	1.00	0.95	0.88	1.00	0.95	
Frpb, ped/bikes				1.00	1.00	0.99	1.00	1.00	0.98	1.00	1.00	
Flpb, ped/bikes				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt				1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected				0.95	0.96	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)				1681	1697	1566	1770	3539	2725	1770	3513	
Flt Permitted				0.95	0.96	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)				1681	1697	1566	1770	3539	2725	1770	3513	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	0	0	0	436	35	460	22	1799	718	337	898	40
RTOR Reduction (vph)	0	0	0	0	0	8	0	0	0	0	3	0
Lane Group Flow (vph)	0	0	0	235	236	452	22	1799	718	337	935	0
Confl. Peds. (#/hr)						7			4			1
Turn Type				Split	NA	pm+ov	Prot	NA	Free	Prot	NA	
Protected Phases				8	8	1	5	2		1	6	
Permitted Phases						8			Free			
Actuated Green, G (s)				15.1	15.1	32.1	2.0	47.5	91.6	17.0	62.5	
Effective Green, g (s)				15.1	15.1	32.1	2.0	47.5	91.6	17.0	62.5	
Actuated g/C Ratio				0.16	0.16	0.35	0.02	0.52	1.00	0.19	0.68	
Clearance Time (s)				4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)				3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)				277	279	617	38	1835	2725	328	2396	
v/s Ratio Prot				c0.14	0.14	c0.14	0.01	c0.51		c0.19	0.27	
v/s Ratio Perm						0.15			0.26			
v/c Ratio				0.85	0.85	0.73	0.58	0.98	0.26	1.03	0.39	
Uniform Delay, d1				37.1	37.1	26.0	44.4	21.6	0.0	37.3	6.3	
Progression Factor				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2				20.7	20.4	4.5	19.6	16.9	0.2	56.9	0.5	
Delay (s)				57.9	57.5	30.5	64.0	38.4	0.2	94.2	6.8	
Level of Service				E	E	C	E	D	A	F	A	
Approach Delay (s)		0.0			44.2			27.9			29.9	
Approach LOS		A			D			C			C	

Intersection Summary

HCM 2000 Control Delay	31.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	91.6	Sum of lost time (s)	12.0
Intersection Capacity Utilization	89.1%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	87	799	137	241	570	194	129	870	82	153	634	308
Future Volume (veh/h)	87	799	137	241	570	194	129	870	82	153	634	308
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1827	1827	1827
Adj Flow Rate, veh/h	94	859	147	259	613	209	139	935	88	165	682	331
Adj No. of Lanes	1	2	1	1	2	0	1	2	1	1	2	1
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	4	4	4
Cap, veh/h	120	897	546	280	892	304	171	997	446	186	1014	451
Arrive On Green	0.07	0.25	0.25	0.16	0.34	0.34	0.10	0.28	0.28	0.11	0.29	0.29
Sat Flow, veh/h	1774	3539	1553	1774	2593	883	1774	3539	1582	1740	3471	1543
Grp Volume(v), veh/h	94	859	147	259	418	404	139	935	88	165	682	331
Grp Sat Flow(s),veh/h/ln	1774	1770	1553	1774	1770	1707	1774	1770	1582	1740	1736	1543
Q Serve(g_s), s	4.7	21.5	6.1	12.9	18.2	18.3	6.9	23.2	3.8	8.4	15.6	17.4
Cycle Q Clear(g_c), s	4.7	21.5	6.1	12.9	18.2	18.3	6.9	23.2	3.8	8.4	15.6	17.4
Prop In Lane	1.00		1.00	1.00		0.52	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	120	897	546	280	609	587	171	997	446	186	1014	451
V/C Ratio(X)	0.79	0.96	0.27	0.92	0.69	0.69	0.81	0.94	0.20	0.89	0.67	0.73
Avail Cap(c_a), veh/h	152	897	546	280	609	587	201	1000	447	186	1014	451
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	41.3	33.1	21.0	37.3	25.3	25.4	39.8	31.5	24.6	39.6	28.1	28.7
Incr Delay (d2), s/veh	18.6	20.4	0.3	34.5	3.2	3.4	19.2	15.7	0.2	36.7	1.8	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	2.9	13.0	2.7	9.0	9.5	9.2	4.3	13.5	1.7	5.9	7.7	8.2
LnGrp Delay(d),s/veh	59.8	53.5	21.2	71.8	28.6	28.7	59.0	47.2	24.8	76.4	29.8	34.8
LnGrp LOS	E	D	C	E	C	C	E	D	C	E	C	C
Approach Vol, veh/h		1100			1081			1162			1178	
Approach Delay, s/veh		49.7			39.0			46.9			37.7	
Approach LOS		D			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.1	29.8	18.7	27.3	13.2	30.8	10.6	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	9.6	25.4	14.2	22.8	10.2	24.8	7.7	29.3
Max Q Clear Time (g_c+I1), s	10.4	25.2	14.9	23.5	8.9	19.4	6.7	20.3
Green Ext Time (p_c), s	0.0	0.1	0.0	0.0	0.0	2.7	0.0	3.5

Intersection Summary	
HCM 2010 Ctrl Delay	43.3
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	61	687	60	398	624	135	140	865	686	154	920	15
Future Volume (veh/h)	61	687	60	398	624	135	140	865	686	154	920	15
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1810	1810	1810
Adj Flow Rate, veh/h	66	739	65	428	671	145	151	930	738	166	989	16
Adj No. of Lanes	1	2	1	2	2	0	1	2	1	1	2	1
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	5	5	5
Cap, veh/h	85	776	345	522	936	202	171	1097	730	190	1113	496
Arrive On Green	0.05	0.22	0.22	0.15	0.32	0.32	0.10	0.31	0.31	0.11	0.32	0.32
Sat Flow, veh/h	1774	3539	1575	3442	2895	625	1774	3539	1582	1723	3438	1532
Grp Volume(v), veh/h	66	739	65	428	410	406	151	930	738	166	989	16
Grp Sat Flow(s),veh/h/ln	1774	1770	1575	1721	1770	1750	1774	1770	1582	1723	1719	1532
Q Serve(g_s), s	3.2	17.8	2.9	10.4	17.6	17.6	7.2	21.2	26.7	8.2	23.5	0.6
Cycle Q Clear(g_c), s	3.2	17.8	2.9	10.4	17.6	17.6	7.2	21.2	26.7	8.2	23.5	0.6
Prop In Lane	1.00		1.00	1.00		0.36	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	85	776	345	522	572	566	171	1097	730	190	1113	496
V/C Ratio(X)	0.78	0.95	0.19	0.82	0.72	0.72	0.88	0.85	1.01	0.87	0.89	0.03
Avail Cap(c_a), veh/h	130	776	345	675	606	599	171	1097	730	190	1113	496
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	40.6	33.2	27.4	35.4	25.7	25.7	38.5	27.8	23.2	37.7	27.7	19.9
Incr Delay (d2), s/veh	15.0	21.4	0.3	6.2	3.8	3.9	37.9	8.2	35.9	33.2	10.6	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	10.9	1.3	5.4	9.1	9.1	5.4	11.6	24.4	5.6	12.8	0.3
LnGrp Delay(d),s/veh	55.6	54.6	27.7	41.6	29.5	29.6	76.4	36.0	59.1	70.9	38.3	20.0
LnGrp LOS	E	D	C	D	C	C	E	D	F	E	D	C
Approach Vol, veh/h		870			1244			1819			1171	
Approach Delay, s/veh		52.6			33.7			48.8			42.7	
Approach LOS		D			C			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.0	31.2	17.6	23.4	12.8	32.4	8.6	32.4
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	9.5	26.7	16.9	18.9	8.3	27.9	6.3	29.5
Max Q Clear Time (g_c+I1), s	10.2	28.7	12.4	19.8	9.2	25.5	5.2	19.6
Green Ext Time (p_c), s	0.0	0.0	0.7	0.0	0.0	1.5	0.0	3.7

Intersection Summary	
HCM 2010 Ctrl Delay	44.3
HCM 2010 LOS	D

Intersection												
Int Delay, s/veh	0.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↱			↑↑↱				↱			↱
Traffic Vol, veh/h	0	1548	2	0	1149	8	0	0	11	0	0	6
Future Vol, veh/h	0	1548	2	0	1149	8	0	0	11	0	0	6
Conflicting Peds, #/hr	5	0	3	3	0	5	0	0	2	2	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	36	36	36	9	9	9
Mvmt Flow	0	1629	2	0	1209	8	0	0	12	0	0	6

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	-	-	0	-	-	821	-	-	614
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	-	-	7.62	-	-	7.08
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	-	-	3.66	-	-	3.39
Pot Cap-1 Maneuver	0	-	-	0	-	-	0	0	255	0	0	418
Stage 1	0	-	-	0	-	-	0	0	-	0	0	-
Stage 2	0	-	-	0	-	-	0	0	-	0	0	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	-	-	-	-	-	-	-	-	254	-	-	416
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	19.8	13.8
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT	WBR	SBLn1
Capacity (veh/h)	254	-	-	-	-	416
HCM Lane V/C Ratio	0.046	-	-	-	-	0.015
HCM Control Delay (s)	19.8	-	-	-	-	13.8
HCM Lane LOS	C	-	-	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	-	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	302	350	70	281	266	30	340	859	645	40	437	290
Future Volume (vph)	302	350	70	281	266	30	340	859	645	40	437	290
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
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
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.97	1.00	1.00	0.94	1.00	1.00	0.94
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	3437		1770	3539	1542	1770	3539	1495	1770	3539	1487
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	3437		1770	3539	1542	1770	3539	1495	1770	3539	1487
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	315	365	73	293	277	31	354	895	672	42	455	302
RTOR Reduction (vph)	0	19	0	0	0	26	0	0	70	0	0	239
Lane Group Flow (vph)	315	419	0	293	277	5	354	895	602	42	455	63
Confl. Peds. (#/hr)			9			10			50			35
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2	3	1	6	
Permitted Phases						8			2			6
Actuated Green, G (s)	16.9	15.4		15.9	14.4	14.4	18.8	33.8	49.7	2.8	17.8	17.8
Effective Green, g (s)	16.9	15.4		15.9	14.4	14.4	18.8	33.8	49.7	2.8	17.8	17.8
Actuated g/C Ratio	0.20	0.18		0.19	0.17	0.17	0.22	0.39	0.58	0.03	0.21	0.21
Clearance Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	348	616		327	593	258	387	1392	943	57	733	308
v/s Ratio Prot	c0.18	c0.12		0.17	0.08		c0.20	0.25	c0.12	0.02	0.13	
v/s Ratio Perm						0.00			0.28			0.04
v/c Ratio	0.91	0.68		0.90	0.47	0.02	0.91	0.64	0.64	0.74	0.62	0.20
Uniform Delay, d1	33.7	32.9		34.2	32.3	29.9	32.8	21.2	12.1	41.2	31.0	28.2
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	25.8	3.1		25.4	0.6	0.0	25.6	1.0	1.4	38.8	1.6	0.3
Delay (s)	59.6	36.0		59.5	32.9	29.9	58.4	22.2	13.5	80.0	32.6	28.5
Level of Service	E	D		E	C	C	E	C	B	E	C	C
Approach Delay (s)		45.9			45.7			25.8			33.6	
Approach LOS		D			D			C			C	

Intersection Summary

HCM 2000 Control Delay	34.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	85.9	Sum of lost time (s)	18.0
Intersection Capacity Utilization	76.3%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	39	0	45	0	0	0	60	1652	0	1	1148	54
Future Volume (veh/h)	39	0	45	0	0	0	60	1652	0	1	1148	54
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1810	1810	1900
Adj Flow Rate, veh/h	42	0	48	0	0	0	65	1776	0	1	1234	58
Adj No. of Lanes	0	1	1	0	1	0	1	2	0	1	2	0
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	5	5	5
Cap, veh/h	256	0	102	0	120	0	89	2332	0	4	2039	96
Arrive On Green	0.06	0.00	0.06	0.00	0.00	0.00	0.05	0.66	0.00	0.00	0.61	0.61
Sat Flow, veh/h	1399	0	1578	0	1863	0	1774	3632	0	1723	3342	157
Grp Volume(v), veh/h	42	0	48	0	0	0	65	1776	0	1	634	658
Grp Sat Flow(s),veh/h/ln	1399	0	1578	0	1863	0	1774	1770	0	1723	1719	1780
Q Serve(g_s), s	1.3	0.0	1.3	0.0	0.0	0.0	1.6	15.0	0.0	0.0	9.9	10.0
Cycle Q Clear(g_c), s	1.3	0.0	1.3	0.0	0.0	0.0	1.6	15.0	0.0	0.0	9.9	10.0
Prop In Lane	1.00		1.00	0.00		0.00	1.00		0.00	1.00		0.09
Lane Grp Cap(c), veh/h	256	0	102	0	120	0	89	2332	0	4	1049	1086
V/C Ratio(X)	0.16	0.00	0.47	0.00	0.00	0.00	0.73	0.76	0.00	0.25	0.60	0.61
Avail Cap(c_a), veh/h	679	0	579	0	684	0	203	2679	0	158	1262	1307
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.7	0.0	19.7	0.0	0.0	0.0	20.4	5.1	0.0	21.7	5.3	5.3
Incr Delay (d2), s/veh	0.3	0.0	3.3	0.0	0.0	0.0	11.0	1.1	0.0	30.5	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	0.5	0.0	0.7	0.0	0.0	0.0	1.0	7.3	0.0	0.0	4.7	4.9
LnGrp Delay(d),s/veh	20.0	0.0	23.0	0.0	0.0	0.0	31.4	6.2	0.0	52.3	5.8	5.8
LnGrp LOS	B		C				C	A		D	A	A
Approach Vol, veh/h		90			0			1841			1293	
Approach Delay, s/veh		21.6			0.0			7.1			5.9	
Approach LOS		C						A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.0	32.7		6.8	6.2	30.6		6.8
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	33.0		16.0	5.0	32.0		16.0
Max Q Clear Time (g_c+I1), s	2.0	17.0		3.3	3.6	12.0		0.0
Green Ext Time (p_c), s	0.0	11.7		0.2	0.0	9.3		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	7.0
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	311	479	210	190	245	205	282	710	298	264	603	300
Future Volume (veh/h)	311	479	210	190	245	205	282	710	298	264	603	300
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1827	1776	1776	1776	1845	1845	1845	1810	1810	1810
Adj Flow Rate, veh/h	349	538	236	213	275	230	317	798	335	297	678	337
Adj No. of Lanes	2	2	1	2	2	1	1	2	1	1	2	1
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	4	4	4	7	7	7	3	3	3	5	5	5
Cap, veh/h	457	789	352	311	631	282	355	895	400	333	849	379
Arrive On Green	0.14	0.23	0.23	0.09	0.19	0.19	0.20	0.26	0.26	0.19	0.25	0.25
Sat Flow, veh/h	3375	3471	1547	3281	3374	1509	1757	3505	1568	1723	3438	1536
Grp Volume(v), veh/h	349	538	236	213	275	230	317	798	335	297	678	337
Grp Sat Flow(s),veh/h/ln	1688	1736	1547	1640	1687	1509	1757	1752	1568	1723	1719	1536
Q Serve(g_s), s	7.8	11.1	10.9	4.9	5.7	11.5	13.8	17.3	15.9	13.2	14.5	16.6
Cycle Q Clear(g_c), s	7.8	11.1	10.9	4.9	5.7	11.5	13.8	17.3	15.9	13.2	14.5	16.6
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	457	789	352	311	631	282	355	895	400	333	849	379
V/C Ratio(X)	0.76	0.68	0.67	0.68	0.44	0.82	0.89	0.89	0.84	0.89	0.80	0.89
Avail Cap(c_a), veh/h	773	795	354	751	772	346	369	914	409	340	853	381
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	32.8	27.8	27.7	34.4	28.3	30.7	30.5	28.2	27.7	30.9	27.8	28.6
Incr Delay (d2), s/veh	2.7	2.4	4.8	2.7	0.5	11.7	22.6	10.9	13.9	23.8	5.4	21.7
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	3.8	5.6	5.1	2.4	2.7	5.7	8.9	9.7	8.4	8.5	7.5	9.3
LnGrp Delay(d),s/veh	35.5	30.1	32.5	37.1	28.8	42.4	53.1	39.1	41.6	54.7	33.2	50.2
LnGrp LOS	D	C	C	D	C	D	D	D	D	D	C	D
Approach Vol, veh/h		1123			718			1450			1312	
Approach Delay, s/veh		32.3			35.6			42.7			42.4	
Approach LOS		C			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.7	24.6	12.0	22.4	20.4	23.9	15.1	19.2
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	15.5	20.5	18.0	18.0	16.5	19.5	18.0	18.0
Max Q Clear Time (g_c+I1), s	15.2	19.3	6.9	13.1	15.8	18.6	9.8	13.5
Green Ext Time (p_c), s	0.0	0.8	0.5	1.9	0.1	0.5	0.8	1.1

Intersection Summary	
HCM 2010 Ctrl Delay	39.0
HCM 2010 LOS	D

Intersection						
Int Delay, s/veh	2.6					

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	93	15	26	1494	1138	52
Future Vol, veh/h	93	15	26	1494	1138	52
Conflicting Peds, #/hr	4	0	2	0	0	2
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	150	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	3	3	4	4
Mvmt Flow	100	16	28	1606	1224	56

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2117	642	1282	0	-	0
Stage 1	1254	-	-	-	-	-
Stage 2	863	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.16	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.23	-	-	-
Pot Cap-1 Maneuver	~ 43	417	532	-	-	-
Stage 1	232	-	-	-	-	-
Stage 2	373	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 41	416	531	-	-	-
Mov Cap-2 Maneuver	143	-	-	-	-	-
Stage 1	219	-	-	-	-	-
Stage 2	372	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	65.9	0.2	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	531	-	143	416	-	-
HCM Lane V/C Ratio	0.053	-	0.699	0.039	-	-
HCM Control Delay (s)	12.2	-	74.3	14	-	-
HCM Lane LOS	B	-	F	B	-	-
HCM 95th %tile Q(veh)	0.2	-	4	0.1	-	-

Notes

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

Appendix H

Level of Service

Calculations

Cumulative Plus Project

Conditions

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	578	17	204	18	918	304	211	1424	21
Future Volume (vph)	0	0	0	578	17	204	18	918	304	211	1424	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor				0.95	0.95	1.00	1.00	0.95	0.88	1.00	0.95	
Frpb, ped/bikes				1.00	1.00	0.98	1.00	1.00	0.98	1.00	1.00	
Flpb, ped/bikes				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt				1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected				0.95	0.95	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)				1498	1506	1388	1577	3154	2427	1593	3177	
Flt Permitted				0.95	0.95	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)				1498	1506	1388	1577	3154	2427	1593	3177	
Peak-hour factor, PHF	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Adj. Flow (vph)	0	0	0	688	20	243	21	1093	362	251	1695	25
RTOR Reduction (vph)	0	0	0	0	0	177	0	0	0	0	1	0
Lane Group Flow (vph)	0	0	0	351	357	66	21	1093	362	251	1719	0
Confl. Peds. (#/hr)						4			6			2
Heavy Vehicles (%)	2%	2%	2%	3%	3%	3%	3%	3%	3%	2%	2%	2%
Turn Type				Split	NA	Perm	Prot	NA	Free	Prot	NA	
Protected Phases				8	8		5	2		1	6	
Permitted Phases						8			Free			
Actuated Green, G (s)				16.7	16.7	16.7	0.8	21.3	61.5	11.5	32.0	
Effective Green, g (s)				16.7	16.7	16.7	0.8	21.3	61.5	11.5	32.0	
Actuated g/C Ratio				0.27	0.27	0.27	0.01	0.35	1.00	0.19	0.52	
Clearance Time (s)				4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)				3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)				406	408	376	20	1092	2427	297	1653	
v/s Ratio Prot				0.23	c0.24		0.01	0.35		c0.16	c0.54	
v/s Ratio Perm						0.05			0.15			
v/c Ratio				0.86	0.88	0.18	1.05	1.00	0.15	0.85	1.04	
Uniform Delay, d1				21.3	21.4	17.1	30.4	20.1	0.0	24.1	14.8	
Progression Factor				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2				17.1	18.4	0.2	217.8	27.5	0.1	19.3	33.2	
Delay (s)				38.5	39.8	17.4	248.1	47.6	0.1	43.4	47.9	
Level of Service				D	D	B	F	D	A	D	D	
Approach Delay (s)		0.0			33.6			38.8			47.4	
Approach LOS		A			C			D			D	

Intersection Summary			
HCM 2000 Control Delay	41.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	61.5	Sum of lost time (s)	12.0
Intersection Capacity Utilization	76.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	130	416	253	138	563	92	115	660	60	58	940	153
Future Volume (veh/h)	130	416	253	138	563	92	115	660	60	58	940	153
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1845	1845	1900	1776	1776	1776	1863	1863	1863
Adj Flow Rate, veh/h	153	489	298	162	662	108	135	776	71	68	1106	180
Adj No. of Lanes	1	2	1	1	2	0	1	2	1	1	2	1
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	3	3	3	7	7	7	2	2	2
Cap, veh/h	164	977	431	138	791	129	133	1038	463	97	1006	448
Arrive On Green	0.09	0.28	0.28	0.08	0.26	0.26	0.08	0.31	0.31	0.05	0.28	0.28
Sat Flow, veh/h	1774	3539	1561	1757	3018	492	1691	3374	1505	1774	3539	1575
Grp Volume(v), veh/h	153	489	298	162	384	386	135	776	71	68	1106	180
Grp Sat Flow(s),veh/h/ln	1774	1770	1561	1757	1752	1758	1691	1687	1505	1774	1770	1575
Q Serve(g_s), s	5.5	7.4	10.9	5.0	13.2	13.2	5.0	13.2	2.2	2.4	18.1	5.9
Cycle Q Clear(g_c), s	5.5	7.4	10.9	5.0	13.2	13.2	5.0	13.2	2.2	2.4	18.1	5.9
Prop In Lane	1.00		1.00	1.00		0.28	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	164	977	431	138	459	461	133	1038	463	97	1006	448
V/C Ratio(X)	0.93	0.50	0.69	1.17	0.84	0.84	1.02	0.75	0.15	0.70	1.10	0.40
Avail Cap(c_a), veh/h	164	1050	463	138	495	497	133	1038	463	139	1006	448
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	28.7	19.4	20.6	29.3	22.2	22.2	29.3	19.8	16.0	29.6	22.8	18.4
Incr Delay (d2), s/veh	50.3	0.4	4.0	131.1	11.3	11.4	82.6	3.0	0.2	8.7	59.6	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.9	3.7	5.1	7.4	7.7	7.8	5.3	6.5	0.9	1.4	17.0	2.6
LnGrp Delay(d),s/veh	79.0	19.8	24.6	160.5	33.5	33.6	112.1	22.8	16.2	38.2	82.4	19.0
LnGrp LOS	E	B	C	F	C	C	F	C	B	D	F	B
Approach Vol, veh/h		940			932			982			1354	
Approach Delay, s/veh		30.9			55.6			34.6			71.8	
Approach LOS		C			E			C			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	24.1	9.5	22.1	9.5	22.6	10.4	21.2
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.0	18.1	5.0	18.9	5.0	18.1	5.9	18.0
Max Q Clear Time (g_c+I1), s	4.4	15.2	7.0	12.9	7.0	20.1	7.5	15.2
Green Ext Time (p_c), s	0.0	1.5	0.0	2.3	0.0	0.0	0.0	1.3

