RESOLUTION NO. 20-8824

A RESOLUTION OF THE CITY OF SANTA CLARA, CALIFORNIA ADOPTING A FIRST ADDENDUM TO THE ENVIRONMENTAL IMPACT REPORT FOR THE RELATED SANTA CLARA PROJECT IN CONNECTION WITH THE APPROVAL OF A DEVELOPMENT AREA PLAN FOR PHASE ONE OF THE PROJECT SITUATED ON APPROXIMATELY 14.3 ACRES OF LAND LOCATED AT 5155 STARS AND STRIPES DRIVE (APNs 104-03-036 (portion), 104-03-037 (portion), 104-03-038 AND 104-03-039)

SCH#2014072078
CEQ2014-01180 (EIR)

BE IT RESOLVED BY THE CITY OF SANTA CLARA AS FOLLOWS:

WHEREAS, pursuant to the provisions of the California Environmental Quality Act (Cal. Pub. Res. Code § 21000 et seq.) ("CEQA") together with the State CEQA Guidelines (14 CCR § 15000 et seq.) ("CEQA Guidelines"), the City of Santa Clara prepared a Final Environmental Impact Report ("Final EIR") for the proposed construction by Related Santa Clara, LLC (the "Applicant") of a new multi-phased, mixed-use development known as the Related Santa Clara Project (the "Project");

WHEREAS, on June 28, 2016, the City Council adopted Resolution No. 16-8337, certifying the Final EIR and adopting CEQA findings and a Mitigation Monitoring and Reporting Program ("MMRP") in accordance with CEQA and the CEQA Guidelines;

WHEREAS, on June 28, 2016, the Santa Clara City Council approved a number of Project entitlements, including Resolution No. 16-8339, which rezoned the Project site to the PD-MC (Planned Development-Master Community) zoning district;

WHEREAS, pursuant to Resolution No. 16-8339, buildout of the Project is governed by a Master Community Plan (the "MCP") dated April 5, 2017, which anticipates up to eight potential phases of development, each of which would be governed by a "Development Area Plan," or "DAP";

WHEREAS, the Project analyzed in the Final EIR and approved via the MCP consists of up to 9.16 million gross square feet of office buildings, retail and entertainment facilities, residential units, hotel rooms, surface and structured parking facilities, new open space and roads, landscaping and tree replacement, and new/upgraded/expanded infrastructure and utilities;

WHEREAS, after certification of the Final EIR, on November 4, 2019, in conformance with the Development Area Plans and Architectural Review Submittal and Approval Procedures (the "DAP Procedures") attached as Appendix C to the MCP, the Applicant filed an application for City Council approval of a Development Area Plan for Phase One of the Project ("DAP 1 Application");

WHEREAS, the DAP 1 Application proposes certain modifications to the Project analyzed in the Final EIR and approved via the MCP, consisting of minor changes to the boundaries of Phase One of the Project, a minor increase in the maximum square footage permitted within Phase One of the Project, and a small change to the use mix permitted within Phase One of the Project;

WHEREAS, in order to ensure that all potential environmental impacts of the Project (as modified by the DAP 1 Application) were thoroughly analyzed, the City caused an addendum to the Final EIR (the "Addendum") to be prepared pursuant to CEQA Guidelines 15164, which Addendum is attached hereto as Attachment 1 and incorporated herein by this reference;

WHEREAS, the Addendum provides analysis and cites substantial evidence that supports the conclusion that no subsequent environmental review is required because the criteria of CEQA Section 21166 and CEQA Guidelines Section 15162 requiring additional environmental review under CEQA have not been met;

WHEREAS, Section 2.7.2.4 of the DAP Procedures provides for the review and recommendation of the City's Planning Commission of each DAP application before action is taken by the City Council;

WHEREAS, on February 20, 2020, the Planning Commission held a duly noticed public hearing to consider the Addendum and the DAP 1 Application, at which time interested persons were given an opportunity to give testimony and provide evidence in support of and in opposition to the proposed DAP 1;

WHEREAS, following the close of the public hearing and deliberations among the Planning Commissioners, on February 20, 2020 the Planning Commission adopted Resolution No. 20-001 making findings that the criteria of CEQA Section 21166 and CEQA Guidelines Section 15162 that would have required additional environmental review under CEQA have not been met and recommending that the City Council adopt the Addendum prior to acting on the DAP 1 Application; and,

WHEREAS, on March 24, 2020, the City Council held a duly noticed public hearing to consider DAP 1, at which time interested persons were given an opportunity to give testimony and provide evidence in support of and in opposition to the proposed DAP 1.

NOW THEREFORE, BE IT FURTHER RESOLVED BY THE CITY OF SANTA CLARA AS FOLLOWS:

1. Recitals. That the City Council hereby finds that the above Recitals are true and correct and by this reference makes them a part hereof.

2. Findings. That the City Council has exercised its independent judgement and reviewed and considered the Final EIR, together with the Addendum thereto, and has determined that the criteria of CEQA Section 21166 and CEQA Guidelines Section 15162 that would have required additional environmental review under CEQA have not been met. Specifically, and without limitation, substantial evidence exists to support the conclusion that no supplemental or subsequent environmental review is required in connection with the City's consideration of the DAP 1 Application because (1) the Project (as modified by the DAP 1 Application) would not result in any new or more severe significant impacts than those studied in the EIR, (2) there exists no new information of substantial importance that would result in any new or more severe

significant impacts as compared to those studied in the EIR; (3) there are no substantial changes in circumstances that would result in any new or more severe significant impacts than those identified in the EIR; and (4) there is no feasible mitigation measure or alternative that is considerably different from others previously analyzed that has not been adopted.

3. Approval. That the City Council hereby adopts the Addendum.

4. Effective date. This resolution shall become effective immediately.

I HEREBY CERTIFY THE FOREGOING TO BE A TRUE COPY OF A RESOLUTION PASSED AND ADOPTED BY THE CITY OF SANTA CLARA, CALIFORNIA, AT A SPECIAL MEETING THEREOF HELD ON THE 24TH DAY OF MARCH, 2020, BY THE FOLLOWING VOTE:

AYES:	COUNCILORS:	Davis, Hardy, O'Neill' and Watanabe, and Mayor Gillmor
NOES:	COUNCILORS:	Chahal
ABSENT:	COUNCILORS:	None
ABSTAINED:	COUNCILORS:	None

ATTEST: _____
NORA PIMENTEL, MMC
ASSISTANT CITY CLERK
CITY OF SANTA CLARA

Attachment Incorporated by Reference:
1. CEQA Addendum

RELATED SANTA CLARA PHASE 1 DAP PROJECT

CEQA Addendum

Prepared for
City of Santa Clara

February 2020

ESA

RELATED SANTA CLARA PHASE 1 DAP PROJECT

CEQA Addendum

Prepared for
City of Santa Clara

February 2020

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RELATED SANTA CLARA PHASE 1 DAP PROJECT

CEQA Addendum

1 General Project Information

1.1 Project Title

Related Santa Clara DAP 1, Phase 1, Parcel 5

1.2 Lead Agency Name and Address

City of Santa Clara
Planning Division
1500 Warburton Avenue
Santa Clara, CA 95050

1.3 Planning/CEQA File Number

PLN2019-14186 (PLN2014-10554/CEQ2014-01180/SCH2014072078)

1.4 Contact Person and Phone Number

Jeffery Schwilk, Associate Planner
Planning Division
jschwilk@santaclaraca.gov
(408) 615-2456

1.5 Project Location

Phase 1 (generally Parcel 5) of the Related Santa Clara Project site (generally north of Tasman Drive up to and including Stars and Stripes Drive, east of Lafayette Street, and west of the City Parking Garage and San Tomas Aquino Creek)
Assessor's Parcel Nos. 104-03-036 (portion), 104-03-037 (portion), 104-03-038 and 104-03-039

1.6 Project Applicant's Name and Address

Related Santa Clara
5201 Great America Parkway, Suite 532
Santa Clara, CA 95054

1.7 Existing General Plan Designations

Urban Center/Entertainment District

1.8 Existing Zoning

Planned Development - Master Community (PD-MC)