Intersection Summary	
HCM 2010 Ctrl Delay	50.4
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	45	499	110	81	738	832	102	85	654	220	209	980
Future Volume (vph)	45	499	110	81	738	832	102	85	654	220	209	980
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	1.00	0.95	1.00		1.00	0.95		1.00	0.95	1.00	1.00	0.95
Frpb, ped/bikes	1.00	1.00	0.98		1.00	1.00		1.00	1.00	0.98	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85		1.00	0.98		1.00	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1770	3539	1557		1770	3476		1719	3438	1513	1752	3505
Flt Permitted	0.95	1.00	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1770	3539	1557		1770	3476		1719	3438	1513	1752	3505
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	50	554	122	90	820	924	113	94	727	244	232	1089
RTOR Reduction (vph)	0	0	105	0	0	6	0	0	0	144	0	0
Lane Group Flow (vph)	50	554	17	0	910	1031	0	94	727	100	232	1089
Confl. Peds. (#/hr)			2				1			2		
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	5%	5%	5%	3%	3%
Turn Type	Prot	NA	Perm	Prot	Prot	NA		Prot	NA	Perm	Prot	NA
Protected Phases	7	4		3	3	8		5	2		1	6
Permitted Phases			4							2		
Actuated Green, G (s)	7.2	19.4	19.4		55.5	67.7		7.5	34.0	34.0	14.0	40.5
Effective Green, g (s)	7.2	19.4	19.4		55.5	67.7		7.5	34.0	34.0	14.0	40.5
Actuated g/C Ratio	0.05	0.14	0.14		0.39	0.48		0.05	0.24	0.24	0.10	0.29
Clearance Time (s)	4.5	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	90	487	214		697	1670		91	829	365	174	1007
v/s Ratio Prot	0.03	c0.16			c0.51	0.30		0.05	0.21		c0.13	c0.31
v/s Ratio Perm			0.01							0.07		
v/c Ratio	0.56	1.14	0.08		1.31	0.62		1.03	0.88	0.27	1.33	1.08
Uniform Delay, d1	65.3	60.8	53.0		42.7	27.0		66.7	51.4	43.4	63.5	50.2
Progression Factor	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	7.2	84.3	0.2		147.8	0.7		103.6	12.6	1.8	183.8	53.0
Delay (s)	72.5	145.1	53.1		190.5	27.7		170.3	64.0	45.3	247.2	103.2
Level of Service	E	F	D		F	C		F	E	D	F	F
Approach Delay (s)		124.6				103.8			69.1			127.6
Approach LOS		F				F			E			F

Intersection Summary			
HCM 2000 Control Delay	105.8	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.24		
Actuated Cycle Length (s)	140.9	Sum of lost time (s)	18.0
Intersection Capacity Utilization	106.0%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group



Movement	SBR
Lane Configurations	
Traffic Volume (vph)	12
Future Volume (vph)	12
Ideal Flow (vphpl)	1900
Total Lost time (s)	4.5
Lane Util. Factor	1.00
Frpb, ped/bikes	0.99
Flpb, ped/bikes	1.00
Frt	0.85
Flt Protected	1.00
Satd. Flow (prot)	1546
Flt Permitted	1.00
Satd. Flow (perm)	1546
Peak-hour factor, PHF	0.90
Adj. Flow (vph)	13
RTOR Reduction (vph)	9
Lane Group Flow (vph)	4
Confl. Peds. (#/hr)	1
Heavy Vehicles (%)	3%
Turn Type	Perm
Protected Phases	
Permitted Phases	6
Actuated Green, G (s)	40.5
Effective Green, g (s)	40.5
Actuated g/C Ratio	0.29
Clearance Time (s)	4.5
Vehicle Extension (s)	3.0
Lane Grp Cap (vph)	444
v/s Ratio Prot	
v/s Ratio Perm	0.00
v/c Ratio	0.01
Uniform Delay, d1	35.9
Progression Factor	1.00
Incremental Delay, d2	0.0
Delay (s)	35.9
Level of Service	D
Approach Delay (s)	
Approach LOS	

Intersection Summary

Intersection												
Int Delay, s/veh	0.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	834	171	0	1735	12	0	0	133	0	0	7
Future Vol, veh/h	4	834	171	0	1735	12	0	0	133	0	0	7
Conflicting Peds, #/hr	2	0	0	0	0	2	0	0	0	0	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	3	3	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	927	190	0	1928	13	0	0	148	0	0	8

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1943	0	0	-	-	0	-	-	559	2409	3062	974
Stage 1	-	-	-	-	-	-	-	-	-	1937	1937	-
Stage 2	-	-	-	-	-	-	-	-	-	472	1125	-
Critical Hdwy	4.16	-	-	-	-	-	-	-	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	6.54	5.54	-
Follow-up Hdwy	2.23	-	-	-	-	-	-	-	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	294	-	-	0	-	-	0	0	472	17	12	251
Stage 1	-	-	-	0	-	-	0	0	-	68	111	-
Stage 2	-	-	-	0	-	-	0	0	-	542	278	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	294	-	-	-	-	-	-	-	472	11	12	250
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	11	12	-
Stage 1	-	-	-	-	-	-	-	-	-	65	111	-
Stage 2	-	-	-	-	-	-	-	-	-	358	267	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	0	16.1	19.9
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBT	WBR	SBLn1
Capacity (veh/h)	472	294	-	-	-	-	250
HCM Lane V/C Ratio	0.313	0.015	-	-	-	-	0.031
HCM Control Delay (s)	16.1	17.4	0.3	-	-	-	19.9
HCM Lane LOS	C	C	A	-	-	-	C
HCM 95th %tile Q(veh)	1.3	0	-	-	-	-	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	181	184	110	425	417	30	110	417	420	70	638	348
Future Volume (veh/h)	181	184	110	425	417	30	110	417	420	70	638	348
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1863	1863	1863	1845	1845	1845	1863	1863	1863
Adj Flow Rate, veh/h	195	198	118	457	448	32	118	448	452	75	686	374
Adj No. of Lanes	1	2	0	1	2	1	1	2	1	1	2	1
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, %	3	3	3	2	2	2	3	3	3	2	2	2
Cap, veh/h	225	358	203	404	945	415	129	998	436	99	945	419
Arrive On Green	0.13	0.17	0.17	0.23	0.27	0.27	0.07	0.28	0.28	0.06	0.27	0.27
Sat Flow, veh/h	1757	2142	1215	1774	3539	1553	1757	3505	1530	1774	3539	1571
Grp Volume(v), veh/h	195	160	156	457	448	32	118	448	452	75	686	374
Grp Sat Flow(s),veh/h/ln	1757	1752	1604	1774	1770	1553	1757	1752	1530	1774	1770	1571
Q Serve(g_s), s	7.4	5.7	6.1	15.5	7.2	1.0	4.5	7.1	19.4	2.8	12.0	15.6
Cycle Q Clear(g_c), s	7.4	5.7	6.1	15.5	7.2	1.0	4.5	7.1	19.4	2.8	12.0	15.6
Prop In Lane	1.00		0.76	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	225	293	268	404	945	415	129	998	436	99	945	419
V/C Ratio(X)	0.87	0.55	0.58	1.13	0.47	0.08	0.91	0.45	1.04	0.76	0.73	0.89
Avail Cap(c_a), veh/h	225	464	425	404	1291	566	129	998	436	130	963	427
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	29.1	26.0	26.1	26.3	20.9	18.7	31.3	19.9	24.3	31.7	22.7	24.0
Incr Delay (d2), s/veh	28.2	1.6	2.0	85.2	0.4	0.1	53.5	0.3	53.2	16.6	2.7	20.2
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	5.3	2.9	2.8	17.1	3.5	0.5	4.1	3.5	14.5	1.9	6.2	9.1
LnGrp Delay(d),s/veh	57.3	27.6	28.1	111.4	21.3	18.7	84.8	20.3	77.5	48.3	25.4	44.1
LnGrp LOS	E	C	C	F	C	B	F	C	F	D	C	D
Approach Vol, veh/h		511			937			1018			1135	
Approach Delay, s/veh		39.1			65.2			53.2			33.1	
Approach LOS		D			E			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.3	23.9	20.0	15.9	9.5	22.7	13.2	22.7
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	5.0	18.5	15.5	18.0	5.0	18.5	8.7	24.8
Max Q Clear Time (g_c+I1), s	4.8	21.4	17.5	8.1	6.5	17.6	9.4	9.2
Green Ext Time (p_c), s	0.0	0.0	0.0	1.3	0.0	0.6	0.0	2.7

Intersection Summary	
HCM 2010 Ctrl Delay	48.0
HCM 2010 LOS	D

Intersection												
Int Delay, s/veh	4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	45	17	82	63	14	139	45	785	77	167	1589	52
Future Vol, veh/h	45	17	82	63	14	139	45	785	77	167	1589	52
Conflicting Peds, #/hr	1	0	1	1	0	1	7	0	7	7	0	7
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2	5	5	5	2	2	2
Mvmt Flow	48	18	87	67	15	148	48	835	82	178	1690	55

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2603	3101	881	2190	3087	467	1752	0	0	924	0	0
Stage 1	2081	2081	-	979	979	-	-	-	-	-	-	-
Stage 2	522	1020	-	1211	2108	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.2	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.25	-	-	2.22	-	-
Pot Cap-1 Maneuver	~ 12	~ 11	290	~ 25	~ 12	542	341	-	-	735	-	-
Stage 1	55	94	-	268	326	-	-	-	-	-	-	-
Stage 2	506	312	-	193	91	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	0	288	-	0	538	339	-	-	731	-	-
Mov Cap-2 Maneuver	-	0	-	-	0	-	-	-	-	-	-	-
Stage 1	~ 39	0	-	188	229	-	-	-	-	-	-	-
Stage 2	242	219	-	-	0	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s			2.9	5.3
HCM LOS	-	-		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	339	-	-	-	-	731	-	-
HCM Lane V/C Ratio	0.141	-	-	-	-	0.243	-	-
HCM Control Delay (s)	17.4	2.3	-	-	-	11.5	4.8	-
HCM Lane LOS	C	A	-	-	-	B	A	-
HCM 95th %tile Q(veh)	0.5	-	-	-	-	0.9	-	-

Notes

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

Intersection	
Int Delay, s/veh	3.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	20	35	882	40	140	1613
Future Vol, veh/h	20	35	882	40	140	1613
Conflicting Peds, #/hr	0	0	0	4	4	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	94	94	94	94	94	94
Heavy Vehicles, %	2	2	7	7	2	2
Mvmt Flow	21	37	938	43	149	1716

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2120	495	0	0	985	0
Stage 1	964	-	-	-	-	-
Stage 2	1156	-	-	-	-	-
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	43	520	-	-	697	-
Stage 1	331	-	-	-	-	-
Stage 2	262	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	0	518	-	-	695	-
Mov Cap-2 Maneuver	0	-	-	-	-	-
Stage 1	0	-	-	-	-	-
Stage 2	262	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.8	0	5.4
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	518	695	-
HCM Lane V/C Ratio	-	-	0.113	0.214	-
HCM Control Delay (s)	-	-	12.8	11.6	4.9
HCM Lane LOS	-	-	B	B	A
HCM 95th %tile Q(veh)	-	-	0.4	0.8	-

Intersection						
Int Delay, s/veh	15.8					

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	49	44	15	873	1544	89
Future Vol, veh/h	49	44	15	873	1544	89
Conflicting Peds, #/hr	2	0	2	0	0	2
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	95	95	95	95	95	95
Heavy Vehicles, %	2	2	7	7	2	2
Mvmt Flow	52	46	16	919	1625	94

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2168	862	1721	0	-	0
Stage 1	1674	-	-	-	-	-
Stage 2	494	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.24	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.27	-	-	-
Pot Cap-1 Maneuver	~ 40	298	342	-	-	-
Stage 1	138	-	-	-	-	-
Stage 2	579	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 36	298	341	-	-	-
Mov Cap-2 Maneuver	~ 36	-	-	-	-	-
Stage 1	124	-	-	-	-	-
Stage 2	578	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	$ 434.6	1	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	341	-	62	-	-
HCM Lane V/C Ratio	0.046	-	1.579	-	-
HCM Control Delay (s)	16.1	0.7	$ 434.6	-	-
HCM Lane LOS	C	A	F	-	-
HCM 95th %tile Q(veh)	0.1	-	8.7	-	-

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	12	0	5	90	25	50	30	786	125	120	742	407
Future Volume (veh/h)	12	0	5	90	25	50	30	786	125	120	742	407
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.99	0.99		0.99	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1652	1652	1792	1792	1900	1863	1863	1900
Adj Flow Rate, veh/h	13	0	5	96	27	53	32	836	133	128	789	433
Adj No. of Lanes	0	1	0	0	1	1	1	2	0	1	2	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	15	15	15	6	6	6	2	2	2
Cap, veh/h	206	22	34	294	54	196	364	1936	308	462	1453	792
Arrive On Green	0.14	0.00	0.14	0.14	0.14	0.14	0.66	0.66	0.66	0.66	0.66	0.66
Sat Flow, veh/h	482	153	244	1067	384	1386	437	2942	468	577	2208	1204
Grp Volume(v), veh/h	18	0	0	123	0	53	32	484	485	128	631	591
Grp Sat Flow(s),veh/h/ln	878	0	0	1451	0	1386	437	1703	1707	577	1770	1643
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	1.5	1.9	6.1	6.1	6.1	8.5	8.6
Cycle Q Clear(g_c), s	3.3	0.0	0.0	3.2	0.0	1.5	10.5	6.1	6.1	12.2	8.5	8.6
Prop In Lane	0.72		0.28	0.78		1.00	1.00		0.27	1.00		0.73
Lane Grp Cap(c), veh/h	262	0	0	348	0	196	364	1121	1123	462	1164	1081
V/C Ratio(X)	0.07	0.00	0.00	0.35	0.00	0.27	0.09	0.43	0.43	0.28	0.54	0.55
Avail Cap(c_a), veh/h	724	0	0	790	0	665	364	1121	1123	462	1164	1081
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.8	0.0	0.0	17.9	0.0	17.2	6.9	3.7	3.7	6.6	4.1	4.1
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.6	0.0	0.7	0.5	1.2	1.2	1.5	1.8	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.0	1.5	0.0	0.6	0.3	3.2	3.2	1.2	4.6	4.4
LnGrp Delay(d),s/veh	16.9	0.0	0.0	18.5	0.0	17.9	7.4	4.9	4.9	8.1	5.9	6.1
LnGrp LOS	B			B		B	A	A	A	A	A	A
Approach Vol, veh/h		18			176			1001			1350	
Approach Delay, s/veh		16.9			18.3			5.0			6.2	
Approach LOS		B			B			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		34.0		10.8		34.0		10.8
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green Setting (Gmax), s		29.5		21.5		29.5		21.5
Max Q Clear Time (g_c+I1), s		12.5		5.3		14.2		5.2
Green Ext Time (p_c), s		6.5		0.0		8.7		0.7

Intersection Summary	
HCM 2010 Ctrl Delay	6.6
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	258	6	269	16	3	0	488	688	9	23	576	136
Future Volume (vph)	258	6	269	16	3	0	488	688	9	23	576	136
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5		4.5		4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	0.95	0.95	1.00		1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	1.00		1.00		1.00	1.00	0.98	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00		1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85		1.00		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	0.95	1.00		0.96		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1649	1657	1553		1598		1736	3471	1518	1687	3374	1489
Flt Permitted	0.95	0.95	1.00		1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1649	1657	1553		1667		1736	3471	1518	1687	3374	1489
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	300	7	313	19	3	0	567	800	10	27	670	158
RTOR Reduction (vph)	0	0	261	0	0	0	0	0	5	0	0	113
Lane Group Flow (vph)	153	154	52	0	22	0	567	800	5	27	670	45
Confl. Peds. (#/hr)									3			1
Heavy Vehicles (%)	4%	4%	4%	14%	14%	14%	4%	4%	4%	7%	7%	7%
Turn Type	Split	NA	Perm	Perm	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	4	4			7		5	2		1	6	
Permitted Phases			4	7					2			6
Actuated Green, G (s)	12.5	12.5	12.5		1.7		21.1	40.6	40.6	2.0	21.5	21.5
Effective Green, g (s)	12.5	12.5	12.5		1.7		21.1	40.6	40.6	2.0	21.5	21.5
Actuated g/C Ratio	0.17	0.17	0.17		0.02		0.28	0.54	0.54	0.03	0.29	0.29
Clearance Time (s)	4.5	4.5	4.5		4.5		4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0		3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	275	276	259		37		489	1883	823	45	969	427
v/s Ratio Prot	0.09	c0.09					c0.33	0.23		0.02	c0.20	
v/s Ratio Perm			0.03		c0.01				0.00			0.03
v/c Ratio	0.56	0.56	0.20		0.59		1.16	0.42	0.01	0.60	0.69	0.11
Uniform Delay, d1	28.6	28.6	26.9		36.2		26.8	10.2	7.8	36.0	23.7	19.6
Progression Factor	1.00	1.00	1.00		1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.4	2.4	0.4		23.1		92.5	0.7	0.0	19.7	4.0	0.5
Delay (s)	31.0	31.1	27.2		59.3		119.4	10.9	7.9	55.7	27.7	20.1
Level of Service	C	C	C		E		F	B	A	E	C	C
Approach Delay (s)		29.1			59.3			55.5			27.2	
Approach LOS		C			E			E			C	

Intersection Summary			
HCM 2000 Control Delay	41.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	74.8	Sum of lost time (s)	18.0
Intersection Capacity Utilization	62.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	255	733	230	249	548	331	224	490	256	226	551	224
Future Volume (vph)	255	733	230	249	548	331	224	490	256	226	551	224
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
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
Lane Util. Factor	0.91	0.91	1.00	0.91	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00	0.98	1.00	1.00	1.00	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1564	3288	1515	1507	3166	1455	1752	3505	1568	1719	3438	1511
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1564	3288	1515	1507	3166	1455	1752	3505	1568	1719	3438	1511
Peak-hour factor, PHF	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Adj. Flow (vph)	300	862	271	293	645	389	264	576	301	266	648	264
RTOR Reduction (vph)	0	0	155	0	0	266	0	0	226	0	0	201
Lane Group Flow (vph)	270	892	116	264	674	123	264	576	75	266	648	63
Confl. Peds. (#/hr)			2			4						4
Heavy Vehicles (%)	5%	5%	5%	9%	9%	9%	3%	3%	3%	5%	5%	5%
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	4	4		7	7		5	2		1	6	
Permitted Phases			4			7			2			6
Actuated Green, G (s)	18.0	18.0	18.0	18.0	18.0	18.0	13.5	22.0	22.0	12.6	21.1	21.1
Effective Green, g (s)	18.0	18.0	18.0	18.0	18.0	18.0	13.5	22.0	22.0	12.6	21.1	21.1
Actuated g/C Ratio	0.20	0.20	0.20	0.20	0.20	0.20	0.15	0.25	0.25	0.14	0.24	0.24
Clearance 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
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	317	667	307	306	643	295	266	870	389	244	818	359
v/s Ratio Prot	0.17	c0.27		0.18	c0.21		0.15	0.16		c0.15	c0.19	
v/s Ratio Perm			0.08			0.08			0.05			0.04
v/c Ratio	0.85	1.34	0.38	0.86	1.05	0.42	0.99	0.66	0.19	1.09	0.79	0.18
Uniform Delay, d1	34.0	35.3	30.5	34.1	35.3	30.7	37.5	30.0	26.3	38.0	31.7	26.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	19.2	161.8	0.8	21.3	48.8	1.0	52.9	1.9	0.2	83.8	5.3	0.2
Delay (s)	53.3	197.1	31.3	55.4	84.1	31.7	90.4	31.9	26.5	121.8	37.0	27.1
Level of Service	D	F	C	E	F	C	F	C	C	F	D	C
Approach Delay (s)		138.7			63.0			44.0			53.9	
Approach LOS		F			E			D			D	

Intersection Summary

HCM 2000 Control Delay	78.0	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.04		
Actuated Cycle Length (s)	88.6	Sum of lost time (s)	18.0
Intersection Capacity Utilization	78.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	429	34	446	21	1816	702	327	941	39
Future Volume (vph)	0	0	0	429	34	446	21	1816	702	327	941	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor				0.95	0.95	1.00	1.00	0.95	0.88	1.00	0.95	
Frpb, ped/bikes				1.00	1.00	0.98	1.00	1.00	0.98	1.00	1.00	
Flpb, ped/bikes				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt				1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected				0.95	0.96	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)				1681	1697	1552	1770	3539	2725	1770	3515	
Flt Permitted				0.95	0.96	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)				1681	1697	1552	1770	3539	2725	1770	3515	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	0	0	0	442	35	460	22	1872	724	337	970	40
RTOR Reduction (vph)	0	0	0	0	0	212	0	0	0	0	4	0
Lane Group Flow (vph)	0	0	0	239	238	248	22	1872	724	337	1006	0
Confl. Peds. (#/hr)						7			4			1
Turn Type				Split	NA	Perm	Prot	NA	Free	Prot	NA	
Protected Phases				8	8		5	2		1	6	
Permitted Phases						8			Free			
Actuated Green, G (s)				13.6	13.6	13.6	0.8	24.4	61.0	11.0	34.6	
Effective Green, g (s)				13.6	13.6	13.6	0.8	24.4	61.0	11.0	34.6	
Actuated g/C Ratio				0.22	0.22	0.22	0.01	0.40	1.00	0.18	0.57	
Clearance Time (s)				4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)				3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)				374	378	346	23	1415	2725	319	1993	
v/s Ratio Prot				0.14	0.14		0.01	c0.53		c0.19	0.29	
v/s Ratio Perm						c0.16			0.27			
v/c Ratio				0.64	0.63	0.72	0.96	1.32	0.27	1.06	0.50	
Uniform Delay, d1				21.5	21.4	21.9	30.1	18.3	0.0	25.0	8.0	
Progression Factor				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2				3.6	3.3	6.9	166.5	150.4	0.2	66.0	0.9	
Delay (s)				25.0	24.7	28.8	196.6	168.7	0.2	91.0	8.9	
Level of Service				C	C	C	F	F	A	F	A	
Approach Delay (s)		0.0			26.8			122.3			29.5	
Approach LOS		A			C			F			C	

Intersection Summary

HCM 2000 Control Delay	78.6	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.09		
Actuated Cycle Length (s)	61.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	91.2%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	87	799	150	247	570	194	142	1024	88	153	785	308
Future Volume (veh/h)	87	799	150	247	570	194	142	1024	88	153	785	308
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1827	1827	1827
Adj Flow Rate, veh/h	94	859	161	266	613	209	153	1101	95	165	844	331
Adj No. of Lanes	1	2	1	1	2	0	1	2	1	1	2	1
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	4	4	4
Cap, veh/h	122	1066	469	144	813	277	168	925	414	202	983	437
Arrive On Green	0.07	0.30	0.30	0.08	0.31	0.31	0.09	0.26	0.26	0.12	0.28	0.28
Sat Flow, veh/h	1774	3539	1558	1774	2593	883	1774	3539	1582	1740	3471	1543
Grp Volume(v), veh/h	94	859	161	266	418	404	153	1101	95	165	844	331
Grp Sat Flow(s),veh/h/ln	1774	1770	1558	1774	1770	1707	1774	1770	1582	1740	1736	1543
Q Serve(g_s), s	3.9	16.8	6.0	6.1	15.9	16.0	6.4	19.6	3.5	6.9	17.3	14.7
Cycle Q Clear(g_c), s	3.9	16.8	6.0	6.1	15.9	16.0	6.4	19.6	3.5	6.9	17.3	14.7
Prop In Lane	1.00		1.00	1.00		0.52	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	122	1066	469	144	555	535	168	925	414	202	983	437
V/C Ratio(X)	0.77	0.81	0.34	1.84	0.75	0.76	0.91	1.19	0.23	0.82	0.86	0.76
Avail Cap(c_a), veh/h	343	1245	548	144	555	535	168	925	414	243	1036	461
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	34.3	24.2	20.4	34.5	23.2	23.2	33.7	27.7	21.8	32.4	25.5	24.6
Incr Delay (d2), s/veh	9.6	3.5	0.4	405.7	5.8	6.1	44.8	96.2	0.3	16.3	7.1	6.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	8.7	2.6	19.2	8.7	8.4	5.2	21.9	1.6	4.3	9.2	7.1
LnGrp Delay(d),s/veh	44.0	27.7	20.9	440.1	28.9	29.2	78.5	123.9	22.1	48.7	32.6	31.3
LnGrp LOS	D	C	C	F	C	C	E	F	C	D	C	C
Approach Vol, veh/h		1114			1088			1349			1340	
Approach Delay, s/veh		28.1			129.6			111.6			34.3	
Approach LOS		C			F			F			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.2	24.1	10.6	27.1	11.6	25.7	9.7	28.0
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	19.0	6.1	26.4	7.1	22.4	14.5	18.0
Max Q Clear Time (g_c+I1), s	8.9	21.6	8.1	18.8	8.4	19.3	5.9	18.0
Green Ext Time (p_c), s	0.1	0.0	0.0	3.8	0.0	2.0	0.1	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	75.4
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	57	735	99	121	520	624	135	269	1038	686	253	854
Future Volume (vph)	57	735	99	121	520	624	135	269	1038	686	253	854
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	1.00	0.95	1.00		1.00	0.95		1.00	0.95	1.00	1.00	0.95
Frpb, ped/bikes	1.00	1.00	0.98		1.00	1.00		1.00	1.00	0.99	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85		1.00	0.97		1.00	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1770	3539	1549		1770	3433		1770	3539	1560	1719	3438
Flt Permitted	0.95	1.00	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1770	3539	1549		1770	3433		1770	3539	1560	1719	3438
Peak-hour factor, PHF	0.93	0.93	0.93	0.92	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	61	790	106	132	559	671	145	289	1116	738	272	918
RTOR Reduction (vph)	0	0	85	0	0	12	0	0	0	217	0	0
Lane Group Flow (vph)	61	790	21	0	691	804	0	289	1116	521	272	918
Confl. Peds. (#/hr)			4				3			1		
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	5%	5%
Turn Type	Prot	NA	Perm	Prot	Prot	NA		Prot	NA	Perm	Prot	NA
Protected Phases	7	4		3	3	8		5	2		1	6
Permitted Phases			4							2		
Actuated Green, G (s)	8.6	29.4	29.4		44.5	65.3		19.5	40.5	40.5	18.5	39.5
Effective Green, g (s)	8.6	29.4	29.4		44.5	65.3		19.5	40.5	40.5	18.5	39.5
Actuated g/C Ratio	0.06	0.19	0.19		0.29	0.43		0.13	0.27	0.27	0.12	0.26
Clearance Time (s)	4.5	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	100	689	301		521	1485		228	949	418	210	899
v/s Ratio Prot	0.03	c0.22			c0.39	0.23		c0.16	0.32		0.16	0.27
v/s Ratio Perm			0.01							c0.33		
v/c Ratio	0.61	1.15	0.07		1.33	0.54		1.27	1.18	1.25	1.30	1.02
Uniform Delay, d1	69.5	60.8	49.6		53.2	31.7		65.7	55.2	55.2	66.2	55.7
Progression Factor	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	10.1	82.3	0.1		159.7	0.4		150.3	90.3	129.3	163.4	35.5
Delay (s)	79.6	143.1	49.7		212.9	32.1		216.0	145.5	184.5	229.6	91.2
Level of Service	E	F	D		F	C		F	F	F	F	F
Approach Delay (s)		128.7				115.0			168.4			121.7
Approach LOS		F				F			F			F

Intersection Summary			
HCM 2000 Control Delay	138.4	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.26		
Actuated Cycle Length (s)	150.9	Sum of lost time (s)	18.0
Intersection Capacity Utilization	127.4%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group



Movement	SBR
Lane Configurations	
Traffic Volume (vph)	15
Future Volume (vph)	15
Ideal Flow (vphpl)	1900
Total Lost time (s)	4.5
Lane Util. Factor	1.00
Frpb, ped/bikes	0.98
Flpb, ped/bikes	1.00
Frt	0.85
Flt Protected	1.00
Satd. Flow (prot)	1504
Flt Permitted	1.00
Satd. Flow (perm)	1504
Peak-hour factor, PHF	0.93
Adj. Flow (vph)	16
RTOR Reduction (vph)	12
Lane Group Flow (vph)	4
Confl. Peds. (#/hr)	4
Heavy Vehicles (%)	5%
Turn Type	Perm
Protected Phases	
Permitted Phases	6
Actuated Green, G (s)	39.5
Effective Green, g (s)	39.5
Actuated g/C Ratio	0.26
Clearance Time (s)	4.5
Vehicle Extension (s)	3.0
Lane Grp Cap (vph)	393
v/s Ratio Prot	
v/s Ratio Perm	0.00
v/c Ratio	0.01
Uniform Delay, d1	41.2
Progression Factor	1.00
Incremental Delay, d2	0.0
Delay (s)	41.3
Level of Service	D
Approach Delay (s)	
Approach LOS	

Intersection Summary

Intersection	
Int Delay, s/veh	6.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	1543	246	0	1392	8	0	0	244	5	0	6
Future Vol, veh/h	4	1543	246	0	1392	8	0	0	244	5	0	6
Conflicting Peds, #/hr	5	0	0	0	0	5	0	0	0	2	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	9	2	9
Mvmt Flow	4	1624	259	0	1465	8	0	0	257	5	0	6

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1478	0	0	-	-	0	-	-	944	2296	3365	742
Stage 1	-	-	-	-	-	-	-	-	-	1474	1474	-
Stage 2	-	-	-	-	-	-	-	-	-	822	1891	-
Critical Hdwy	4.14	-	-	-	-	-	-	-	6.94	7.68	6.54	7.08
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	6.68	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	6.68	5.54	-
Follow-up Hdwy	2.22	-	-	-	-	-	-	-	3.32	3.59	4.02	3.39
Pot Cap-1 Maneuver	452	-	-	0	-	-	0	0	263	19	8	343
Stage 1	-	-	-	0	-	-	0	0	-	124	189	-
Stage 2	-	-	-	0	-	-	0	0	-	320	117	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	450	-	-	-	-	-	-	-	263	0	8	342
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	0	8	-
Stage 1	-	-	-	-	-	-	-	-	-	124	188	-
Stage 2	-	-	-	-	-	-	-	-	-	7	117	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	91.2	15.9
HCM LOS			F	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBT	WBR	SBLn1
Capacity (veh/h)	263	450	-	-	-	-	342
HCM Lane V/C Ratio	0.977	0.009	-	-	-	-	0.034
HCM Control Delay (s)	91.2	13.1	0	-	-	-	15.9
HCM Lane LOS	F	B	A	-	-	-	C
HCM 95th %tile Q(veh)	9.4	0	-	-	-	-	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	328	376	70	281	292	30	340	859	645	40	437	316
Future Volume (veh/h)	328	376	70	281	292	30	340	859	645	40	437	316
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.96	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	342	392	73	293	304	31	354	895	672	42	455	329
Adj No. of Lanes	1	2	0	1	2	1	1	2	1	1	2	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	278	569	105	296	713	314	219	1205	516	71	911	391
Arrive On Green	0.16	0.19	0.19	0.17	0.20	0.20	0.12	0.34	0.34	0.04	0.26	0.26
Sat Flow, veh/h	1774	2977	549	1774	3539	1560	1774	3539	1514	1774	3539	1519
Grp Volume(v), veh/h	342	232	233	293	304	31	354	895	672	42	455	329
Grp Sat Flow(s),veh/h/ln	1774	1770	1757	1774	1770	1560	1774	1770	1514	1774	1770	1519
Q Serve(g_s), s	10.8	8.4	8.5	11.4	5.2	1.1	8.5	15.4	23.5	1.6	7.5	14.2
Cycle Q Clear(g_c), s	10.8	8.4	8.5	11.4	5.2	1.1	8.5	15.4	23.5	1.6	7.5	14.2
Prop In Lane	1.00		0.31	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	278	338	336	296	713	314	219	1205	516	71	911	391
V/C Ratio(X)	1.23	0.68	0.70	0.99	0.43	0.10	1.62	0.74	1.30	0.59	0.50	0.84
Avail Cap(c_a), veh/h	278	462	459	296	961	423	219	1205	516	129	976	419
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	29.0	25.9	26.0	28.6	24.0	22.4	30.2	20.0	22.7	32.5	21.8	24.3
Incr Delay (d2), s/veh	130.8	2.5	2.8	49.3	0.4	0.1	297.9	2.5	150.2	7.6	0.4	13.7
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	15.3	4.3	4.4	9.5	2.6	0.5	22.2	7.9	31.2	0.9	3.7	7.3
LnGrp Delay(d),s/veh	159.9	28.4	28.7	77.9	24.4	22.6	328.1	22.6	173.0	40.1	22.2	37.9
LnGrp LOS	F	C	C	E	C	C	F	C	F	D	C	D
Approach Vol, veh/h		807			628			1921			826	
Approach Delay, s/veh		84.2			49.3			131.5			29.4	
Approach LOS		F			D			F			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.3	28.0	16.0	17.7	13.0	22.2	15.3	18.4
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.0	22.5	11.5	18.0	8.5	19.0	10.8	18.7
Max Q Clear Time (g_c+I1), s	3.6	25.5	13.4	10.5	10.5	16.2	12.8	7.2
Green Ext Time (p_c), s	0.0	0.0	0.0	1.6	0.0	1.2	0.0	1.5

Intersection Summary	
HCM 2010 Ctrl Delay	89.9
HCM 2010 LOS	F

Intersection												
Int Delay, s/veh	12.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	39	26	45	116	26	257	60	1652	115	250	1148	54
Future Vol, veh/h	39	26	45	116	26	257	60	1652	115	250	1148	54
Conflicting Peds, #/hr	0	0	1	1	0	0	13	0	2	2	0	13
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	5	5	5
Mvmt Flow	42	28	48	125	28	276	65	1776	124	269	1234	58

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2846	3846	660	3140	3813	952	1305	0	0	1902	0	0
Stage 1	1814	1814	-	1970	1970	-	-	-	-	-	-	-
Stage 2	1032	2032	-	1170	1843	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.2	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.25	-	-
Pot Cap-1 Maneuver	~ 8	~ 4	406	~ 5	~ 4	~ 260	526	-	-	297	-	-
Stage 1	81	128	-	~ 64	107	-	-	-	-	-	-	-
Stage 2	249	99	-	205	124	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	0	401	-	0	~ 260	520	-	-	297	-	-
Mov Cap-2 Maneuver	-	0	-	-	0	-	-	-	-	-	-	-
Stage 1	80	0	-	~ 64	107	-	-	-	-	-	-	-
Stage 2	-	99	-	-	0	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s			0.4	31
HCM LOS	-	-		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	520	-	-	-	-	297	-	-
HCM Lane V/C Ratio	0.124	-	-	-	-	0.905	-	-
HCM Control Delay (s)	12.9	0	-	-	-	69.2	24.1	-
HCM Lane LOS	B	A	-	-	-	F	C	-
HCM 95th %tile Q(veh)	0.4	-	-	-	-	8.4	-	-

Notes

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

Intersection						
Int Delay, s/veh	28					

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	10	195	1642	60	35	1296
Future Vol, veh/h	10	195	1642	60	35	1296
Conflicting Peds, #/hr	0	0	0	3	3	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	94	94	94	94	94	94
Heavy Vehicles, %	2	2	3	3	4	4
Mvmt Flow	11	207	1747	64	37	1379

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2546	909	0	0	1814	0
Stage 1	1782	-	-	-	-	-
Stage 2	764	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.18	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.24	-
Pot Cap-1 Maneuver	22	278	-	-	326	-
Stage 1	120	-	-	-	-	-
Stage 2	420	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	11	277	-	-	325	-
Mov Cap-2 Maneuver	11	-	-	-	-	-
Stage 1	62	-	-	-	-	-
Stage 2	420	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	$ 413.7	0	4.4
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	127	325	-
HCM Lane V/C Ratio	-	-	1.717	0.115	-
HCM Control Delay (s)	-	-	$ 413.7	17.5	4
HCM Lane LOS	-	-	F	C	A
HCM 95th %tile Q(veh)	-	-	16.4	0.4	-

Notes

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

Intersection						
Int Delay, s/veh	4.1					

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	99	15	26	1603	1248	58
Future Vol, veh/h	99	15	26	1603	1248	58
Conflicting Peds, #/hr	4	0	2	0	0	2
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	93	93	93	93	93	93
Heavy Vehicles, %	2	2	3	3	4	4
Mvmt Flow	106	16	28	1724	1342	62

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2297	704	1406	0	-	0
Stage 1	1375	-	-	-	-	-
Stage 2	922	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.16	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.23	-	-	-
Pot Cap-1 Maneuver	~ 33	379	476	-	-	-
Stage 1	200	-	-	-	-	-
Stage 2	348	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	0	378	475	-	-	-
Mov Cap-2 Maneuver	0	-	-	-	-	-
Stage 1	0	-	-	-	-	-
Stage 2	347	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	19	6.4	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	475	-	378	-	-
HCM Lane V/C Ratio	0.059	-	0.324	-	-
HCM Control Delay (s)	13.1	6.3	19	-	-
HCM Lane LOS	B	A	C	-	-
HCM 95th %tile Q(veh)	0.2	-	1.4	-	-

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	55	1	15	135	48	200	30	1224	120	50	780	153
Future Volume (veh/h)	55	1	15	135	48	200	30	1224	120	50	780	153
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1792	1792	1827	1827	1900	1845	1845	1900
Adj Flow Rate, veh/h	60	1	16	148	53	220	33	1345	132	55	857	168
Adj No. of Lanes	0	1	0	0	1	1	1	2	0	1	2	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	6	6	6	4	4	4	3	3	3
Cap, veh/h	213	17	28	348	96	324	381	1952	191	255	1785	350
Arrive On Green	0.21	0.21	0.21	0.21	0.21	0.21	0.61	0.61	0.61	0.61	0.61	0.61
Sat Flow, veh/h	413	80	129	1060	450	1515	537	3194	312	353	2921	573
Grp Volume(v), veh/h	77	0	0	201	0	220	33	728	749	55	514	511
Grp Sat Flow(s),veh/h/ln	622	0	0	1510	0	1515	537	1736	1770	353	1752	1741
Q Serve(g_s), s	2.3	0.0	0.0	0.0	0.0	6.9	1.9	14.5	14.7	6.4	8.3	8.3
Cycle Q Clear(g_c), s	8.4	0.0	0.0	6.1	0.0	6.9	10.2	14.5	14.7	21.1	8.3	8.3
Prop In Lane	0.78		0.21	0.74		1.00	1.00		0.18	1.00		0.33
Lane Grp Cap(c), veh/h	257	0	0	445	0	324	381	1061	1082	255	1071	1064
V/C Ratio(X)	0.30	0.00	0.00	0.45	0.00	0.68	0.09	0.69	0.69	0.22	0.48	0.48
Avail Cap(c_a), veh/h	451	0	0	680	0	573	381	1061	1082	255	1071	1064
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.3	0.0	0.0	18.3	0.0	18.6	8.3	6.7	6.7	13.9	5.5	5.5
Incr Delay (d2), s/veh	0.6	0.0	0.0	0.7	0.0	2.5	0.4	3.6	3.6	1.9	1.5	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	0.0	0.0	2.7	0.0	3.1	0.3	7.7	8.2	0.8	4.5	4.4
LnGrp Delay(d),s/veh	21.0	0.0	0.0	19.0	0.0	21.1	8.8	10.3	10.4	15.8	7.1	7.1
LnGrp LOS	C			B		C	A	B	B	B	A	A
Approach Vol, veh/h		77			421			1510			1080	
Approach Delay, s/veh		21.0			20.1			10.3			7.5	
Approach LOS		C			C			B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		36.0		15.5		36.0		15.5
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green Setting (Gmax), s		31.5		19.5		31.5		19.5
Max Q Clear Time (g_c+I1), s		16.7		10.4		23.1		8.9
Green Ext Time (p_c), s		9.3		0.2		4.7		1.4

Intersection Summary	
HCM 2010 Ctrl Delay	10.9
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	569	0	463	40	4	8	262	684	17	15	628	158
Future Volume (vph)	569	0	463	40	4	8	262	684	17	15	628	158
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5		4.5		4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	0.95	0.95	1.00		1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	1.00		1.00		1.00	1.00	0.98	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00		1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85		0.98		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	0.95	1.00		0.96		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1665	1665	1568		1398		1719	3438	1500	1703	3406	1524
Flt Permitted	0.95	0.95	1.00		0.86		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1665	1665	1568		1252		1719	3438	1500	1703	3406	1524
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	605	0	493	43	4	9	279	728	18	16	668	168
RTOR Reduction (vph)	0	0	255	0	9	0	0	0	9	0	0	117
Lane Group Flow (vph)	302	303	238	0	47	0	279	728	9	16	668	51
Confl. Peds. (#/hr)									5			
Heavy Vehicles (%)	3%	3%	3%	28%	28%	28%	5%	5%	5%	6%	6%	6%
Turn Type	Split	NA	Perm	Perm	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	4	4			7		5	2		1	6	
Permitted Phases			4	7					2			6
Actuated Green, G (s)	16.9	16.9	16.9		4.1		15.9	39.1	39.1	0.9	24.1	24.1
Effective Green, g (s)	16.9	16.9	16.9		4.1		15.9	39.1	39.1	0.9	24.1	24.1
Actuated g/C Ratio	0.21	0.21	0.21		0.05		0.20	0.49	0.49	0.01	0.31	0.31
Clearance Time (s)	4.5	4.5	4.5		4.5		4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0		3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	356	356	335		64		345	1701	742	19	1039	464
v/s Ratio Prot	0.18	c0.18					c0.16	0.21		0.01	c0.20	
v/s Ratio Perm			0.15		c0.04				0.01			0.03
v/c Ratio	0.85	0.85	0.71		0.74		0.81	0.43	0.01	0.84	0.64	0.11
Uniform Delay, d1	29.8	29.8	28.8		36.9		30.1	12.8	10.1	39.0	23.7	19.7
Progression Factor	1.00	1.00	1.00		1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	16.9	17.4	6.7		36.6		13.0	0.8	0.0	131.7	3.1	0.5
Delay (s)	46.7	47.3	35.5		73.5		43.1	13.6	10.2	170.7	26.8	20.2
Level of Service	D	D	D		E		D	B	B	F	C	C
Approach Delay (s)		41.8			73.5			21.6			28.2	
Approach LOS		D			E			C			C	

Intersection Summary

HCM 2000 Control Delay	31.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	79.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	62.0%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	337	479	210	190	245	218	282	767	298	277	661	326
Future Volume (vph)	337	479	210	190	245	218	282	767	298	277	661	326
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
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
Lane Util. Factor	0.91	0.91	1.00	0.91	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	0.99	1.00	0.95	0.99	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1579	3303	1528	1535	3205	1509	1752	3505	1568	1719	3438	1517
Flt Permitted	0.95	0.99	1.00	0.95	0.99	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1579	3303	1528	1535	3205	1509	1752	3505	1568	1719	3438	1517
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	379	538	236	213	275	245	317	862	335	311	743	366
RTOR Reduction (vph)	0	0	187	0	0	201	0	0	246	0	0	285
Lane Group Flow (vph)	296	621	49	158	330	44	317	862	89	311	743	81
Confl. Peds. (#/hr)			3									1
Heavy Vehicles (%)	4%	4%	4%	7%	7%	7%	3%	3%	3%	5%	5%	5%
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	4	4		7	7		5	2		1	6	
Permitted Phases			4			7			2			6
Actuated Green, G (s)	18.0	18.0	18.0	15.4	15.4	15.4	15.5	22.7	22.7	11.8	19.0	19.0
Effective Green, g (s)	18.0	18.0	18.0	15.4	15.4	15.4	15.5	22.7	22.7	11.8	19.0	19.0
Actuated g/C Ratio	0.21	0.21	0.21	0.18	0.18	0.18	0.18	0.26	0.26	0.14	0.22	0.22
Clearance 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
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	330	692	320	275	574	270	316	926	414	236	760	335
v/s Ratio Prot	0.19	c0.19		0.10	c0.10		0.18	c0.25		c0.18	0.22	
v/s Ratio Perm			0.03			0.03			0.06			0.05
v/c Ratio	0.90	0.90	0.15	0.57	0.57	0.16	1.00	0.93	0.21	1.32	0.98	0.24
Uniform Delay, d1	33.0	33.1	27.7	32.3	32.3	29.8	35.2	30.8	24.6	37.1	33.2	27.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	25.3	14.3	0.2	2.9	1.4	0.3	51.4	15.5	0.3	169.7	26.9	0.4
Delay (s)	58.4	47.4	28.0	35.1	33.7	30.1	86.6	46.3	24.9	206.7	60.1	27.9
Level of Service	E	D	C	D	C	C	F	D	C	F	E	C
Approach Delay (s)		46.2			32.8			50.0			83.9	
Approach LOS		D			C			D			F	

Intersection Summary

HCM 2000 Control Delay	56.5	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	85.9	Sum of lost time (s)	18.0
Intersection Capacity Utilization	75.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	578	17	204	18	918	304	211	1424	21
Future Volume (vph)	0	0	0	578	17	204	18	918	304	211	1424	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor				0.95	0.95	1.00	1.00	0.95	0.88	1.00	0.95	
Frpb, ped/bikes				1.00	1.00	0.99	1.00	1.00	0.98	1.00	1.00	
Flpb, ped/bikes				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt				1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected				0.95	0.95	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)				1498	1506	1396	1577	3154	2427	1593	3177	
Flt Permitted				0.95	0.95	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)				1498	1506	1396	1577	3154	2427	1593	3177	
Peak-hour factor, PHF	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Adj. Flow (vph)	0	0	0	688	20	243	21	1093	362	251	1695	25
RTOR Reduction (vph)	0	0	0	0	0	18	0	0	0	0	1	0
Lane Group Flow (vph)	0	0	0	351	357	225	21	1093	362	251	1719	0
Confl. Peds. (#/hr)						4			6			2
Heavy Vehicles (%)	2%	2%	2%	3%	3%	3%	3%	3%	3%	2%	2%	2%
Turn Type				Split	NA	pm+ov	Prot	NA	Free	Prot	NA	
Protected Phases				8	8	1	5	2		1	6	
Permitted Phases						8			Free			
Actuated Green, G (s)				22.5	22.5	38.7	1.6	40.5	91.2	16.2	55.1	
Effective Green, g (s)				22.5	22.5	38.7	1.6	40.5	91.2	16.2	55.1	
Actuated g/C Ratio				0.25	0.25	0.42	0.02	0.44	1.00	0.18	0.60	
Clearance Time (s)				4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)				3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)				369	371	653	27	1400	2427	282	1919	
v/s Ratio Prot				0.23	c0.24	0.06	0.01	0.35		c0.16	c0.54	
v/s Ratio Perm						0.10			0.15			
v/c Ratio				0.95	0.96	0.34	0.78	0.78	0.15	0.89	0.90	
Uniform Delay, d1				33.8	33.9	17.7	44.6	21.6	0.0	36.6	15.6	
Progression Factor				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2				34.2	36.7	0.3	81.9	4.4	0.1	27.4	7.0	
Delay (s)				68.0	70.6	18.0	126.5	26.0	0.1	64.0	22.6	
Level of Service				E	E	B	F	C	A	E	C	
Approach Delay (s)		0.0			56.2			21.1			27.9	
Approach LOS		A			E			C			C	