1.9 Requested Permits

- Planning Commission consideration of and City Council approval of a Phase 1—Development Area Plan.
- Community Development Director approval of the Architectural Materials component of the Phase 1 DAP, as allowed pursuant to the MCP zoning.
- City administrative approvals for such items as demolition permits, grading permits, building permits, on- and off-site work permits (e.g., public right-of-way improvements, and tie backs), encroachment permits, utilities and stormwater protection measures.
- Various implementation agreements between the applicant and the City, as needed.
- Bay Area Air Quality Management District (BAAQMD) – Issuance of permits for hazardous abatement activities, if any.
- Regional Water Quality Control Board (RWQCB) – Acceptance of a Notice of Intent to obtain coverage under the General Construction Activity Storm Water Permit, and Notice of Termination after construction is complete.

2 Background

2.1 Planning Context

The proposed Related Santa Clara Phase 1 Development Area Plan (DAP) Project (DAP 1 Project) site is located generally on Parcel 5 of the City Place Santa Clara Project, for which the City of Santa Clara certified an Environmental Impact Report (EIR) on June 28, 2016, pursuant to the California Environmental Quality Act (CEQA) (see Figures 1 and 2) and approved a General Plan amendment, zoning amendments (including a Master Community Plan) and other entitlements.

The City Place Santa Clara Project (City Place Project or Project) includes conversion of 240-acres of City-owned property into a multi-phase, mixed-use development.[1] The Project analyzed in the EIR and approved at the Master Community Plan level entails demolition of the existing buildings and on-site features and establishment of a new mixed-use City neighborhood with a defined center to serve as a focal point for a pedestrian-oriented "live, work, and play" environment. The Project, as analyzed in the EIR, proposed to divide the Project site into five development parcels: Parcel 1 (36.8 acres), Parcel 2 (60.9 acres), Parcel 3 (34.9 acres), Parcel 4 (86.6 acres), and Parcel 5 (8 acres). The EIR also analyzed four variants to vehicular access including the "New Tasman Drive Intersection Variant 2" which proposed to relocate Stars and Stripes Drive 100 feet to the north and increase the developable acreage in Phase 1.

The Project was approved to include up to 9.16 million gross square feet (gsf) of office buildings, retail and entertainment facilities, residential units, and hotel rooms; it will also include surface and structured parking facilities. In addition, the Project will include: large, shared open spaces throughout the project site; new pedestrian and vehicular entrances and roadway networks; new roads; new, upgraded, and expanded infrastructure; and new utilities, with improvements to off-site connections. In addition, the Project will include construction of a fire station to replace existing Santa Clara Fire Station 10 (Fire Station 10), which would be demolished to accommodate the Project. Because the majority of the Project is located over the former Santa Clara All-Purpose Landfill (Landfill), it includes the following additional activities: constructing foundation systems that minimize disturbance to, and preserve the integrity of, Landfill components; relocating, upgrading, and/or replacing, as necessary, the existing groundwater monitoring network, leachate collection system, and landfill gas collection and removal systems; and conducting associated environmental remediation activities.

The EIR analyzed two conceptual land use schemes (Scheme A and Scheme B) for the project site to capture the range of possible land uses that could be developed. Both schemes included a building area of up to 9.16 million gsf. Under Scheme A, the uses for Parcels 1, 2, and 3 would be primarily office uses, and Parcels 4 and 5 would be devoted to mixed-use development, consisting of commercial uses, including retail, food and beverage, and entertainment uses along with offices, a hotel, and multi-family residential uses (up to 1,680 units). Scheme B proposed the same development scheme and building area at Parcels 1 and 3 as Scheme A. At Parcel 2, a retail center with offices was proposed rather than only the office use proposed under Scheme A. At

[1] Although the City Place Santa Clara Project is now referred to as "Related Santa Clara," this addendum uses "City Place Santa Clara" as that is consistent with the naming in the CEQA documents and the Master Community Plan.

Parcel 4, no residential use was proposed, instead office development equal in area to the residential development in Scheme A was included, along with the same amount of space for the proposed hotel, retail uses, entertainment venues, and open space areas. Development at Parcel 5 was proposed to include the same amount of residential, hotel, retail, and office uses under both schemes.