Intersection Summary

HCM 2000 Control Delay	31.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	91.2	Sum of lost time (s)	12.0
Intersection Capacity Utilization	76.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	130	416	253	138	563	92	115	660	60	58	940	153
Future Volume (veh/h)	130	416	253	138	563	92	115	660	60	58	940	153
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1845	1845	1900	1776	1776	1776	1863	1863	1863
Adj Flow Rate, veh/h	153	489	298	162	662	108	135	776	71	68	1106	180
Adj No. of Lanes	1	2	1	1	2	0	1	2	1	1	2	1
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	3	3	3	7	7	7	2	2	2
Cap, veh/h	177	803	503	188	708	115	160	1316	587	87	1219	543
Arrive On Green	0.10	0.23	0.23	0.11	0.23	0.23	0.09	0.39	0.39	0.05	0.34	0.34
Sat Flow, veh/h	1774	3539	1556	1757	3018	492	1691	3374	1506	1774	3539	1576
Grp Volume(v), veh/h	153	489	298	162	384	386	135	776	71	68	1106	180
Grp Sat Flow(s),veh/h/ln	1774	1770	1556	1757	1752	1758	1691	1687	1506	1774	1770	1576
Q Serve(g_s), s	6.7	9.8	12.8	7.2	17.0	17.1	6.2	14.5	2.4	3.0	23.6	6.7
Cycle Q Clear(g_c), s	6.7	9.8	12.8	7.2	17.0	17.1	6.2	14.5	2.4	3.0	23.6	6.7
Prop In Lane	1.00		1.00	1.00		0.28	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	177	803	503	188	411	412	160	1316	587	87	1219	543
V/C Ratio(X)	0.87	0.61	0.59	0.86	0.93	0.94	0.84	0.59	0.12	0.78	0.91	0.33
Avail Cap(c_a), veh/h	177	803	503	188	411	412	160	1316	587	130	1249	556
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	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	35.2	27.5	22.6	34.8	29.8	29.8	35.3	19.2	15.5	37.3	24.8	19.2
Incr Delay (d2), s/veh	33.5	1.3	1.9	30.9	28.5	28.9	31.8	0.7	0.1	16.1	9.6	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	5.0	5.0	5.7	5.1	11.5	11.6	4.3	6.8	1.0	1.9	13.1	3.0
LnGrp Delay(d),s/veh	68.7	28.9	24.5	65.8	58.3	58.7	67.1	19.9	15.6	53.4	34.4	19.6
LnGrp LOS	E	C	C	E	E	E	E	B	B	D	C	B
Approach Vol, veh/h		940			932			982			1354	
Approach Delay, s/veh		33.9			59.8			26.1			33.4	
Approach LOS		C			E			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.4	35.4	13.0	22.5	12.0	31.8	12.4	23.1
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.8	29.7	8.5	18.0	7.5	28.0	7.9	18.6
Max Q Clear Time (g_c+I1), s	5.0	16.5	9.2	14.8	8.2	25.6	8.7	19.1
Green Ext Time (p_c), s	0.0	4.7	0.0	1.4	0.0	1.7	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	37.6
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	49	495	110	81	738	832	91	89	654	220	214	980
Future Volume (vph)	49	495	110	81	738	832	91	89	654	220	214	980
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	1.00	0.95	1.00		0.97	0.95		1.00	0.95	1.00	1.00	0.95
Frpb, ped/bikes	1.00	1.00	0.98		1.00	1.00		1.00	1.00	0.98	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85		1.00	0.99		1.00	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1770	3539	1559		3433	3482		1719	3438	1515	1752	3505
Flt Permitted	0.95	1.00	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1770	3539	1559		3433	3482		1719	3438	1515	1752	3505
Peak-hour factor, PHF	0.90	0.90	0.90	0.92	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	54	550	122	88	820	924	101	99	727	244	238	1089
RTOR Reduction (vph)	0	0	100	0	0	8	0	0	0	187	0	0
Lane Group Flow (vph)	54	550	22	0	908	1017	0	99	727	57	238	1089
Confl. Peds. (#/hr)			2				1			2		
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	5%	5%	5%	3%	3%
Turn Type	Prot	NA	Perm	Prot	Prot	NA		Prot	NA	Perm	Prot	NA
Protected Phases	7	4		3	3	8		5	2		1	6
Permitted Phases			4							2		
Actuated Green, G (s)	4.7	18.5	18.5		26.1	39.9		6.5	23.3	23.3	14.6	31.4
Effective Green, g (s)	4.7	18.5	18.5		26.1	39.9		6.5	23.3	23.3	14.6	31.4
Actuated g/C Ratio	0.05	0.18	0.18		0.26	0.40		0.06	0.23	0.23	0.15	0.31
Clearance Time (s)	4.5	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	82	651	286		891	1382		111	797	351	254	1095
v/s Ratio Prot	0.03	c0.16			c0.26	0.29		0.06	0.21		c0.14	c0.31
v/s Ratio Perm			0.01							0.04		
v/c Ratio	0.66	0.84	0.08		1.02	0.74		0.89	0.91	0.16	0.94	0.99
Uniform Delay, d1	47.1	39.6	33.9		37.2	25.8		46.7	37.6	30.8	42.5	34.5
Progression Factor	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	17.5	9.8	0.1		35.0	2.1		52.8	16.5	1.0	39.3	25.9
Delay (s)	64.6	49.4	34.1		72.2	27.9		99.5	54.1	31.8	81.7	60.4
Level of Service	E	D	C		E	C		F	D	C	F	E
Approach Delay (s)		48.0				48.7			53.2			63.8
Approach LOS		D				D			D			E

Intersection Summary			
HCM 2000 Control Delay	53.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	100.5	Sum of lost time (s)	18.0
Intersection Capacity Utilization	84.2%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	SBR
Lane Configurations	
Traffic Volume (vph)	12
Future Volume (vph)	12
Ideal Flow (vphpl)	1900
Total Lost time (s)	4.5
Lane Util. Factor	1.00
Frpb, ped/bikes	0.99
Flpb, ped/bikes	1.00
Frt	0.85
Flt Protected	1.00
Satd. Flow (prot)	1547
Flt Permitted	1.00
Satd. Flow (perm)	1547
Peak-hour factor, PHF	0.90
Adj. Flow (vph)	13
RTOR Reduction (vph)	9
Lane Group Flow (vph)	4
Confl. Peds. (#/hr)	1
Heavy Vehicles (%)	3%
Turn Type	Perm
Protected Phases	
Permitted Phases	6
Actuated Green, G (s)	31.4
Effective Green, g (s)	31.4
Actuated g/C Ratio	0.31
Clearance Time (s)	4.5
Vehicle Extension (s)	3.0
Lane Grp Cap (vph)	483
v/s Ratio Prot	
v/s Ratio Perm	0.00
v/c Ratio	0.01
Uniform Delay, d1	23.8
Progression Factor	1.00
Incremental Delay, d2	0.0
Delay (s)	23.8
Level of Service	C
Approach Delay (s)	
Approach LOS	

Intersection Summary

Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	49	495	110	81	738	832	91	95	654	220	209	980
Future Volume (vph)	49	495	110	81	738	832	91	95	654	220	209	980
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	1.00	0.95	1.00		0.97	0.95		1.00	0.95	0.88	1.00	0.95
Frpb, ped/bikes	1.00	1.00	0.98		1.00	1.00		1.00	1.00	0.97	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85		1.00	0.99		1.00	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1770	3539	1559		3433	3482		1719	3438	2637	1752	3505
Flt Permitted	0.95	1.00	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1770	3539	1559		3433	3482		1719	3438	2637	1752	3505
Peak-hour factor, PHF	0.90	0.90	0.90	0.92	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	54	550	122	88	820	924	101	106	727	244	232	1089
RTOR Reduction (vph)	0	0	101	0	0	7	0	0	0	182	0	0
Lane Group Flow (vph)	54	550	21	0	908	1018	0	106	727	62	232	1089
Confl. Peds. (#/hr)			2				1			2		
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	5%	5%	5%	3%	3%
Turn Type	Prot	NA	Perm	Prot	Prot	NA		Prot	NA	Perm	Prot	NA
Protected Phases	7	4		3	3	8		5	2		1	6
Permitted Phases			4							2		
Actuated Green, G (s)	4.9	19.0	19.0		30.1	44.2		7.8	28.2	28.2	15.6	36.0
Effective Green, g (s)	4.9	19.0	19.0		30.1	44.2		7.8	28.2	28.2	15.6	36.0
Actuated g/C Ratio	0.04	0.17	0.17		0.27	0.40		0.07	0.25	0.25	0.14	0.32
Clearance Time (s)	4.5	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	78	606	267		931	1387		120	874	670	246	1137
v/s Ratio Prot	0.03	c0.16			c0.26	0.29		0.06	0.21		c0.13	c0.31
v/s Ratio Perm			0.01							0.02		
v/c Ratio	0.69	0.91	0.08		0.98	0.73		0.88	0.83	0.09	0.94	0.96
Uniform Delay, d1	52.3	45.1	38.6		40.0	28.3		51.1	39.1	31.6	47.2	36.7
Progression Factor	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	23.3	17.3	0.1		23.4	2.0		48.0	9.1	0.3	41.7	18.3
Delay (s)	75.5	62.4	38.7		63.4	30.4		99.1	48.2	31.9	88.9	55.0
Level of Service	E	E	D		E	C		F	D	C	F	E
Approach Delay (s)		59.4				45.9			49.5			60.6
Approach LOS		E				D			D			E

Intersection Summary			
HCM 2000 Control Delay	52.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	110.9	Sum of lost time (s)	18.0
Intersection Capacity Utilization	84.5%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBR
Lane Configurations	
Traffic Volume (vph)	12
Future Volume (vph)	12
Ideal Flow (vphpl)	1900
Total Lost time (s)	4.5
Lane Util. Factor	1.00
Frpb, ped/bikes	0.99
Flpb, ped/bikes	1.00
Frt	0.85
Flt Protected	1.00
Satd. Flow (prot)	1546
Flt Permitted	1.00
Satd. Flow (perm)	1546
Peak-hour factor, PHF	0.90
Adj. Flow (vph)	13
RTOR Reduction (vph)	9
Lane Group Flow (vph)	4
Confl. Peds. (#/hr)	1
Heavy Vehicles (%)	3%
Turn Type	Perm
Protected Phases	
Permitted Phases	6
Actuated Green, G (s)	36.0
Effective Green, g (s)	36.0
Actuated g/C Ratio	0.32
Clearance Time (s)	4.5
Vehicle Extension (s)	3.0
Lane Grp Cap (vph)	501
v/s Ratio Prot	
v/s Ratio Perm	0.00
v/c Ratio	0.01
Uniform Delay, d1	25.4
Progression Factor	1.00
Incremental Delay, d2	0.0
Delay (s)	25.4
Level of Service	C
Approach Delay (s)	
Approach LOS	

Intersection Summary

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	869	171	0	1735	12	0	0	133	0	0	7
Future Vol, veh/h	0	869	171	0	1735	12	0	0	133	0	0	7
Conflicting Peds, #/hr	2	0	0	0	0	2	0	0	0	0	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	3	3	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	966	190	0	1928	13	0	0	148	0	0	8

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	-	-	0	-	-	578	-	-	974
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	-	-	6.94	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	-	-	3.32	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	0	-	-	0	0	459	0	0	251
Stage 1	0	-	-	0	-	-	0	0	-	0	0	-
Stage 2	0	-	-	0	-	-	0	0	-	0	0	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	-	-	-	-	-	-	-	-	459	-	-	250
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	16.5	19.9
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT	WBR	SBLn1
Capacity (veh/h)	459	-	-	-	-	250
HCM Lane V/C Ratio	0.322	-	-	-	-	0.031
HCM Control Delay (s)	16.5	-	-	-	-	19.9
HCM Lane LOS	C	-	-	-	-	C
HCM 95th %tile Q(veh)	1.4	-	-	-	-	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	181	184	110	425	417	30	110	417	420	70	638	348
Future Volume (veh/h)	181	184	110	425	417	30	110	417	420	70	638	348
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1863	1863	1863	1845	1845	1845	1863	1863	1863
Adj Flow Rate, veh/h	195	198	118	457	448	32	118	448	452	75	686	374
Adj No. of Lanes	1	2	0	1	2	1	1	2	1	1	2	1
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, %	3	3	3	2	2	2	3	3	3	2	2	2
Cap, veh/h	239	331	188	498	1059	466	148	1010	881	96	914	405
Arrive On Green	0.14	0.15	0.15	0.28	0.30	0.30	0.08	0.29	0.29	0.05	0.26	0.26
Sat Flow, veh/h	1757	2141	1214	1774	3539	1556	1757	3505	1530	1774	3539	1570
Grp Volume(v), veh/h	195	160	156	457	448	32	118	448	452	75	686	374
Grp Sat Flow(s),veh/h/ln	1757	1752	1602	1774	1770	1556	1757	1752	1530	1774	1770	1570
Q Serve(g_s), s	8.7	6.9	7.4	20.2	8.2	1.2	5.3	8.5	14.6	3.4	14.5	18.8
Cycle Q Clear(g_c), s	8.7	6.9	7.4	20.2	8.2	1.2	5.3	8.5	14.6	3.4	14.5	18.8
Prop In Lane	1.00		0.76	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	239	271	248	498	1059	466	148	1010	881	96	914	405
V/C Ratio(X)	0.81	0.59	0.63	0.92	0.42	0.07	0.80	0.44	0.51	0.78	0.75	0.92
Avail Cap(c_a), veh/h	397	389	356	558	1100	484	163	1010	881	142	917	407
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	34.0	31.9	32.1	28.2	22.8	20.3	36.4	23.5	10.7	37.9	27.7	29.3
Incr Delay (d2), s/veh	6.6	2.1	2.6	19.0	0.3	0.1	21.9	0.3	0.5	14.8	3.5	26.3
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	4.7	3.5	3.4	12.5	4.1	0.5	3.5	4.1	6.3	2.1	7.5	11.1
LnGrp Delay(d),s/veh	40.6	33.9	34.7	47.2	23.1	20.4	58.4	23.9	11.2	52.7	31.2	55.6
LnGrp LOS	D	C	C	D	C	C	E	C	B	D	C	E
Approach Vol, veh/h		511			937			1018			1135	
Approach Delay, s/veh		36.7			34.8			22.2			40.6	
Approach LOS		D			C			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.9	27.9	27.3	17.0	11.3	25.4	15.6	28.8
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	6.5	22.0	25.5	18.0	7.5	21.0	18.3	25.2
Max Q Clear Time (g_c+I1), s	5.4	16.6	22.2	9.4	7.3	20.8	10.7	10.2
Green Ext Time (p_c), s	0.0	2.3	0.5	1.2	0.0	0.1	0.3	2.7

Intersection Summary	
HCM 2010 Ctrl Delay	33.3
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	17	82	63	14	139	45	785	77	167	1589	52
Future Volume (veh/h)	45	17	82	63	14	139	45	785	77	167	1589	52
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1863	1810	1810	1900	1863	1863	1900
Adj Flow Rate, veh/h	48	18	87	67	15	148	48	835	82	178	1690	55
Adj No. of Lanes	0	1	1	0	1	1	1	2	0	1	2	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	5	5	5	2	2	2
Cap, veh/h	99	22	402	104	13	602	62	1355	133	224	1816	59
Arrive On Green	0.25	0.25	0.25	0.25	0.25	0.25	0.04	0.43	0.43	0.13	0.52	0.52
Sat Flow, veh/h	0	87	1581	0	52	1581	1723	3160	310	1774	3498	113
Grp Volume(v), veh/h	66	0	87	82	0	148	48	454	463	178	852	893
Grp Sat Flow(s),veh/h/ln	87	0	1581	52	0	1581	1723	1719	1752	1774	1770	1842
Q Serve(g_s), s	0.0	0.0	2.7	0.0	0.0	4.0	1.7	12.9	12.9	6.1	28.1	28.5
Cycle Q Clear(g_c), s	16.0	0.0	2.7	16.0	0.0	4.0	1.7	12.9	12.9	6.1	28.1	28.5
Prop In Lane	0.73		1.00	0.82		1.00	1.00		0.18	1.00		0.06
Lane Grp Cap(c), veh/h	121	0	402	117	0	602	62	737	751	224	919	956
V/C Ratio(X)	0.55	0.00	0.22	0.70	0.00	0.25	0.77	0.62	0.62	0.79	0.93	0.93
Avail Cap(c_a), veh/h	121	0	402	117	0	602	110	737	751	366	928	966
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	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.2	0.0	18.5	28.9	0.0	13.3	30.1	14.0	14.0	26.7	14.0	14.1
Incr Delay (d2), s/veh	5.0	0.0	0.3	16.8	0.0	0.2	18.0	1.5	1.5	6.2	15.0	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	1.3	0.0	1.2	2.0	0.0	1.8	1.1	6.4	6.5	3.4	17.3	18.2
LnGrp Delay(d),s/veh	31.2	0.0	18.8	45.8	0.0	13.5	48.1	15.5	15.5	32.9	29.0	29.6
LnGrp LOS	C		B	D		B	D	B	B	C	C	C
Approach Vol, veh/h		153			230			965			1923	
Approach Delay, s/veh		24.2			25.0			17.1			29.7	
Approach LOS		C			C			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	12.0	31.0		20.0	6.3	36.7		20.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	13.0	24.0		16.0	4.0	33.0		16.0
Max Q Clear Time (g_c+I1), s	8.1	14.9		18.0	3.7	30.5		18.0
Green Ext Time (p_c), s	0.2	3.9		0.0	0.0	2.2		0.0

Intersection Summary		
HCM 2010 Ctrl Delay		25.4
HCM 2010 LOS		C

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	49	44	15	873	1544	89
Future Vol, veh/h	49	44	15	873	1544	89
Conflicting Peds, #/hr	2	0	2	0	0	2
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	150	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	7	7	2	2
Mvmt Flow	52	46	16	919	1625	94

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2168	862	1721	0	-	0
Stage 1	1674	-	-	-	-	-
Stage 2	494	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.24	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.27	-	-	-
Pot Cap-1 Maneuver	~ 40	298	342	-	-	-
Stage 1	138	-	-	-	-	-
Stage 2	579	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 38	298	341	-	-	-
Mov Cap-2 Maneuver	107	-	-	-	-	-
Stage 1	131	-	-	-	-	-
Stage 2	578	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	44.2	0.3	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	341	-	107	298	-	-
HCM Lane V/C Ratio	0.046	-	0.482	0.155	-	-
HCM Control Delay (s)	16.1	-	66.6	19.3	-	-
HCM Lane LOS	C	-	F	C	-	-
HCM 95th %tile Q(veh)	0.1	-	2.1	0.5	-	-

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	255	733	230	249	548	331	224	490	256	226	551	224
Future Volume (veh/h)	255	733	230	249	548	331	224	490	256	226	551	224
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1810	1810	1810	1743	1743	1743	1845	1845	1845	1810	1810	1810
Adj Flow Rate, veh/h	300	862	271	293	645	389	264	576	301	266	648	264
Adj No. of Lanes	2	2	1	2	2	1	1	2	1	1	2	1
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, %	5	5	5	9	9	9	3	3	3	5	5	5
Cap, veh/h	382	920	411	347	866	385	292	788	352	295	790	352
Arrive On Green	0.11	0.27	0.27	0.11	0.26	0.26	0.17	0.22	0.22	0.17	0.23	0.23
Sat Flow, veh/h	3343	3438	1535	3221	3312	1475	1757	3505	1568	1723	3438	1530
Grp Volume(v), veh/h	300	862	271	293	645	389	264	576	301	266	648	264
Grp Sat Flow(s),veh/h/ln	1672	1719	1535	1610	1656	1475	1757	1752	1568	1723	1719	1530
Q Serve(g_s), s	6.9	19.3	12.4	7.0	14.1	20.6	11.6	12.0	14.5	11.9	14.1	12.7
Cycle Q Clear(g_c), s	6.9	19.3	12.4	7.0	14.1	20.6	11.6	12.0	14.5	11.9	14.1	12.7
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	382	920	411	347	866	385	292	788	352	295	790	352
V/C Ratio(X)	0.79	0.94	0.66	0.84	0.75	1.01	0.90	0.73	0.85	0.90	0.82	0.75
Avail Cap(c_a), veh/h	420	920	411	347	866	385	292	840	376	295	842	375
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	34.0	28.2	25.7	34.5	26.7	29.1	32.2	28.3	29.3	32.0	28.8	28.2
Incr Delay (d2), s/veh	8.7	16.5	3.9	17.0	3.5	48.2	29.4	3.1	16.4	28.6	6.2	7.7
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	3.6	11.2	5.7	4.0	6.9	13.5	8.0	6.1	7.9	8.0	7.3	6.1
LnGrp Delay(d),s/veh	42.7	44.7	29.5	51.5	30.2	77.3	61.6	31.4	45.7	60.6	35.0	36.0
LnGrp LOS	D	D	C	D	C	F	E	C	D	E	C	D
Approach Vol, veh/h		1433			1327			1141			1178	
Approach Delay, s/veh		41.4			48.7			42.2			41.0	
Approach LOS		D			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.0	22.2	13.0	25.6	17.6	22.6	13.5	25.1
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	13.5	18.9	8.5	21.1	13.1	19.3	9.9	19.7
Max Q Clear Time (g_c+I1), s	13.9	16.5	9.0	21.3	13.6	16.1	8.9	22.6
Green Ext Time (p_c), s	0.0	1.2	0.0	0.0	0.0	1.6	0.1	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	43.4
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	429	34	446	21	1816	702	327	941	39
Future Volume (vph)	0	0	0	429	34	446	21	1816	702	327	941	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor				0.95	0.95	1.00	1.00	0.95	0.88	1.00	0.95	
Frpb, ped/bikes				1.00	1.00	0.99	1.00	1.00	0.98	1.00	1.00	
Flpb, ped/bikes				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt				1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected				0.95	0.96	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)				1681	1697	1565	1770	3539	2725	1770	3515	
Flt Permitted				0.95	0.96	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)				1681	1697	1565	1770	3539	2725	1770	3515	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	0	0	0	442	35	460	22	1872	724	337	970	40
RTOR Reduction (vph)	0	0	0	0	0	8	0	0	0	0	3	0
Lane Group Flow (vph)	0	0	0	239	238	452	22	1872	724	337	1007	0
Confl. Peds. (#/hr)						7			4			1
Turn Type				Split	NA	pm+ov	Prot	NA	Free	Prot	NA	
Protected Phases				8	8	1	5	2		1	6	
Permitted Phases						8			Free			
Actuated Green, G (s)				15.2	15.2	31.2	2.0	48.5	91.7	16.0	62.5	
Effective Green, g (s)				15.2	15.2	31.2	2.0	48.5	91.7	16.0	62.5	
Actuated g/C Ratio				0.17	0.17	0.34	0.02	0.53	1.00	0.17	0.68	
Clearance Time (s)				4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)				3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)				278	281	600	38	1871	2725	308	2395	
v/s Ratio Prot				c0.14	0.14	c0.13	0.01	c0.53		c0.19	0.29	
v/s Ratio Perm						0.16			0.27			
v/c Ratio				0.86	0.85	0.75	0.58	1.00	0.27	1.09	0.42	
Uniform Delay, d1				37.2	37.1	26.8	44.4	21.6	0.0	37.9	6.5	
Progression Factor				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2				22.3	20.4	5.3	19.6	20.9	0.2	78.9	0.5	
Delay (s)				59.5	57.5	32.2	64.0	42.5	0.2	116.7	7.1	
Level of Service				E	E	C	E	D	A	F	A	
Approach Delay (s)		0.0			45.6			31.0			34.5	
Approach LOS		A			D			C			C	

Intersection Summary

HCM 2000 Control Delay	34.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	91.7	Sum of lost time (s)	12.0
Intersection Capacity Utilization	91.2%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	87	799	150	247	570	194	142	1024	88	153	785	308
Future Volume (vph)	87	799	150	247	570	194	142	1024	88	153	785	308
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
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
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.97	1.00	1.00		1.00	1.00	0.99	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	3539	1542	1770	3404		1770	3539	1562	1736	3471	1519
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	3539	1542	1770	3404		1770	3539	1562	1736	3471	1519
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	94	859	161	266	613	209	153	1101	95	165	844	331
RTOR Reduction (vph)	0	0	73	0	33	0	0	0	65	0	0	209
Lane Group Flow (vph)	94	859	88	266	789	0	153	1101	30	165	844	122
Confl. Peds. (#/hr)			16						1			6
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	4%	4%	4%
Turn Type	Prot	NA	pm+ov	Prot	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4	5	3	8		5	2		1	6	
Permitted Phases			4						2			6
Actuated Green, G (s)	7.0	25.4	36.9	15.5	33.9		11.5	32.0	32.0	10.0	30.5	30.5
Effective Green, g (s)	7.0	25.4	36.9	15.5	33.9		11.5	32.0	32.0	10.0	30.5	30.5
Actuated g/C Ratio	0.07	0.25	0.37	0.15	0.34		0.11	0.32	0.32	0.10	0.30	0.30
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	122	890	632	271	1143		201	1122	495	172	1049	459
v/s Ratio Prot	0.05	c0.24	0.02	c0.15	0.23		0.09	c0.31		c0.10	0.24	
v/s Ratio Perm			0.04						0.02			0.08
v/c Ratio	0.77	0.97	0.14	0.98	0.69		0.76	0.98	0.06	0.96	0.80	0.27
Uniform Delay, d1	46.2	37.3	21.4	42.6	29.0		43.4	34.2	24.0	45.2	32.5	26.7
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	25.4	21.9	0.1	49.3	1.8		15.6	22.3	0.1	56.0	4.6	0.3
Delay (s)	71.5	59.2	21.5	91.9	30.8		58.9	56.5	24.0	101.2	37.0	27.0
Level of Service	E	E	C	F	C		E	E	C	F	D	C
Approach Delay (s)		54.8			45.7			54.5			42.5	
Approach LOS		D			D			D			D	

Intersection Summary

HCM 2000 Control Delay	49.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	100.9	Sum of lost time (s)	18.0
Intersection Capacity Utilization	87.6%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	61	731	99	121	520	624	135	269	1038	686	253	854
Future Volume (vph)	61	731	99	121	520	624	135	269	1038	686	253	854
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	1.00	0.95	1.00		0.97	0.95		1.00	0.95	1.00	1.00	0.95
Frpb, ped/bikes	1.00	1.00	0.98		1.00	1.00		1.00	1.00	0.99	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85		1.00	0.97		1.00	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1770	3539	1552		3433	3434		1770	3539	1561	1719	3438
Flt Permitted	0.95	1.00	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1770	3539	1552		3433	3434		1770	3539	1561	1719	3438
Peak-hour factor, PHF	0.93	0.93	0.93	0.92	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	66	786	106	132	559	671	145	289	1116	738	272	918
RTOR Reduction (vph)	0	0	85	0	0	15	0	0	0	87	0	0
Lane Group Flow (vph)	66	786	21	0	691	801	0	289	1116	651	272	918
Confl. Peds. (#/hr)			4				3			1		
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	5%	5%
Turn Type	Prot	NA	Perm	Prot	Prot	NA		Prot	NA	Perm	Prot	NA
Protected Phases	7	4		3	3	8		5	2		1	6
Permitted Phases			4							2		
Actuated Green, G (s)	5.8	24.4	24.4		19.5	38.1		20.5	43.5	43.5	15.5	38.5
Effective Green, g (s)	5.8	24.4	24.4		19.5	38.1		20.5	43.5	43.5	15.5	38.5
Actuated g/C Ratio	0.05	0.20	0.20		0.16	0.32		0.17	0.36	0.36	0.13	0.32
Clearance Time (s)	4.5	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	84	714	313		553	1082		300	1273	561	220	1094
v/s Ratio Prot	0.04	c0.22			c0.20	0.23		0.16	0.32		c0.16	0.27
v/s Ratio Perm			0.01							c0.42		
v/c Ratio	0.79	1.10	0.07		1.25	0.74		0.96	0.88	1.16	1.24	0.84
Uniform Delay, d1	56.9	48.2	39.1		50.7	37.0		49.8	36.2	38.7	52.7	38.3
Progression Factor	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	37.0	64.7	0.1		126.7	2.8		41.8	8.7	90.6	139.1	7.8
Delay (s)	94.0	112.9	39.1		177.4	39.7		91.6	44.9	129.3	191.8	46.1
Level of Service	F	F	D		F	D		F	D	F	F	D
Approach Delay (s)		103.5				102.9			80.3			78.7
Approach LOS		F				F			F			E

Intersection Summary

HCM 2000 Control Delay	89.6	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.17		
Actuated Cycle Length (s)	120.9	Sum of lost time (s)	18.0
Intersection Capacity Utilization	110.1%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group



Movement	SBR
Lane Configurations	
Traffic Volume (vph)	15
Future Volume (vph)	15
Ideal Flow (vphpl)	1900
Total Lost time (s)	4.5
Lane Util. Factor	1.00
Frpb, ped/bikes	0.98
Flpb, ped/bikes	1.00
Frt	0.85
Flt Protected	1.00
Satd. Flow (prot)	1507
Flt Permitted	1.00
Satd. Flow (perm)	1507
Peak-hour factor, PHF	0.93
Adj. Flow (vph)	16
RTOR Reduction (vph)	11
Lane Group Flow (vph)	5
Confl. Peds. (#/hr)	4
Heavy Vehicles (%)	5%
Turn Type	Perm
Protected Phases	
Permitted Phases	6
Actuated Green, G (s)	38.5
Effective Green, g (s)	38.5
Actuated g/C Ratio	0.32
Clearance Time (s)	4.5
Vehicle Extension (s)	3.0
Lane Grp Cap (vph)	479
v/s Ratio Prot	
v/s Ratio Perm	0.00
v/c Ratio	0.01
Uniform Delay, d1	28.2
Progression Factor	1.00
Incremental Delay, d2	0.0
Delay (s)	28.2
Level of Service	C
Approach Delay (s)	
Approach LOS	

Intersection Summary

Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	61	731	99	121	520	624	135	269	1038	686	253	854
Future Volume (vph)	61	731	99	121	520	624	135	269	1038	686	253	854
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	1.00	0.95	1.00		0.97	0.95		1.00	0.95	0.88	1.00	0.95
Frpb, ped/bikes	1.00	1.00	0.98		1.00	1.00		1.00	1.00	0.98	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85		1.00	0.97		1.00	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1770	3539	1551		3433	3434		1770	3539	2721	1719	3438
Flt Permitted	0.95	1.00	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1770	3539	1551		3433	3434		1770	3539	2721	1719	3438
Peak-hour factor, PHF	0.93	0.93	0.93	0.92	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	66	786	106	132	559	671	145	289	1116	738	272	918
RTOR Reduction (vph)	0	0	83	0	0	14	0	0	0	198	0	0
Lane Group Flow (vph)	66	786	23	0	691	802	0	289	1116	540	272	918
Confl. Peds. (#/hr)			4				3			1		
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	5%	5%
Turn Type	Prot	NA	Perm	Prot	Prot	NA		Prot	NA	Perm	Prot	NA
Protected Phases	7	4		3	3	8		5	2		1	6
Permitted Phases			4							2		
Actuated Green, G (s)	7.9	28.4	28.4		24.5	45.0		22.2	40.5	40.5	19.5	37.8
Effective Green, g (s)	7.9	28.4	28.4		24.5	45.0		22.2	40.5	40.5	19.5	37.8
Actuated g/C Ratio	0.06	0.22	0.22		0.19	0.34		0.17	0.31	0.31	0.15	0.29
Clearance Time (s)	4.5	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	106	767	336		642	1180		300	1094	841	256	992
v/s Ratio Prot	0.04	c0.22			c0.20	0.23		0.16	c0.32		c0.16	0.27
v/s Ratio Perm			0.01							0.20		
v/c Ratio	0.62	1.02	0.07		1.08	0.68		0.96	1.02	0.64	1.06	0.93
Uniform Delay, d1	60.0	51.2	40.7		53.2	36.8		53.9	45.2	39.0	55.7	45.2
Progression Factor	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	10.9	38.9	0.1		57.8	1.6		41.8	32.4	3.7	73.7	15.4
Delay (s)	70.9	90.2	40.8		111.0	38.4		95.7	77.6	42.7	129.4	60.6
Level of Service	E	F	D		F	D		F	E	D	F	E
Approach Delay (s)		83.4				71.7			68.0			75.8
Approach LOS		F				E			E			E

Intersection Summary

HCM 2000 Control Delay	73.1	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.04		
Actuated Cycle Length (s)	130.9	Sum of lost time (s)	18.0
Intersection Capacity Utilization	96.2%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	SBR
Lane Configurations	
Traffic Volume (vph)	15
Future Volume (vph)	15
Ideal Flow (vphpl)	1900
Total Lost time (s)	4.5
Lane Util. Factor	1.00
Frpb, ped/bikes	0.98
Flpb, ped/bikes	1.00
Frt	0.85
Flt Protected	1.00
Satd. Flow (prot)	1506
Flt Permitted	1.00
Satd. Flow (perm)	1506
Peak-hour factor, PHF	0.93
Adj. Flow (vph)	16
RTOR Reduction (vph)	11
Lane Group Flow (vph)	5
Confl. Peds. (#/hr)	4
Heavy Vehicles (%)	5%
Turn Type	Perm
Protected Phases	
Permitted Phases	6
Actuated Green, G (s)	37.8
Effective Green, g (s)	37.8
Actuated g/C Ratio	0.29
Clearance Time (s)	4.5
Vehicle Extension (s)	3.0
Lane Grp Cap (vph)	434
v/s Ratio Prot	
v/s Ratio Perm	0.00
v/c Ratio	0.01
Uniform Delay, d1	33.2
Progression Factor	1.00
Incremental Delay, d2	0.0
Delay (s)	33.3
Level of Service	C
Approach Delay (s)	
Approach LOS	
Intersection Summary	

Intersection

Int Delay, s/veh	7.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↱			↑↑↱				↱			↱
Traffic Vol, veh/h	0	1548	246	0	1392	8	0	0	244	0	0	6
Future Vol, veh/h	0	1548	246	0	1392	8	0	0	244	0	0	6
Conflicting Peds, #/hr	5	0	3	3	0	5	0	0	2	2	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	9	2	9
Mvmt Flow	0	1665	265	0	1497	9	0	0	262	0	0	6

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	-	-	0	-	-	970	-	-	758
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	-	-	6.94	-	-	7.08
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	-	-	3.32	-	-	3.39
Pot Cap-1 Maneuver	0	-	-	0	-	-	0	0	~ 253	0	0	335
Stage 1	0	-	-	0	-	-	0	0	-	0	0	-
Stage 2	0	-	-	0	-	-	0	0	-	0	0	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	-	-	-	-	-	-	-	-	~ 252	-	-	334
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	110.9	16
HCM LOS			F	C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT	WBR	SBLn1
Capacity (veh/h)	252	-	-	-	-	334
HCM Lane V/C Ratio	1.041	-	-	-	-	0.019
HCM Control Delay (s)	110.9	-	-	-	-	16
HCM Lane LOS	F	-	-	-	-	C
HCM 95th %tile Q(veh)	10.6	-	-	-	-	0.1

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	328	376	70	281	292	30	340	859	645	40	437	316
Future Volume (veh/h)	328	376	70	281	292	30	340	859	645	40	437	316
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.96	1.00		0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	342	392	73	293	304	31	354	895	672	42	455	329
Adj No. of Lanes	1	2	0	1	2	1	1	2	1	1	2	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	364	526	97	328	553	243	377	1381	887	66	760	323
Arrive On Green	0.21	0.18	0.18	0.18	0.16	0.16	0.21	0.39	0.39	0.04	0.21	0.21
Sat Flow, veh/h	1774	2976	549	1774	3539	1553	1774	3539	1522	1774	3539	1506
Grp Volume(v), veh/h	342	232	233	293	304	31	354	895	672	42	455	329
Grp Sat Flow(s),veh/h/ln	1774	1770	1756	1774	1770	1553	1774	1770	1522	1774	1770	1506
Q Serve(g_s), s	16.2	10.6	10.8	13.7	6.8	1.5	16.7	17.6	28.6	2.0	9.9	18.3
Cycle Q Clear(g_c), s	16.2	10.6	10.8	13.7	6.8	1.5	16.7	17.6	28.6	2.0	9.9	18.3
Prop In Lane	1.00		0.31	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	364	313	310	328	553	243	377	1381	887	66	760	323
V/C Ratio(X)	0.94	0.74	0.75	0.89	0.55	0.13	0.94	0.65	0.76	0.64	0.60	1.02
Avail Cap(c_a), veh/h	364	405	402	335	752	330	377	1381	887	104	760	323
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	33.3	33.2	33.3	33.9	33.2	31.0	33.0	21.2	13.8	40.5	30.1	33.5
Incr Delay (d2), s/veh	31.8	5.2	5.8	24.4	0.9	0.2	31.2	1.1	3.8	10.0	1.3	54.5
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	0.1
%ile BackOfQ(50%),veh/ln	11.1	5.6	5.7	9.0	3.4	0.6	11.4	8.8	12.7	1.2	4.9	12.5
LnGrp Delay(d),s/veh	65.1	38.4	39.1	58.3	34.0	31.2	64.3	22.3	17.6	50.4	31.4	88.0
LnGrp LOS	E	D	D	E	C	C	E	C	B	D	C	F
Approach Vol, veh/h		807			628			1921			826	
Approach Delay, s/veh		49.9			45.2			28.4			55.0	
Approach LOS		D			D			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.6	37.8	20.3	19.6	22.6	22.8	22.0	17.8
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.0	31.4	16.1	19.5	18.1	18.3	17.5	18.1
Max Q Clear Time (g_c+I1), s	4.0	30.6	15.7	12.8	18.7	20.3	18.2	8.8
Green Ext Time (p_c), s	0.0	0.6	0.0	1.5	0.0	0.0	0.0	1.3

Intersection Summary	
HCM 2010 Ctrl Delay	40.3
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	39	26	45	116	26	257	60	1652	115	250	1148	54
Future Volume (veh/h)	39	26	45	116	26	257	60	1652	115	250	1148	54
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1863	1863	1863	1863	1810	1810	1900
Adj Flow Rate, veh/h	42	28	48	125	28	276	65	1776	124	269	1234	58
Adj No. of Lanes	0	1	1	0	1	1	1	2	1	1	2	0
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	5	5	5
Cap, veh/h	64	28	282	73	4	546	84	1845	815	288	2143	101
Arrive On Green	0.18	0.18	0.18	0.18	0.18	0.18	0.05	0.52	0.52	0.17	0.64	0.64
Sat Flow, veh/h	0	155	1581	0	21	1581	1774	3539	1564	1723	3342	157
Grp Volume(v), veh/h	70	0	48	153	0	276	65	1776	124	269	634	658
Grp Sat Flow(s),veh/h/ln	155	0	1581	21	0	1581	1774	1770	1564	1723	1719	1780
Q Serve(g_s), s	0.0	0.0	2.3	0.0	0.0	12.4	3.3	43.3	3.7	13.8	18.8	18.9
Cycle Q Clear(g_c), s	16.0	0.0	2.3	16.0	0.0	12.4	3.3	43.3	3.7	13.8	18.8	18.9
Prop In Lane	0.60		1.00	0.82		1.00	1.00		1.00	1.00		0.09
Lane Grp Cap(c), veh/h	92	0	282	77	0	546	84	1845	815	288	1102	1141
V/C Ratio(X)	0.76	0.00	0.17	2.00	0.00	0.51	0.78	0.96	0.15	0.93	0.58	0.58
Avail Cap(c_a), veh/h	92	0	282	77	0	546	158	1852	818	288	1102	1141
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.9	0.0	31.3	44.1	0.0	23.3	42.3	20.7	11.2	36.9	9.2	9.2
Incr Delay (d2), s/veh	30.8	0.0	0.3	492.8	0.0	0.8	14.2	13.2	0.1	36.1	0.7	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	0.0	1.0	12.3	0.0	5.5	1.9	24.3	1.6	9.5	9.0	9.4
LnGrp Delay(d),s/veh	69.7	0.0	31.6	537.0	0.0	24.1	56.5	33.8	11.3	73.1	9.9	9.9
LnGrp LOS	E		C	F		C	E	C	B	E	A	A
Approach Vol, veh/h		118			429			1965			1561	
Approach Delay, s/veh		54.2			207.0			33.1			20.8	
Approach LOS		D			F			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	19.0	50.8		20.0	8.2	61.6		20.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	15.0	47.0		16.0	8.0	54.0		16.0
Max Q Clear Time (g_c+I1), s	15.8	45.3		18.0	5.3	20.9		18.0
Green Ext Time (p_c), s	0.0	1.5		0.0	0.0	11.5		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	47.3
HCM 2010 LOS	D

Intersection						
Int Delay, s/veh	3.8					

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	99	15	26	1603	1248	58
Future Vol, veh/h	99	15	26	1603	1248	58
Conflicting Peds, #/hr	4	0	2	0	0	2
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	150	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	3	3	4	4
Mvmt Flow	106	16	28	1724	1342	62

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2297	704	1406	0	-	0
Stage 1	1375	-	-	-	-	-
Stage 2	922	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.16	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.23	-	-	-
Pot Cap-1 Maneuver	~ 33	379	476	-	-	-
Stage 1	200	-	-	-	-	-
Stage 2	348	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 31	378	475	-	-	-
Mov Cap-2 Maneuver	124	-	-	-	-	-
Stage 1	188	-	-	-	-	-
Stage 2	347	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	99.9	0.2	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	475	-	124	378	-	-
HCM Lane V/C Ratio	0.059	-	0.858	0.043	-	-
HCM Control Delay (s)	13.1	-	112.8	14.9	-	-
HCM Lane LOS	B	-	F	B	-	-
HCM 95th %tile Q(veh)	0.2	-	5.3	0.1	-	-

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	337	479	210	190	245	218	282	767	298	277	661	326
Future Volume (veh/h)	337	479	210	190	245	218	282	767	298	277	661	326
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1827	1776	1776	1776	1845	1845	1845	1810	1810	1810
Adj Flow Rate, veh/h	379	538	236	213	275	245	317	862	335	311	743	366
Adj No. of Lanes	2	2	1	2	2	1	1	2	1	1	2	1
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	4	4	4	7	7	7	3	3	3	5	5	5
Cap, veh/h	443	806	359	285	634	284	350	968	433	343	950	424
Arrive On Green	0.13	0.23	0.23	0.09	0.19	0.19	0.20	0.28	0.28	0.20	0.28	0.28
Sat Flow, veh/h	3375	3471	1547	3281	3374	1509	1757	3505	1568	1723	3438	1536
Grp Volume(v), veh/h	379	538	236	213	275	245	317	862	335	311	743	366
Grp Sat Flow(s),veh/h/ln	1688	1736	1547	1640	1687	1509	1757	1752	1568	1723	1719	1536
Q Serve(g_s), s	9.6	12.3	12.1	5.6	6.3	13.8	15.4	20.7	17.2	15.5	17.5	19.8
Cycle Q Clear(g_c), s	9.6	12.3	12.1	5.6	6.3	13.8	15.4	20.7	17.2	15.5	17.5	19.8
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	443	806	359	285	634	284	350	968	433	343	950	424
V/C Ratio(X)	0.86	0.67	0.66	0.75	0.43	0.86	0.91	0.89	0.77	0.91	0.78	0.86
Avail Cap(c_a), veh/h	443	840	374	311	693	310	351	1000	447	344	981	438
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	37.2	30.6	30.5	39.1	31.5	34.5	34.3	30.4	29.2	34.3	29.3	30.1
Incr Delay (d2), s/veh	15.1	1.9	3.9	8.8	0.5	20.3	26.1	9.9	8.0	26.4	4.1	15.7
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	5.4	6.1	5.5	2.9	3.0	7.3	10.0	11.3	8.3	9.9	8.8	10.2
LnGrp Delay(d),s/veh	52.3	32.5	34.4	47.9	31.9	54.8	60.3	40.3	37.2	60.7	33.3	45.8
LnGrp LOS	D	C	C	D	C	D	E	D	D	E	C	D
Approach Vol, veh/h		1153			733			1514			1420	
Approach Delay, s/veh		39.4			44.2			43.8			42.5	
Approach LOS		D			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	21.9	28.7	12.1	24.9	21.9	28.7	16.0	21.0
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	17.5	25.0	8.3	21.2	17.5	25.0	11.5	18.0
Max Q Clear Time (g_c+I1), s	17.5	22.7	7.6	14.3	17.4	21.8	11.6	15.8
Green Ext Time (p_c), s	0.0	1.5	0.1	2.5	0.0	1.9	0.0	0.6

Intersection Summary	
HCM 2010 Ctrl Delay	42.4
HCM 2010 LOS	D

Intersection	
Intersection Delay, s/veh	9
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	111	120	30	2	97	2	24	2	2	2	2	95
Future Vol, veh/h	111	120	30	2	97	2	24	2	2	2	2	95
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	121	130	33	2	105	2	26	2	2	2	2	103
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.7	8.3	8.4	8
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	86%	43%	2%	2%
Vol Thru, %	7%	46%	96%	2%
Vol Right, %	7%	11%	2%	96%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	28	261	101	99
LT Vol	24	111	2	2
Through Vol	2	120	97	2
RT Vol	2	30	2	95
Lane Flow Rate	30	284	110	108
Geometry Grp	1	1	1	1
Degree of Util (X)	0.043	0.346	0.139	0.128
Departure Headway (Hd)	5.087	4.386	4.546	4.294
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	703	820	789	835
Service Time	3.121	2.408	2.573	2.322
HCM Lane V/C Ratio	0.043	0.346	0.139	0.129
HCM Control Delay	8.4	9.7	8.3	8
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.1	1.6	0.5	0.4