As a part of Project approval, on June 28, 2016, the City adopted a Master Community Plan (MCP) for the Project site that became a part of the Zoning Map of the City and that anticipated up to eight potential phases of development, each of which would be governed by a DAP. The MCP is consistent with the Project analyzed in the EIR and future development on the site is required to conform with the MCP.

2.2 CEQA Context

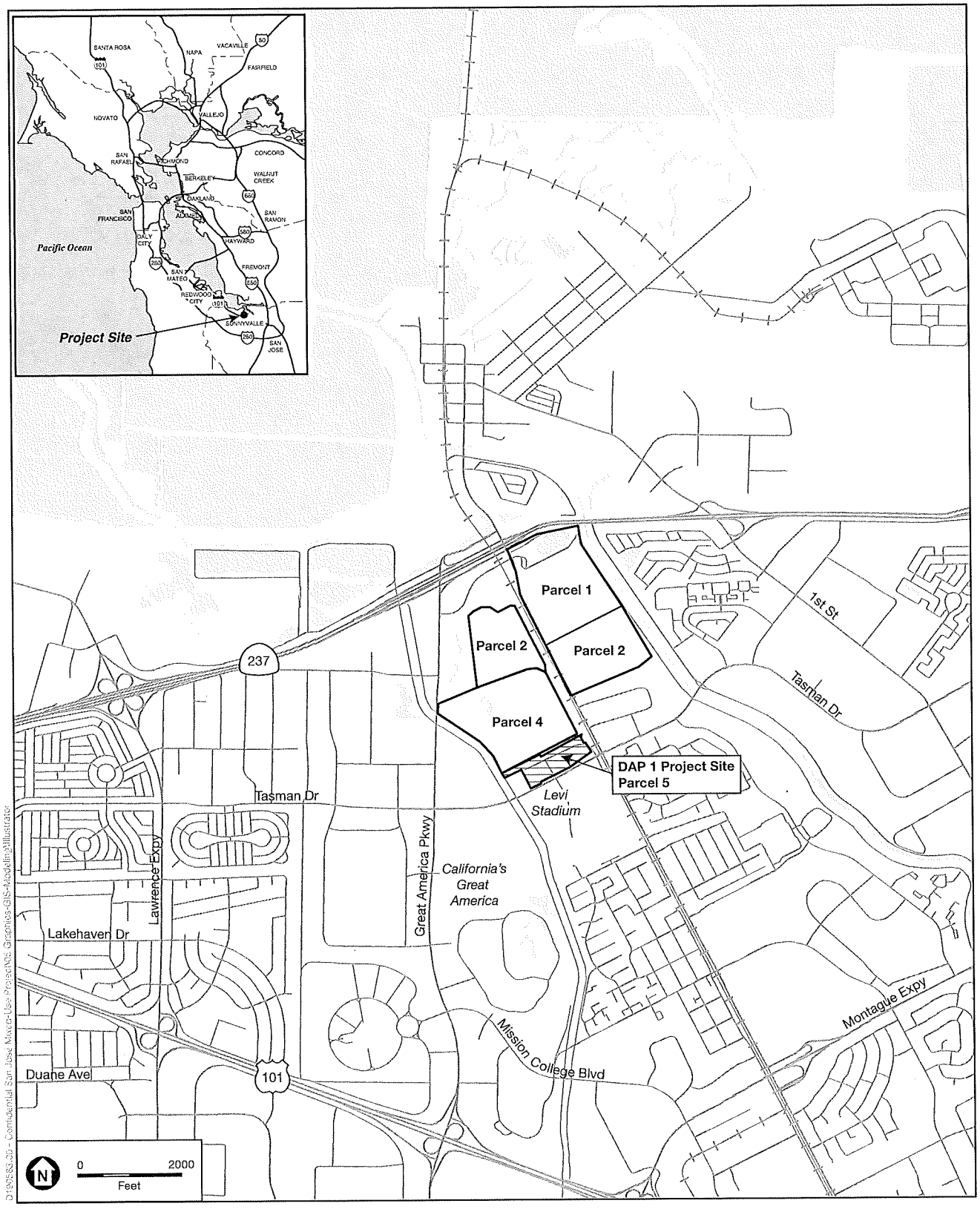
The City Place Santa Clara Project EIR was certified June 28, 2016. This EIR is hereby incorporated by reference and can be obtained from the City of Santa Clara Planning Division at 1500 Warburton Avenue, Santa Clara, California, 95050, and on the City of Santa Clara Planning Division website at http://www.santaclaraca.gov/Home/Components/BusinessDirectory/BusinessDirectory/135/3650.