Intersection	
Intersection Delay, s/veh	8.4
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	22	20	4	30	20	79	4	32	20	110	41	20
Future Vol, veh/h	22	20	4	30	20	79	4	32	20	110	41	20
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	24	22	4	33	22	86	4	35	22	120	45	22
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	8.1	8.1	7.7	8.9
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	7%	48%	23%	64%
Vol Thru, %	57%	43%	16%	24%
Vol Right, %	36%	9%	61%	12%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	56	46	129	171
LT Vol	4	22	30	110
Through Vol	32	20	20	41
RT Vol	20	4	79	20
Lane Flow Rate	61	50	140	186
Geometry Grp	1	1	1	1
Degree of Util (X)	0.074	0.065	0.165	0.232
Departure Headway (Hd)	4.373	4.704	4.244	4.488
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	820	762	847	801
Service Time	2.395	2.728	2.263	2.506
HCM Lane V/C Ratio	0.074	0.066	0.165	0.232
HCM Control Delay	7.7	8.1	8.1	8.9
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.2	0.2	0.6	0.9

Intersection	
Intersection Delay, s/veh	12.2
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	150	196	45	3	198	3	50	3	3	3	3	151
Future Vol, veh/h	150	196	45	3	198	3	50	3	3	3	3	151
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	163	213	49	3	215	3	54	3	3	3	3	164
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	14.5	10.5	9.7	9.7
HCM LOS	B	B	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	89%	38%	1%	2%
Vol Thru, %	5%	50%	97%	2%
Vol Right, %	5%	12%	1%	96%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	56	391	204	157
LT Vol	50	150	3	3
Through Vol	3	196	198	3
RT Vol	3	45	3	151
Lane Flow Rate	61	425	222	171
Geometry Grp	1	1	1	1
Degree of Util (X)	0.102	0.58	0.316	0.241
Departure Headway (Hd)	6.008	4.915	5.137	5.087
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	596	740	701	705
Service Time	4.051	2.915	3.167	3.124
HCM Lane V/C Ratio	0.102	0.574	0.317	0.243
HCM Control Delay	9.7	14.5	10.5	9.7
HCM Lane LOS	A	B	B	A
HCM 95th-tile Q	0.3	3.8	1.4	0.9

Intersection	
Intersection Delay, s/veh	9.8
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	40	30	6	45	30	143	6	61	35	150	51	45
Future Vol, veh/h	40	30	6	45	30	143	6	61	35	150	51	45
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	43	33	7	49	33	155	7	66	38	163	55	49
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9	9.7	8.8	10.6
HCM LOS	A	A	A	B

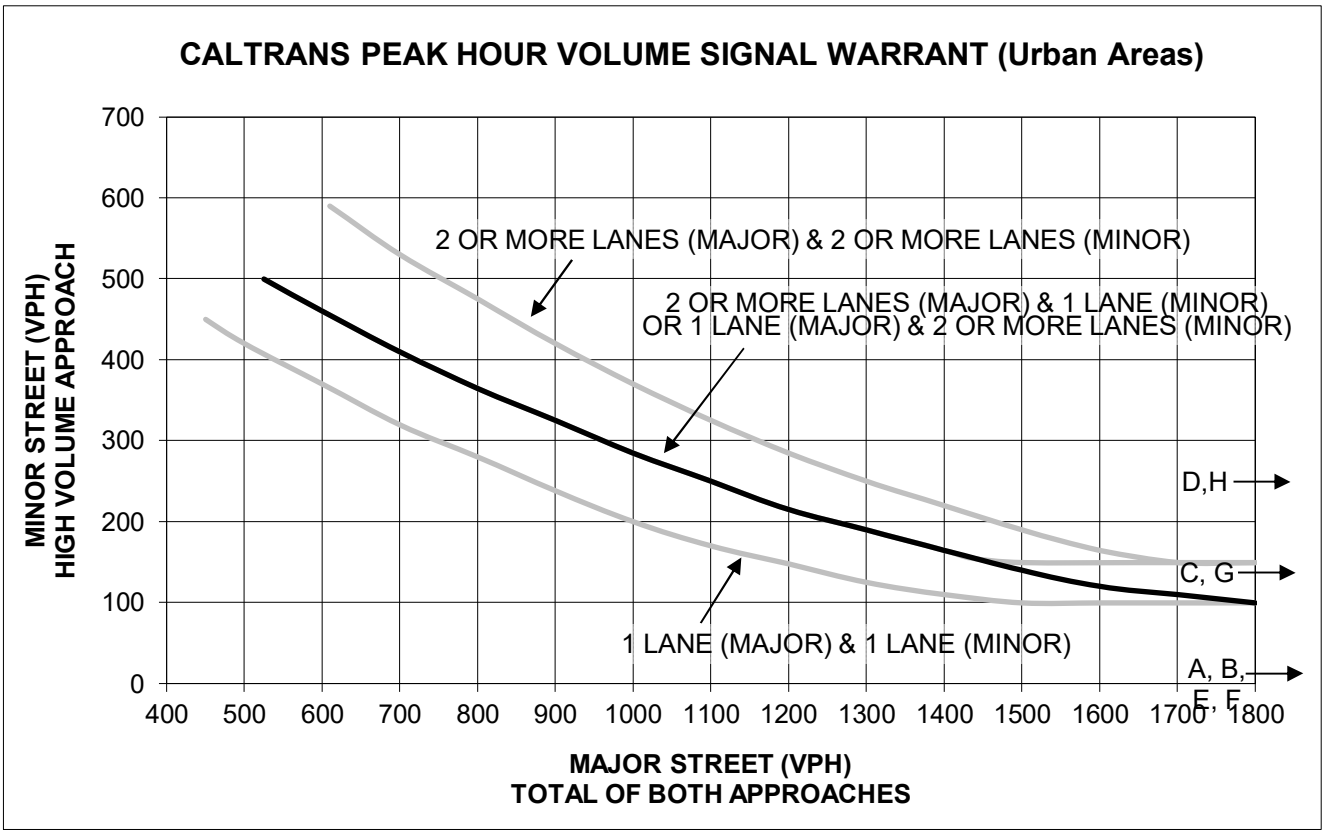
Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	6%	53%	21%	61%
Vol Thru, %	60%	39%	14%	21%
Vol Right, %	34%	8%	66%	18%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	102	76	218	246
LT Vol	6	40	45	150
Through Vol	61	30	30	51
RT Vol	35	6	143	45
Lane Flow Rate	111	83	237	267
Geometry Grp	1	1	1	1
Degree of Util (X)	0.149	0.12	0.303	0.36
Departure Headway (Hd)	4.842	5.209	4.607	4.841
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	733	682	775	738
Service Time	2.921	3.289	2.672	2.907
HCM Lane V/C Ratio	0.151	0.122	0.306	0.362
HCM Control Delay	8.8	9	9.7	10.6
HCM Lane LOS	A	A	A	B
HCM 95th-tile Q	0.5	0.4	1.3	1.6

Appendix I

Warrant

Worksheets

Intersection #4
Spring Street / John Street (SR 68)



Scenario	John St (SR 68) East/West	Spring St North/South	Warrant Met?
A. Existing AM	2193	9	No
B. Existing PM	2318	11	No
C. Ex+Pro AM	2519	133	No*
D. Ex+Pro PM	2802	244	No*
E. CumNoPro AM	2430	9	No
F. CumNoPro PM	2709	11	No
G. Cum+Pro AM	2756	133	No*
H. Cum+Pro PM	3193	244	No*

* Warrant not met, as approach volumes are all right turns, the movement that would have the least benefit from signalization.

Notes:

1. 150 VPH applies as the lower threshold volume for a minor street approach with two or more lanes and 100 VPH applies as the lower threshold volume for a minor street approaching with one lane.

2. Bold line applies to intersection geometry.

Warrant 3 (Part B) - Peak Hour Delay
#4 - Spring Street / John Street (SR 68)

Number of Approaches to Intersection: 4 approaches **Minimum Entering Vehicles: 800 vehicles**
Number of Approach Lanes: NB Spring: 1 lanes
SB Spring: 1 lanes

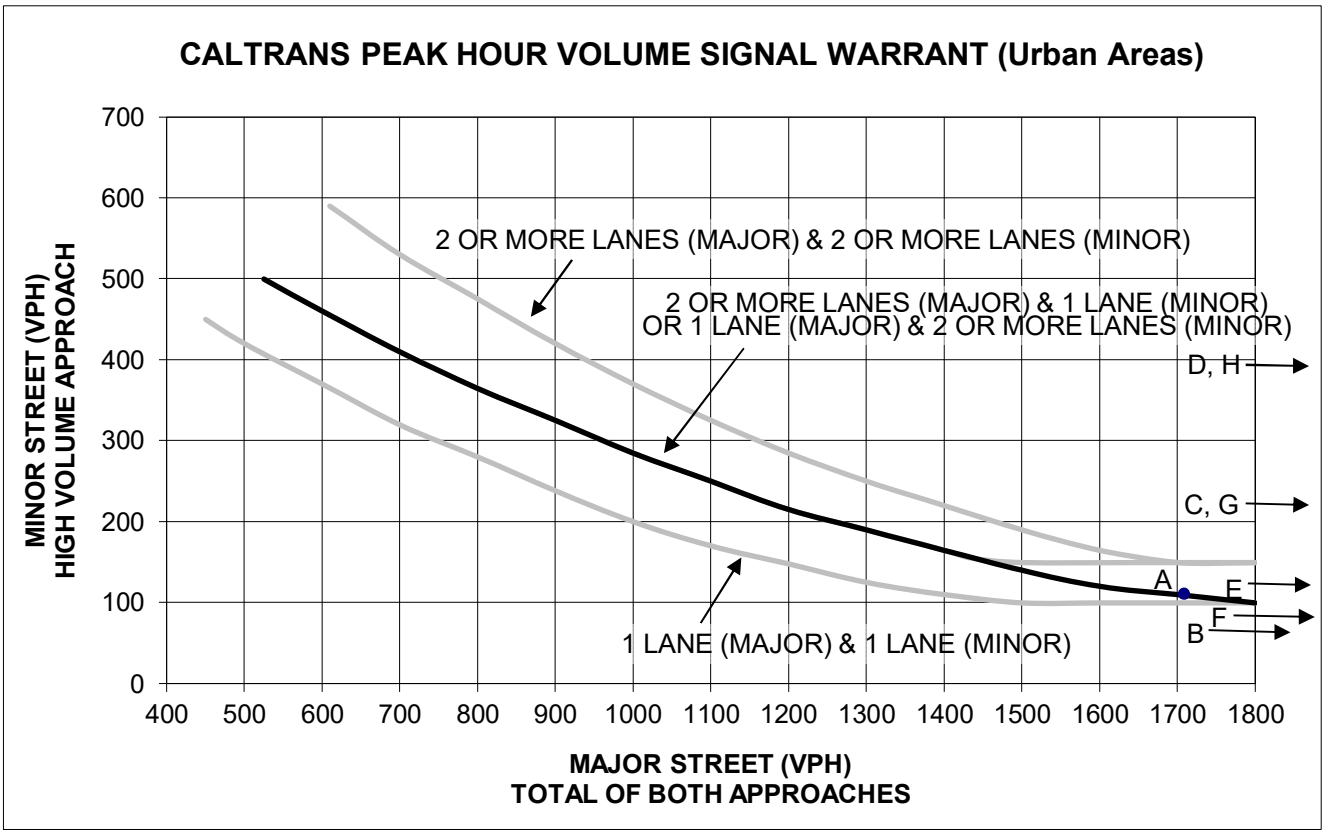
Total Entering Volumes:

Existing AM:	2,209 vehicles		
Existing PM:	2,340 vehicles		
Exist+Proj AM:	2,659 vehicles	CumNoPro AM:	2,446 vehicles
Exist+Proj PM:	3,057 vehicles	CumNoPro PM:	2,731 vehicles
		Cum+Proj AM:	2,896 vehicles
		Cum+Proj PM:	3,448 vehicles

Street	Direction	Scenario	Peak Hour	No. of Stopped Vehicles	Average Vehicle Delay (sec)	Total Vehicle Delay (sec)	Total Delay (hours)	Min. Approach Delay? 4 Veh-Hrs (One-Lane)	Min. Approach Delay? 5 Veh-Hrs (Two-Lane)	Min. Approach Vols? 100 Veh (One-Lane)	Min. Approach Vols? 150 Veh (Two-Lane)	At least 800 Veh? (Intersection)	Warrant Met?
Spring	NB	Existing	AM	9	34.3	309	0.09	NO	N/A	NO	N/A	YES	NO
Spring	SB	Existing	AM	7	16.6	116	0.03	NO	N/A	NO	N/A	YES	NO
Spring	NB	Existing	PM	11	76.6	843	0.23	NO	N/A	NO	N/A	YES	NO
Spring	SB	Existing	PM	11	54.1	595	0.17	NO	N/A	NO	N/A	YES	NO
Spring	NB	Exist+Proj	AM	133	19.2	2,554	0.71	NO	N/A	YES	N/A	YES	NO
Spring	SB	Exist+Proj	AM	7	18.5	130	0.04	NO	N/A	NO	N/A	YES	NO
Spring	NB	Exist+Proj	PM	244	129.4	31,574	8.77	YES	N/A	YES	N/A	YES	YES
Spring	SB	Exist+Proj	PM	11	3,000.0	33,000	9.17	YES	N/A	NO	N/A	YES	NO
Spring	NB	CumNoPro	AM	9	43.7	393	0.11	NO	N/A	NO	N/A	YES	NO
Spring	SB	CumNoPro	AM	7	17.8	125	0.03	NO	N/A	NO	N/A	YES	NO
Spring	NB	CumNoPro	PM	11	141.6	1,558	0.43	NO	N/A	NO	N/A	YES	NO
Spring	SB	CumNoPro	PM	11	99.9	1,099	0.31	NO	N/A	NO	N/A	YES	NO
Spring	NB	Cum+Proj	AM	133	16.1	2,141	0.59	NO	N/A	YES	N/A	YES	NO
Spring	SB	Cum+Proj	AM	7	19.9	139	0.04	NO	N/A	NO	N/A	YES	NO
Spring	NB	Cum+Proj	PM	244	3,000.0	732,000	203.33	YES	N/A	YES	N/A	YES	YES
Spring	SB	Cum+Proj	PM	11	3,000.0	33,000	9.17	YES	N/A	NO	N/A	YES	NO

Notes:
1. Warrant based on level of service calculations.
2. NB, SB, EB, WB = Northbound, Southbound, Eastbound, Westbound.
3. N/A = Not Applicable - this evaluation does not apply to that approach.
4. Delays of over 3,000 seconds reduced to exactly 3,000 seconds for this warrant evaluation.

Intersection #6
Abbott Street / Maple Street



Scenario	Abbott St	Maple St	Warrant
	North/South	East/West	Met?
A. Existing AM	1708	111	Yes
B. Existing PM	1871	63	No
C. Ex+Pro AM	1952	216	Yes
D. Ex+Pro PM	2235	399	Yes
E. CumNoPro AM	2471	127	Yes
F. CumNoPro PM	2915	84	No
G. Cum+Pro AM	2715	216	Yes
H. Cum+Pro PM	3279	399	Yes

Notes:

1. 150 VPH applies as the lower threshold volume for a minor street approach with two or more lanes and 100 VPH applies as the lower threshold volume for a minor street approaching with one lane.

2. Bold line applies to intersection geometry.

Warrant 3 (Part B) - Peak Hour Delay
#6 - Abbott Street / Maple Street

Number of Approaches to Intersection: 4 approaches **Minimum Entering Vehicles: 800 vehicles**

Number of Approach Lanes: EB Maple: 1 lanes
WB Private Dwy: 1 lanes

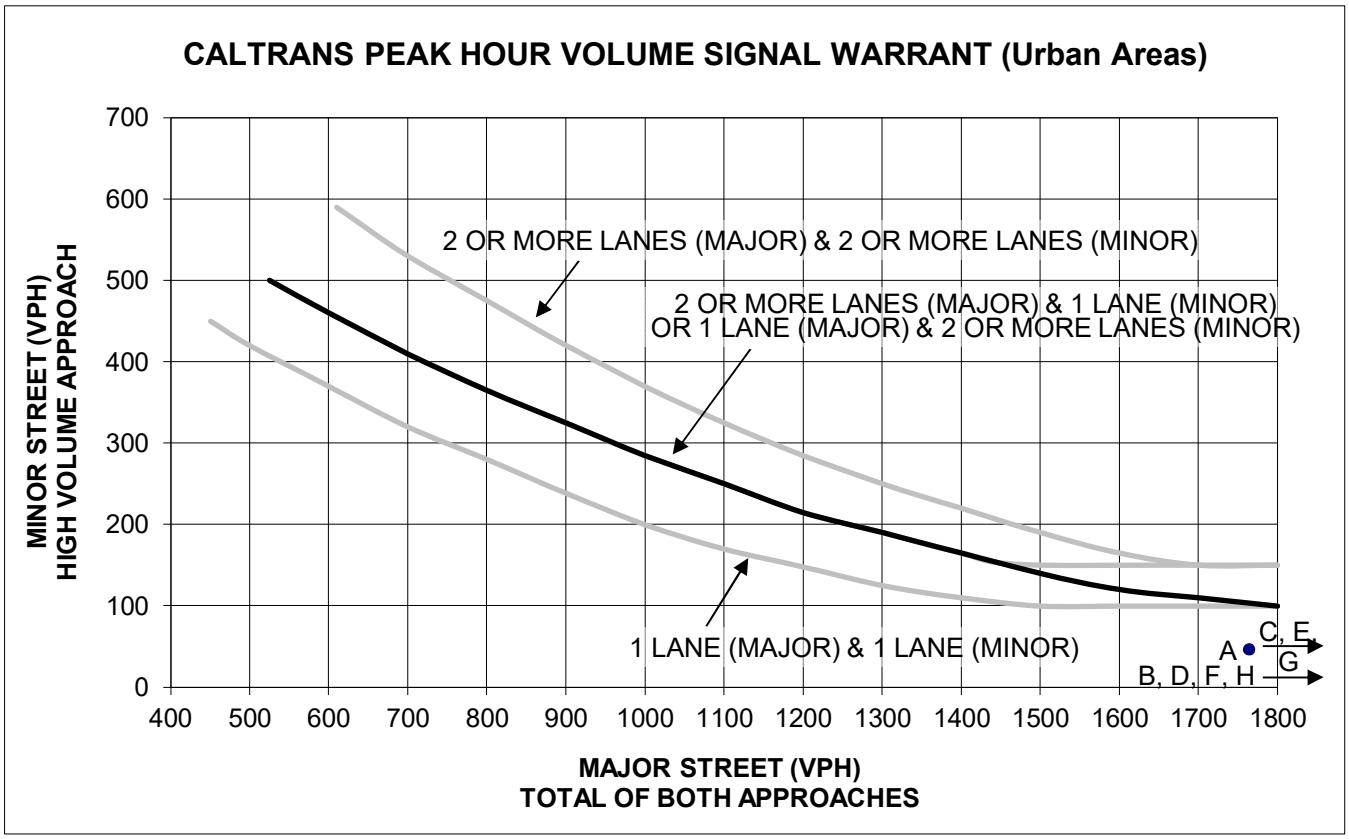
Total Entering Volumes:

Existing AM:	1,819 vehicles		
Existing PM:	1,934 vehicles		
Exist+Proj AM:	2,296 vehicles	CumNoPro AM:	2,598 vehicles
Exist+Proj PM:	2,723 vehicles	CumNoPro PM:	2,999 vehicles
		Cum+Proj AM:	3,075 vehicles
		Cum+Proj PM:	3,788 vehicles

Street	Direction	Scenario	Peak Hour	No. of Stopped Vehicles	Average Vehicle Delay (sec)	Total Vehicle Delay (sec)	Total Delay (hours)	Min. Approach Delay? 4 Veh-Hrs (One-Lane)	Min. Approach Delay? 5 Veh-Hrs (Two-Lane)	Min. Approach Vols? 100 Veh (One-Lane)	Min. Approach Vols? 150 Veh (Two-Lane)	At least 800 Veh? (Intersection)	Warrant Met?
Maple	EB	Existing	AM	111	85.3	9,468	2.63	NO	N/A	YES	N/A	YES	NO
Private Dwy	WB	Existing	AM	0	0.0	0	0.00	NO	N/A	NO	N/A	YES	NO
Maple	EB	Existing	PM	63	40.3	2,539	0.71	NO	N/A	NO	N/A	YES	NO
Private Dwy	WB	Existing	PM	0	0.0	0	0.00	NO	N/A	NO	N/A	YES	NO
Maple	EB	Exist+Proj	AM	128	3,000.0	384,000	106.67	YES	N/A	YES	N/A	YES	YES
Maple	WB	Exist+Proj	AM	216	3,000.0	648,000	180.00	YES	N/A	YES	N/A	YES	YES
Maple	EB	Exist+Proj	PM	89	11.2	997	0.28	NO	N/A	NO	N/A	YES	NO
Maple	WB	Exist+Proj	PM	399	3,000.0	1,197,000	332.50	YES	N/A	YES	N/A	YES	YES
Maple	EB	CumNoPro	AM	127	1,060.8	134,722	37.42	YES	N/A	YES	N/A	YES	YES
Private Dwy	WB	CumNoPro	AM	0	0.0	0	0.00	NO	N/A	NO	N/A	YES	NO
Maple	EB	CumNoPro	PM	84	3,000.0	252,000	70.00	YES	N/A	NO	N/A	YES	NO
Private Dwy	WB	CumNoPro	PM	0	0.0	0	0.00	NO	N/A	NO	N/A	YES	NO
Maple	EB	Cum+Proj	AM	144	3,000.0	432,000	120.00	YES	N/A	YES	N/A	YES	YES
Maple	WB	Cum+Proj	AM	216	3,000.0	648,000	180.00	YES	N/A	YES	N/A	YES	YES
Maple	EB	Cum+Proj	PM	110	3,000.0	330,000	91.67	YES	N/A	YES	N/A	YES	YES
Maple	WB	Cum+Proj	PM	399	3,000.0	1,197,000	332.50	YES	N/A	YES	N/A	YES	YES

Notes:
1. Warrant based on level of service calculations.
2. NB, SB, EB, WB = Northbound, Southbound, Eastbound, Westbound.
3. N/A = Not Applicable - this evaluation does not apply to that approach.
4. Delays of over 3,000 seconds reduced to exactly 3,000 seconds for this warrant evaluation.

Intersection #7
Abbott Street / Spicer Street



Scenario	Abbott St	Spicer St	Warrant
	North/South	East/West	Met?
A. Existing AM	1764	47	No
B. Existing PM	1802	3	No
C. Ex+Pro AM	1904	47	No
D. Ex+Pro PM	2033	3	No
E. CumNoPro AM	2535	55	No
F. CumNoPro PM	2802	10	No
G. Cum+Pro AM	2675	55	No
H. Cum+Pro PM	3033	10	No

Notes:

1. 150 VPH applies as the lower threshold volume for a minor street approach with two or more lanes and 100 VPH applies as the lower threshold volume for a minor street approaching with one lane.

2. Bold line applies to intersection geometry.

3. High northbound and southbound right turn volumes are removed from warrant evaluation.

Warrant 3 (Part B) - Peak Hour Delay
#7 - Abbott Street / Spicer Street

Number of Approaches to Intersection: 3 approaches **Minimum Entering Vehicles: 650 vehicles**
Number of Approach Lanes: WB Spicer: 1 lanes

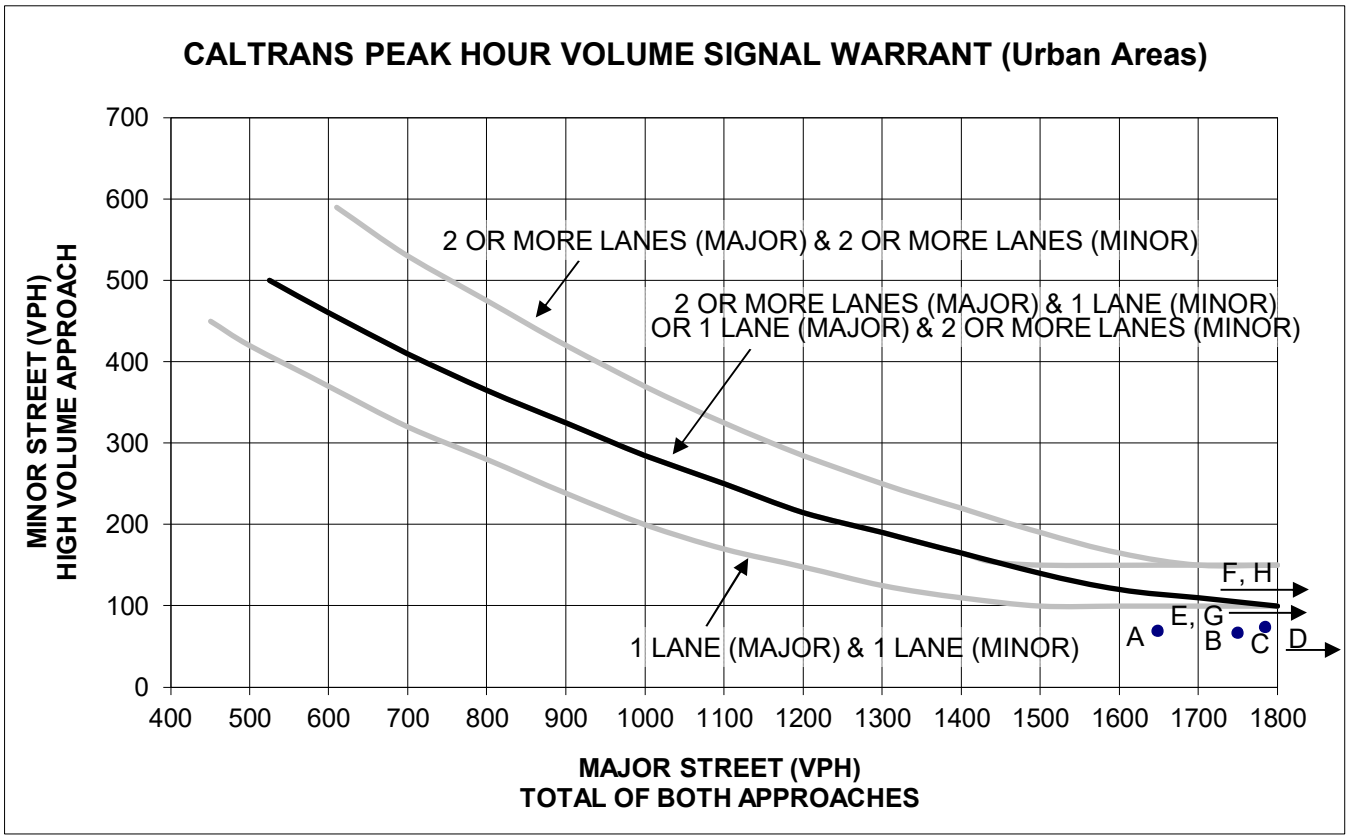
Total Entering Volumes:

Existing AM:	1,811 vehicles		
Existing PM:	1,805 vehicles		
Exist+Proj AM:	1,951 vehicles	CumNoPro AM:	2,590 vehicles
Exist+Proj PM:	2,036 vehicles	CumNoPro PM:	2,812 vehicles
		Cum+Proj AM:	2,730 vehicles
		Cum+Proj PM:	3,043 vehicles

Street	Direction	Scenario	Peak Hour	No. of Stopped Vehicles	Average Vehicle Delay (sec)	Total Vehicle Delay (sec)	Total Delay (hours)	Min. Approach Delay? 4 Veh-Hrs (One-Lane)	Min. Approach Delay? 5 Veh-Hrs (Two-Lane)	Min. Approach Vols? 100 Veh (One-Lane)	Min. Approach Vols? 150 Veh (Two-Lane)	At least 650 Veh? (Intersection)	Warrant Met?
Spicer	WB	Existing	AM	47	18.1	851	0.24	NO	N/A	NO	N/A	YES	NO
Spicer	WB	Existing	PM	3	20.2	61	0.02	NO	N/A	NO	N/A	YES	NO
Spicer	WB	Exist+Proj	AM	47	43.2	2,030	0.56	NO	N/A	NO	N/A	YES	NO
Spicer	WB	Exist+Proj	PM	3	23.4	70	0.02	NO	N/A	NO	N/A	YES	NO
Spicer	WB	CumNoPro	AM	55	12.3	677	0.19	NO	N/A	NO	N/A	YES	NO
Spicer	WB	CumNoPro	PM	10	187.4	1,874	0.52	NO	N/A	NO	N/A	YES	NO
Spicer	WB	Cum+Proj	AM	55	12.8	704	0.20	NO	N/A	NO	N/A	YES	NO
Spicer	WB	Cum+Proj	PM	10	413.7	4,137	1.15	NO	N/A	NO	N/A	YES	NO

Notes:
1. Warrant based on level of service calculations.
2. NB, SB, EB, WB = Northbound, Southbound, Eastbound, Westbound.
3. N/A = Not Applicable - this evaluation does not apply to that approach.
4. High northbound and southbound right turn volumes are removed from warrant evaluation.

Intersection #8
Abbott Street / Alameda Avenue



Scenario	Abbott St	Alameda Ave	Warrant
	North/South	East/West	Met?
A. Existing AM	1648	70	No
B. Existing PM	1749	67	No
C. Ex+Pro AM	1784	74	No
D. Ex+Pro PM	1974	73	No
E. CumNoPro AM	2385	89	No
F. CumNoPro PM	2710	108	Yes
G. Cum+Pro AM	2521	93	No
H. Cum+Pro PM	2935	114	Yes

Notes:

1. 150 VPH applies as the lower threshold volume for a minor street approach with two or more lanes and 100 VPH applies as the lower threshold volume for a minor street approaching with one lane.

2. Bold line applies to intersection geometry.

Warrant 3 (Part B) - Peak Hour Delay
#8 - Abbott Street / Alameda Avenue

Number of Approaches to Intersection: 3 approaches **Minimum Entering Vehicles: 650 vehicles**
Number of Approach Lanes: EB Alameda: 1 lanes

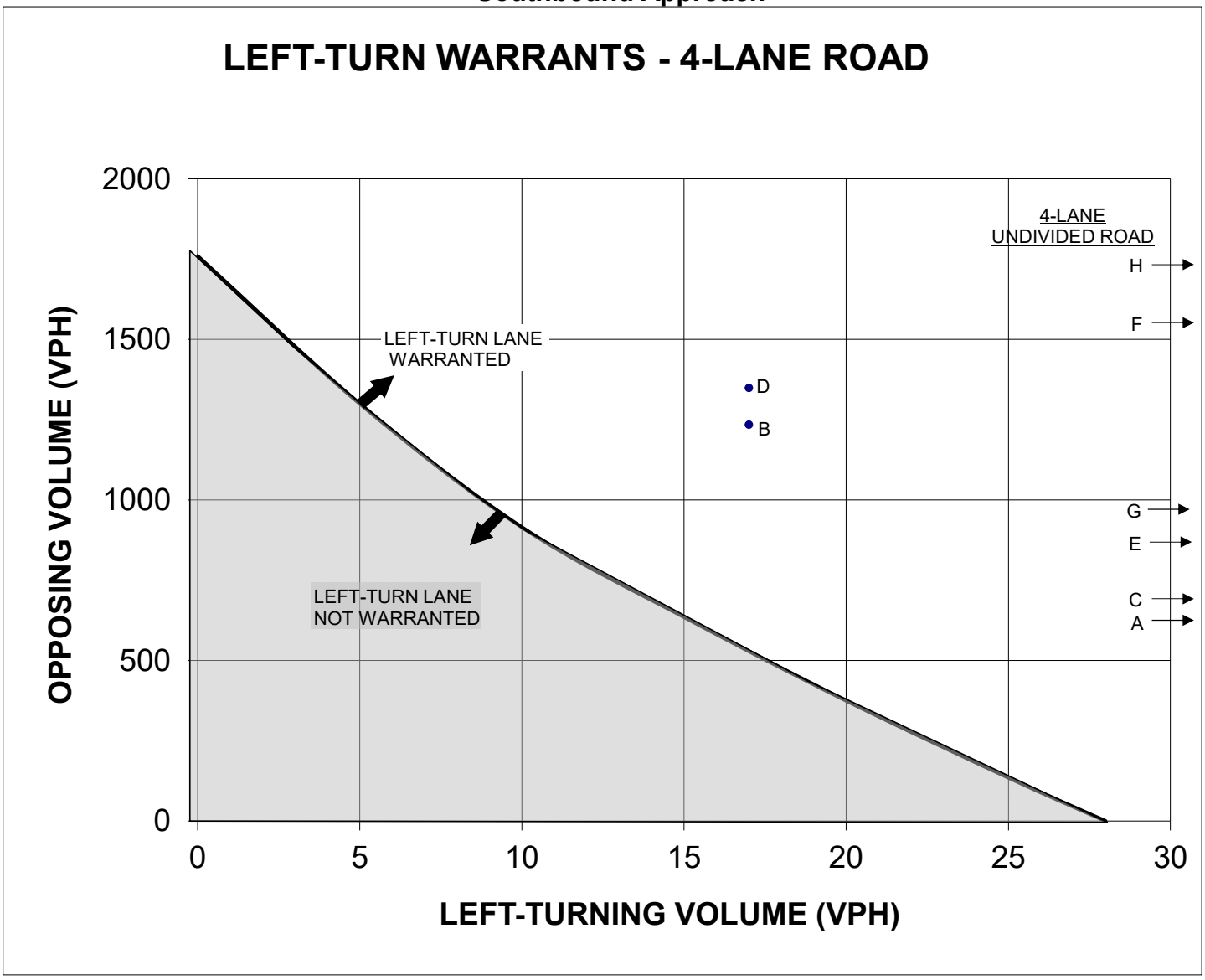
Total Entering Volumes:

Existing AM:	1,718 vehicles		
Existing PM:	1,816 vehicles		
Exist+Proj AM:	1,858 vehicles	CumNoPro AM:	2,474 vehicles
Exist+Proj PM:	2,047 vehicles	CumNoPro PM:	2,818 vehicles
		Cum+Proj AM:	2,614 vehicles
		Cum+Proj PM:	3,049 vehicles

Street	Direction	Scenario	Peak Hour	No. of Stopped Vehicles	Average Vehicle Delay (sec)	Total Vehicle Delay (sec)	Total Delay (hours)	Min. Approach Delay? 4 Veh-Hrs (One-Lane)	Min. Approach Delay? 5 Veh-Hrs (Two-Lane)	Min. Approach Vols? 100 Veh (One-Lane)	Min. Approach Vols? 150 Veh (Two-Lane)	At least 650 Veh? (Intersection)	Warrant Met?
Alameda	EB	Existing	AM	70	37.5	2,625	0.73	NO	N/A	NO	N/A	YES	NO
Alameda	EB	Existing	PM	67	44.9	3,008	0.84	NO	N/A	NO	N/A	YES	NO
Alameda	EB	Exist+Proj	AM	74	50.5	3,737	1.04	NO	N/A	NO	N/A	YES	NO
Alameda	EB	Exist+Proj	PM	73	86.9	6,344	1.76	NO	N/A	NO	N/A	YES	NO
Alameda	EB	CumNoPro	AM	89	282.6	25,151	6.99	YES	N/A	NO	N/A	YES	NO
Alameda	EB	CumNoPro	PM	108	1,955.9	211,237	58.68	YES	N/A	YES	N/A	YES	YES
Alameda	EB	Cum+Proj	AM	93	434.6	40,418	11.23	YES	N/A	NO	N/A	YES	NO
Alameda	EB	Cum+Proj	PM	114	3,000.0	342,000	95.00	YES	N/A	YES	N/A	YES	YES

Notes:
1. Warrant based on level of service calculations.
2. NB, SB, EB, WB = Northbound, Southbound, Eastbound, Westbound.
3. N/A = Not Applicable - this evaluation does not apply to that approach.
4. Delays of over 3,000 seconds reduced to exactly 3,000 seconds for this warrant evaluation.

Intersection #7
Abbott Street / Spicer Street
Southbound Approach

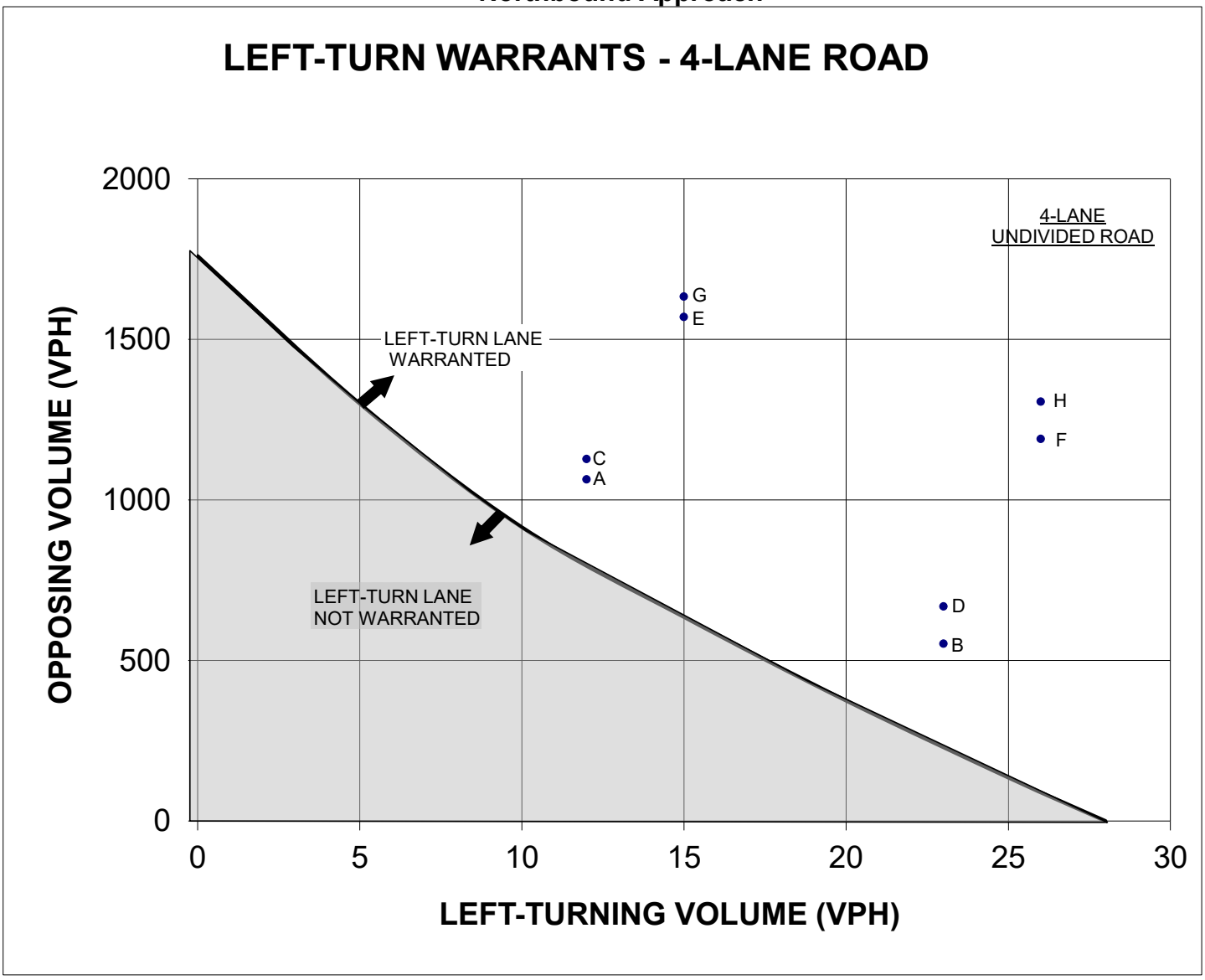


Scenario	Left-Turning	Opposing	Warrant Met?
A. Existing AM	110	601	Yes
B. Existing PM	17	1234	Yes
C. Ex+Pro AM	110	678	Yes
D. Ex+Pro PM	17	1349	Yes
E. CumNoPro AM	140	845	Yes
F. CumNoPro PM	35	1587	Yes
G. Cum+Pro AM	140	922	Yes
H. Cum+Pro PM	35	1702	Yes

Source: Transportation Research Board, "Intersection Channelization Guide", NCHRP Report 279, November, 1985

Note: When opposing volume < 400 VPH, a left-turn lane is not normally warranted unless the advancing volume in the same direction as the left-turning traffic exceeds 400 VPH.

Intersection #8
Abbott Street / Alameda Avenue
Northbound Approach



Scenario	Left-Turning	Opposing	Warrant Met?
A. Existing AM	12	1064	Yes
B. Existing PM	23	552	Yes
C. Ex+Pro AM	12	1127	Yes
D. Ex+Pro PM	23	668	Yes
E. CumNoPro AM	15	1570	Yes
F. CumNoPro PM	26	1190	Yes
G. Cum+Pro AM	15	1633	Yes
H. Cum+Pro PM	26	1306	Yes

Source: Transportation Research Board, "Intersection Channelization Guide", NCHRP Report 279, November, 1985

Note: When opposing volume < 400 VPH, a left-turn lane is not normally warranted unless the advancing volume in the same direction as the left-turning traffic exceeds 400 VPH.

Hexagon Transportation Consultants, Inc.

Memorandum

Date: December 1, 2022

To: Mr. Andrew Easterling, City of Salinas

From: Gary Black
Ling Jin

Subject: VMT Analysis for the Proposed John-Abbott Master Plan in Salinas, CA.

Hexagon Transportation Consultants, Inc. has completed a VMT Analysis for the proposed John-Abbott Master Plan in Salinas, CA. The project site is located at the southeast corner of the John Street (State Route 68, i.e., SR 68) / Abbott Street intersection in Salinas, California. The Project site covers approximately 21 acres and will be composed of residential, commercial, office, and a hotel on multiple parcels. The project proposes approximately 17,460 square feet (s.f.) of general office space, 13,440 s.f. of medical office space, 118,400 s.f. of retail space in 15 different buildings, a 111-room hotel, and 242 apartments. The project site is currently occupied by a variety of agricultural industrial developments. A preliminary VMT analysis[1] was completed for this project. Based on comments from a peer review completed by Kimley-Horn [2], a VMT analysis focused on the office and hotel components of the project is needed in order to satisfy the City of Salinas and CEQA requirements.

Office VMT Analysis

The proposed project includes approximately 17,460 s.f. of general office space. Based on ITE rates, the proposed office space would generate 189 daily trips (see Table 1), which is higher than the City's screening criteria for office development of 110 daily trips. Therefore, the proposed office component does not meet the screening criterion; a detailed VMT analysis is required to address potential significant VMT impacts. The City's VMT analysis tool was used to evaluate the office VMT.

Table 1
Trip Generation Estimates for the Proposed Office Space

					AM Peak Hour				PM Peak Hour			
Land Use	Size	Unit	Daily Rate	Daily Trips	Peak Rate	Trips In	Trips Out	Total Trips	Peak Rate	Trips In	Trips Out	Total Trips
Proposed Project [1]												
Office [1]	17.5	ksf	10.84	189	1.52	24	3	27	1.44	4	21	25

Notes:
All rates are from: Institute of Transportation Engineers, *Trip Generation, 11th Edition* (September 2021)
1. Land Use Code 710: General Office Building (average rates, expressed in trips per 1,000 s.f. gross floor area).

[1] *John/Abbott Master Plan Analysis, May 7, 2021*. Keith Higgins Traffic Engineer
[2] *DRAFT Vehicle Miles Traveled (VMT) Analysis Peer Review, March 22, 2022*. Kimley-Horn

Office Development VMT

The City's VMT Evaluation Tool estimates the existing area VMT for office uses. The proposed John-Abbott Master Plan includes multi-uses developments. Therefore, a 11% mixed-use adjustment was assumed when the VMT per employee for the proposed office uses was estimated. Table 2 shows existing county-wide average work VMT per employee, the VMT threshold (15 percent below the existing county-wide average), and existing work VMT for TAZ 1263, the TAZ in which the project site is located. The existing daily VMT per employee for office uses within the Project site's TAZ is estimated to be 7.57, which exceeds the threshold of 6.6 VMT per employee (15% below the county-wide average) (see Figure 1).

Table 2
Project VMT and VMT Impact Threshold

Land Use	Significance Criteria	Threshold[1]	Project TAZ VMT[2]
Office	Project exceeds existing county-wide average Work VMT per employee minus 15%	6.6	7.57

Notes:
[1] 15% below existing county-wide average Work VMT per employee (7.7)
[2] Home-based-work VMT per employee assumed within the TAZ (1263) where the project is located. A 11% mixed-use adjustment was assumed to acccount for the proposed multi-use developments on the project site.

Project Impact

Since the VMT generated by the proposed office development would exceed the threshold of significance for office uses in the area, the proposed office development would result in a significant transportation impact on VMT, and mitigation measures are required to reduce the VMT impact to a less-than-significant level. The City's VMT Tool estimates VMT reduction relative to a project's design features and applicable TDM measures. Figure 2 shows the estimated reduction in VMT based on the potential mitigation measures that are described below. With implementation of this mitigation program, the project's VMT could be reduced to 6.55, which is below the significant impact threshold at 6.6.

1. **Transit Stop near the Project Site:** There is a bus stop along the project frontage on John Street.
2. **Reduce Transit Headways:** The project will install queue jump lanes for northbound Abbott MST buses at the Maple Street signal.
3. **Safe and Well-Lit Access to Transit:** The project should enhance pedestrian facilities including street lighting along its frontages. The project will install a traffic signal at the intersection of Abbott Street and Maple Street. The new signal will be an enhancement to facilitate pedestrians crossing Abbott Street to access the transit stop on the Project side of Abbott Street. The project should provide internal connections within the site and to the surrounding streets.
4. **Preferential Carpool / Vanpool Parking Spaces:** The project will provide reserved carpool / vanpool spaces close to the building entrance based on the City's parking requirements.
5. **Designated Parking Spaces for Car Sharing Vehicles:** The project will provide designated parking spaces for car sharing vehicles.
6. **Implement/Improve On-Street Bike Facilities:** Bike lanes will be added along the Project's John Street and Abbott Street frontages.

7. **Bike Charging Facility:** The project will provide a secure bike charging facility on site.
8. **Bike Parking:** The project will provide the required number of bicycle parking spaces per City code.
9. **Pedestrian Network Improvements:** The project will implement pedestrian network improvements throughout and around the project site that encourages people to walk.
10. **Multimodal Wayfinding Signage:** The project will provide Multimodal Wayfinding Signage to orient users to locations of sustainable transportation.
11. **Bicycle Repair Station / Services:** The project should provide on-site bicycle repair tools and space to use them supports on-going use of bicycles for transportation.

As shown in the VMT summary report generated by the City's VMT Evaluation Tool, implementing the above listed mitigation measures would lower the project VMT to 6.55 per worker, which would reduce the project impact to a less-than-significant level (below the threshold of 6.6 VMT per worker) (see Figure 2).

VMT CALCULATOR

Kimley»Horn

SALINAS

Version 1.1 Build Date 11_17_20

PROJECT INFORMATION

Project Name	John-Abbott Master Plan
Address	1263
TAZ	1263
Project Context/Setting	Low Density Suburb

LAND USE INFORMATION

VMT Land Use Type	Service
Trip Gen Land Use Type	710 | General Office Building
	Accepted: Common Land Use
Size (KSF)	17.46
Mixed-Use Adjustment	11%

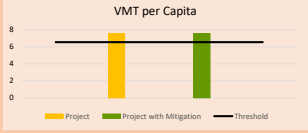
PRESUMPTIONS OF LESS THAN SIGNIFICANT IMPACT

- [ ] Affordable Housing
- [ ] Within a 1/2 mile of Major Transit Stop
- [ ] Local Retail (<50,000 Sq Ft)
- [ ] Less than 110 Trips per Day

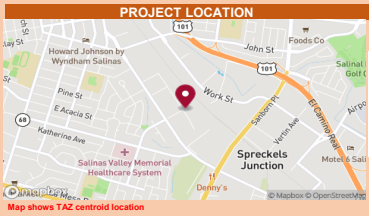
VMT OUTPUT

	PROJECT	REDUCTIONS	PROJ. WITH MITIGATION
HBW VMT/Emp	7.57	0.00	7.57
Daily Trips	172	0	172

Average (HBW VMT/Emp)	7.7
Threshold (15% below Average)	6.6
Significant Impact?	Yes



PROJECT LOCATION



Map shows TAZ centroid location

TRANSPORTATION DEMAND MANAGEMENT (TDM) STRATEGIES

Scroll down for all TDM Strategies

PARKING STRATEGIES

#	TDM Measure	Selected Max Value	Input	Description
1	Reduce Parking Supply	4%	0	City code parking provision for project site (parking spaces)
			0	Actual parking provision for project site (parking spaces)
2	Unbundle Parking	5%	0	monthly parking cost ($) for project site
3	Parking Cash-out	4%	0%	percent of employees eligible
4	Residential Area Parking Permits	0.25%	No	Yes/No
5	Price Workplace Parking	4%	0%	percent of employees eligible
6	Parking Management Strategies	1%	No	Yes/No

TRANSIT STRATEGIES

#	TDM Measure	Selected Max Value	Input	Description
7	Reduce Transit Headways	2%	No	Yes/No
8	Transit Rerouting	2%	No	Yes/No
9	Transit Stops near Project Site	2%	No	Yes/No
10	Safe and Well-Lit Access to Transit	1%	No	Yes/No
11	Transit Subsidies	4%	0%	percent of employees and residents eligible
			$0.00	amount ($) of transit subsidy per passenger (daily equivalent) ($0.75, $1.49, $2.98 or $5.96. Select highest value if unlimited ride passes are provided.)

COMMUNICATION & INFORMATION STRATEGIES

#	TDM Measure	Selected Max Value	Input	Description
12	Voluntary Travel Behavior Change Program	2%	0%	percent of employees and residents participating
13	Promotions & Marketing	2%	0%	percent of employees and residents participating
14	Multimodal Wayfinding Signage	1%	No	Yes/No

COMMUTING STRATEGIES

#	TDM Measure	Selected Max Value	Input	Description
15	Employer Sponsored Vanpool or Shuttle	2%	None	degree of implementation - High (>30 vans) - Medium (10-30 vans) - Low (<10 vans)
			None	employer size - Large (>500 employees) - Medium (100-500 employees) - Low (<100 employees)
			0%	percent of employees eligible
16	Preferential Carpool / Vanpool Parking Spaces	2%	No	Yes/No
17	On-site Carts or Shuttles	1%	No	Yes/No
18	On-site Childcare	2%	No	Yes/No

SHARED MOBILITY STRATEGIES

#	TDM Measure	Selected Max Value	Input	Description
19	Ride-Share Program	5%	0%	percent of employees eligible
20	Car Share	1%	None	project setting - urban + comprehensive transit - suburban + commuter rail - all other settings
21	Designated Parking Spaces for Car Share Vehicles	1%	No	Yes/No
22	School Carpool Program	15%	None	level of implementation

BICYCLE INFRASTRUCTURE STRATEGIES

#	TDM Measure	Selected Max Value	Input	Description
23	Bike Charging Facility	1.0%	No	Yes/No
24	Implement/Improve On-street Bicycle Facility	0.50%	No	Yes/No
25	Include Bike Parking Per City Code	0.50%	No	Yes/No
26	Include Secure Bike Parking and Showers	0.50%	No	Yes/No
27	Bicycle Repair Station / Services	0.50%	No	Yes/No

NEIGHBORHOOD ENHANCEMENT STRATEGIES

#	TDM Measure	Selected Max Value	Input	Description
28	Traffic Calming Improvements	1%	0%	percent of streets within project with traffic calming improvements (25%, 50%, 75%, or 100%)
			0%	percent of intersections within project with traffic calming improvements (25%, 50%, 75%, or 100%)
29	Pedestrian Network Improvements	2%	None	selection: within project and connecting off-site, within project only
30	Healthy Food Retail in Underserved Area	2%	None	selection: within project and connecting off-site, within project only

MISCELLANEOUS STRATEGIES

#	TDM Measure	Selected Max Value	Input	Description
31	Virtual Care Strategies for Hospitals	6%	No	Yes/No
32	On-site Affordable Housing	20%	No	Yes/No

LAND USE STRATEGIES

#	TDM Measure	Selected Max Value	Input	Description
33	Transit Oriented Development	15%	No	Yes/No
34	Destination Development (Residential Close to work)	2.5%	No	Yes/No
35	Transit Service Expansion	2.5%	No	Yes/No
36	Higher Density	4%	No	Yes/No
37	Open Space	1%	No	Yes/No
38	Street grid	4%	No	Yes/No

Figure 1
Salinas VMT Calculator Summary Report - Proposed Office without Mitigations

VMT CALCULATOR

Kimley»Horn

SALINAS

Version 1.1 Build Date 11_17_20

PROJECT INFORMATION

Project Name	John-Abbott Master Plan
Address	1263
TAZ	1263
Project Context/Setting	Low Density Suburb

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VMT Land Use Type	Service
Trip Gen Land Use Type	710 | General Office Building
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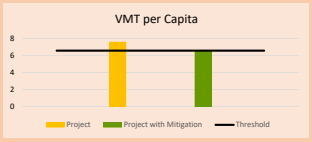
PRESUMPTIONS OF LESS THAN SIGNIFICANT IMPACT

- [ ] Affordable Housing
- [ ] Within a 1/2 mile of Major Transit Stop
- [ ] Local Retail (<50,000 Sq Ft)
- [ ] Less than 110 Trips per Day

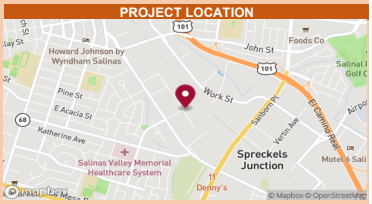
VMT OUTPUT

	PROJECT	REDUCTIONS	PROJ. WITH MITIGATION
HBW VMT/Emp	7.57	1.02	6.55
Daily Trips	172	23	149

Average (HBW VMT/Emp)	7.7
Threshold (15% below Average)	6.6
Significant Impact?	No



PROJECT LOCATION



Map shows TAZ centroid location

TRANSPORTATION DEMAND MANAGEMENT (TDM) STRATEGIES

Scroll down for all TDM Strategies

PARKING STRATEGIES

#	TDM Measure	Selected Max Value	Input	Description
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			0	Actual parking provision for project site (parking spaces)
2	Unbundle Parking	5%	0	monthly parking cost ($) for project site
3	Parking Cash-out	4%	0%	percent of employees eligible
4	Residential Area Parking Permits	0.25%	No	Yes/No
5	Price Workplace Parking	4%	0%	percent of employees eligible
6	Parking Management Strategies	1%	No	Yes/No

TRANSIT STRATEGIES

#	TDM Measure	Selected Max Value	Input	Description
7	Reduce Transit Headways	2%	Yes	Yes/No
8	Transit Rerouting	2%	No	Yes/No
9	Transit Stops near Project Site	2%	Yes	Yes/No
10	Safe and Well-Lit Access to Transit	1%	Yes	Yes/No
11	Transit Subsidies	4%	0%	percent of employees and residents eligible
			$0.00	amount ($) of transit subsidy per passenger (daily equivalent) ($0.75, $1.49, $2.98 or $5.96. Select highest value if unlimited ride passes are provided.)

COMMUNICATION & INFORMATION STRATEGIES

#	TDM Measure	Selected Max Value	Input	Description
12	Voluntary Travel Behavior Change Program	2%	0%	percent of employees and residents participating
13	Promotions & Marketing	2%	0%	percent of employees and residents participating
14	Multimodal Wayfinding Signage	1%	Yes	Yes/No

COMMUTING STRATEGIES

#	TDM Measure	Selected Max Value	Input	Description
15	Employer Sponsored Vanpool or Shuttle	2%	None	degree of implementation - High (>30 vans) - Medium (10-30 vans) - Low (<10 vans)
			None	employer size - Large (>500 employees) - Medium (100-500 employees) - Low (<100 employees)
			0%	percent of employees eligible
16	Preferential Carpool / Vanpool Parking Spaces	2%	Yes	Yes/No
17	On-site Carts or Shuttles	1%	No	Yes/No
18	On-site Childcare	2%	No	Yes/No

SHARED MOBILITY STRATEGIES

#	TDM Measure	Selected Max Value	Input	Description
19	Ride-Share Program	5%	0%	percent of employees eligible
20	Car Share	1%	None	project setting - urban + comprehensive transit - suburban + commuter rail - all other settings
21	Designated Parking Spaces for Car Share Vehicles	1%	Yes	Yes/No
22	School Carpool Program	15%	None	level of implementation

BICYCLE INFRASTRUCTURE STRATEGIES

#	TDM Measure	Selected Max Value	Input	Description
23	Bike Charging Facility	1.0%	Yes	Yes/No
24	Implement/Improve On-street Bicycle Facility	0.50%	Yes	Yes/No
25	Include Bike Parking Per City Code	0.50%	Yes	Yes/No
26	Include Secure Bike Parking and Showers	0.50%	No	Yes/No
27	Bicycle Repair Station / Services	0.50%	Yes	Yes/No

NEIGHBORHOOD ENHANCEMENT STRATEGIES

#	TDM Measure	Selected Max Value	Input	Description
28	Traffic Calming Improvements	1%	0%	percent of streets within project with traffic calming improvements (25%, 50%, 75%, or 100%)
			0%	percent of intersections within project with traffic calming improvements (25%, 50%, 75%, or 100%)
29	Pedestrian Network Improvements	2%	ct and Connec	selection: within project and connecting off-site, within project only
30	Healthy Food Retail in Underserved Area	2%	None	selection: within project and connecting off-site, within project only

MISCELLANEOUS STRATEGIES

#	TDM Measure	Selected Max Value	Input	Description
31	Virtual Care Strategies for Hospitals	6%	No	Yes/No
32	On-site Affordable Housing	20%	No	Yes/No

LAND USE STRATEGIES

#	TDM Measure	Selected Max Value	Input	Description
33	Transit Oriented Development	15%	No	Yes/No
34	Destination Development (Residential Close to work)	2.5%	No	Yes/No
35	Transit Service Expansion	2.5%	No	Yes/No
36	Higher Density	4%	No	Yes/No
37	Open Space	1%	No	Yes/No
38	Street grid	4%	No	Yes/No

Figure 2
Salinas VMT Calculator Summary Report - Proposed Office with Mitigations

Hotel VMT Analysis

The proposed project also includes a 111-room hotel. The proposed hotel would not have conference facilities other than small meeting rooms and would only provide meals to guests. Thus, the hotel would not be a regional draw. Hotels are not explicitly included in the City of Salinas' VMT policy nor in the OPR VMT guidelines.

The VMT analysis for the proposed hotel can be considered equivalent to a retail use. This is a reasonable approach to VMT analysis since hotels exhibit similar vehicle mode share characteristics, travel patterns, and trip length characteristics to that of local retail uses (e.g., both uses typically serve nearby local businesses and residents). Note also that since there are over 10 existing hotels within a two-mile radius of the project site, it is expected that the hotel project would generate mostly localized traffic. Based on trip generation estimates, the proposed 111-room hotel would generate daily trips equivalent to 9,000 square feet of retail space (see Table 3). This small amount of equivalent retail space meets the screening criterion set forth in the *City's VMT Guidelines* (Exhibit 2 – Screening Criteria), which is defined as local-serving retail of 50,000 s.f. or less. Therefore, the proposed hotel component would cause a less-than-significant VMT impact.

Table 3
Conversion of the Proposed Hotel to Equivalent Retail Space

Land Use	Size	Daily	
		Trip Rate	Trips
Proposed Land Use			
Hotel[1]	111 rooms	4.40	488
Equivalent Land Use			
Retail[2]	9,000 s.f.	54.45	488

Source: ITE *Trip Generation Manual* , 11th Edition, 2021.
s.f. = square feet
Notes:
1. Average daily trip rate (in trips per student) for "All Suites Hotel " (ITE Land Use 311) is used.
2. Average daily trip rate (in trips per 1,000 s.f.) for "Strip Retail Plaza" (ITE Land Use 822) is used.

VMT Analysis for Other Exempted Land Uses

The City of Salina's VMT Guidelines include screening criteria for projects that are expected to result in a less-than-significant VMT impact based on the project description, characteristics and/or location. The screening criteria set forth in the City's *VMT Guidelines* (Exhibit 2 – Screening Criteria) for retail, medical office, and residential uses are described below.

Screening Criterion for Local-Serving Retail

Presumed to cause a less-than-significant impact:

- No single store on-site exceeds 50,000 square feet; and
- Project is local-serving as determined by the City of Salinas

Unless

- The nature of the service is regionally focused as determined by the City of Salinas

The project is proposing to construct 118,400 s.f. of local-serving retail spaces in 15 different buildings with maximum 13,000 s.f. in one site. Therefore, the proposed retail component would meet the screening criterion and would cause a less-than-significant VMT impact.

Screening Criterion for Local Essential Service

Presumed to cause a less-than-significant impact:

- Building is less than 50,000 square feet: and

Land Use is:

- Day care center; or
- Public K-12 School; or
- Police or Fire facility; or
- Medical/Dental office building; or
- Government offices (in-person services such as post office, library, and utilities)

Unless

- The nature of the service is regionally focused as determined by the City of Salinas

The project is proposing to construct 13,440 s.f. of medical office space, which is categorized as a local essential service, and the size is less than the 50,000 square-foot threshold. Therefore, the proposed medical office component would meet the screening criterion and would cause a less-than-significant VMT impact.

Screening Criterion for Residential

Based on the City's VMT Guidelines, the VMT impact threshold for residential development is 9.7, which is defined as 15% below existing county-wide average VMT per capita. As specified in the City's VMT guidelines, residential developments should be screened for non-significant transportation impact based on the following criteria:

Map-Based Screening: This method eliminates the need for complex analyses, by allowing existing VMT data to serve as a basis for the screening smaller developments. Note that screening is limited to residential and office projects utilizing the maps.

Presumed to cause a less-than-significant impact:

- Area of development is under threshold as shown on screening map as allowed by City of Salinas

Unless

- Represent significant growth as to substantially change regional travel patterns as determined by the City of Salinas

The Project is located in TAZ 1263, which falls in an area indicated on the "Residential VMT per Capita Map" (see Figure 3) of the Salinas VMT Guidelines to have residential VMT per capita that is at or below the County Threshold. The Project's Residential component would therefore have a less-than-significant VMT impact.

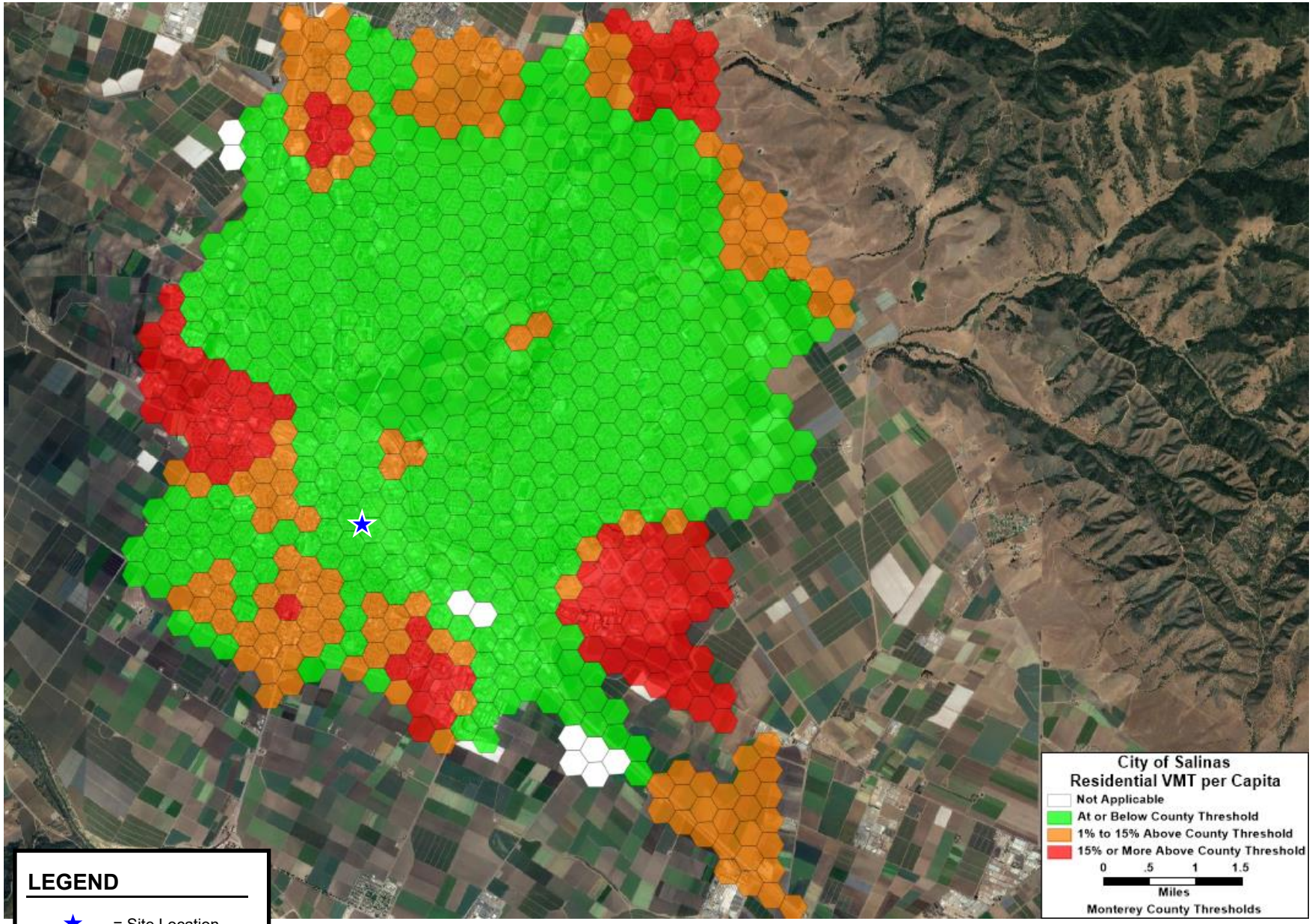


Figure 3
Residential VMT per Capita Map

Kimley»Horn

Memorandum

To: Andrew Easterling, P.E., T.E., PTOE, RSP_1

From: Chris Gregerson, P.E., T.E., PTOE, PTP
Frederik Venter, P.E.

Re: **Vehicle Miles Traveled (VMT) Analysis Peer Review**
John Abbott Master Plan, City of Salinas

Date: August 1, 2022

This memorandum documents a peer review completed by Kimley-Horn of an SB 743 analysis completed for the proposed John Abbot Master Plan development in Salinas, CA. The proposed development is expected to consist of several land uses included general office, hotel, medical-office, residential, restaurants, and retail. With the passage of SB 743, Vehicle Miles Travelled (VMT) has become an important indicator for determining if a new development will result in a "significant transportation impact" under the California Environmental Quality Act (CEQA). This memorandum summarizes the peer review completed of the VMT analysis and resultant findings for the proposed development.

Peer Review Comments

A. Office VMT Analysis

- The memo states that due to the office component of the project generating 189 daily trips, a VMT analysis is required as it exceeds the City's 110 daily trip threshold. This statement is correct.
- The memo concludes that the project is located in TAZ 1263 which has a VMT per employee of 7.57, which exceeds the City's threshold of 6.6 resulting in a significant impact. This is correct.

B. Project Impact

- The document lists nine TDM measures stating that the VMT can be reduced to 6.58, which is below the threshold of 6.6 to reduce the project's impact to less than significant for the office land use. This is based on using the City's VMT estimator tool to determine the overall VMT reductions to reduce the project's VMT per employee for the office use.
- The 'Transit Stop near the Project Site' mitigation is taken by stating that there is an existing bus stop along the project frontage. However, this would already be accounted for in the model and therefore cannot be used as a mitigation measure. This mitigation measure requires the construction of a new bus stop along the project frontage to reduce the number of vehicle trips included in the initial calculation for the project's VMT per employee.
- As noted by the City, the project could further reduce its VMT per employee by 2-percent by taking the 'Reduce Transit Headways' mitigation measure due to the MST transit queue jump. In addition, Figure 2 shows a 1-percent reduction for the 'Designated Parking Spaces for Car Share Vehicles' mitigation measure, but this is not listed in the memo as a reduction. This mitigation measure should be listed with the others in the body of the report if it is required for the project to meet the City's VMT per employee threshold.
- To successfully implement these mitigation measures, a Mitigation and Monitoring Reporting Program (MMRP) is required to prove that the project is achieving the VMT reductions used in this report. The MMRP will need to produce annual reports that are submitted to the City, though the reporting period can be shorter as specified by the City, proving implementation of the listed

mitigation measures. The contents of this report shall be specified by the City and agreed to by the project applicant, but should address all mitigation measures taken credit for by the project.

C. Hotel VMT Analysis

- The document states that the hotel component of the proposed project would not be a regional draw due to the design of the hotel. This is correct.
- The document states that the proposed hotel can be considered equivalent to a retail use. While correct, this statement should be expanded to discuss that the equivalency is due to how it impacts existing trips on the roadway network rather than its function as a land use. Adding a hotel with basic functions as the project intends impacts existing trips on the network for visitors traveling to the area without a hotel preference rather than traveling to the hotel as their end destination. This is similar to a new retail or food establishment that patrons are traveling to because the new establishment allows their trip to be shorter as they would otherwise travel to a comparable establishment further away if the new establishment was not constructed. This explanation should be used an expanded upon in the document rather than attempting to use trip generation to explain the phenomenon as the document currently states. The overall conclusion that the hotel component of the project can be screened out would still remain.

D. VMT Analysis for Other Exempted Land Uses

- The document correctly states that all retail land uses can be screened out and be presumed to result in a less than significant impact as each retail building has a maximum size of 13,000 square-feet, well below the 50,000 square-foot threshold.
- The document correctly states that the 13,440 square-foot medical office space component of the project can be screened out and be presumed to result in a less than significant impact as it is included in the City's screening criteria as a local essential service less than 50,000 square-feet in size.
- The document correctly states that the project's residential component can be screened out and be presumed to result in a less than significant impact due to map-based screening. As shown in Figure 3, the project is located in an area that is "At or Below County Threshold" and therefore if a quantitative analysis were to be performed, it would determine that the project would result in a less than significant impact.