As described above, the EIR analyzed two conceptual land use schemes and four access point variants for the Project site to capture the range of possible land uses that could be developed. This approach allowed for some flexibility in location, amount, and type of future development in terms of the precise mix of newly developed land uses and their location within the Project site. Therefore, as long as the overall project site buildout stays within the impact envelope analyzed in the EIR and the developable area does not change more than 20 percent in a single phase, individual DAPs need not adhere to the specific parcel-by-parcel assumptions in the Project.

The EIR anticipated that the environmental review of specific development projects, or DAPs, consistent with the Project would be streamlined in accordance with CEQA. The DAP 1 Project is included in the Project's level of development proposed for the site and is within the broader development assumptions and thus within the impact envelope of the Project analyzed in the EIR. This CEQA Analysis is an addendum to the EIR, which provides the analysis evaluating the potential significant environmental impacts that could result from the DAP 1 Project when compared with the Project analyzed in the EIR in compliance with CEQA Guidelines Section 15164.

2.2.1 City Place EIR – Environmental Effects Summary

The EIR determined that the City Place Project would result in **no impacts** for aesthetics (adversely affect scenic vistas); biological resources (plant species, habitat conservation plan); cultural resources (changes to historic resources); geology and soils (alternative waste water system); hazards and hazardous materials (private airstrip, wildland fires); hydrology and water quality (seiche, tsunami, or mudflow); land use (physical division of an established community); noise (private airstrip); population and housing (housing displacement); utilities and service systems (solid waste regulation); agricultural or forestry resources, and mineral resources.



SOURCE: ESA, 2019

Related Santa Clara DAP 1

Figure 1
Project Location

ESA

SOURCE: Gensler, 2019

Related Santa Clara DAP 1

Figure 2
City Place Parcels

ESA

Less-than-significant impacts were identified for the following resources in the EIR: air quality (carbon monoxide CO concentrations; asbestos); biological resources (trees); geology and soils (ground shaking or a seismic event); hazards and hazardous materials (routine hazardous materials use, proximity to schools, aviation hazards, emergency access routes); hydrology and water quality (groundwater supplies, flooding due to levee or dam failure); population and housing (employment displacement, new housing demand); public services and recreation; utilities and service systems (water supplies, landfill capacity).

The EIR determined that the City Place Project would result in the following impacts that would be **reduced to a less-than-significant level with the implementation of mitigation measures**: aesthetics (degradation of existing visual character, new light or glare); air quality (emissions of criteria air pollutants and Toxic Air Contaminants during construction, odors); biological resources (special status fish or wildlife species, wetlands); cultural resources (archaeological, human remains, paleontological); geology and soils (soil erosion, unstable soils); hazards and hazardous materials (accidental release during construction; the presence of hazardous materials in areas not underlain by the landfill; landfill-related hazards include gas, contaminated soils or groundwater, and subsurface fires); hydrology and water quality (water quality standards, drainage, and stormwater runoff); noise (construction noise, vibration); and utilities and service systems (construction of water delivery and stormwater generation and drainage systems, energy).

Significant unavoidable impacts were identified for the following environmental resources in the EIR: air quality (emissions of criteria air pollutants during operation, conflicts with implementation of the applicable air quality plan); biological resources (interference with movement of native migratory wildlife species); greenhouse gases (generation of greenhouse gas emissions, conflict with an applicable plan); land use (land use policy); noise (operational noise in excess of applicable standards); utilities and service systems (cumulative landfill capacity, cumulative energy). Due to the potential for significant unavoidable impacts, a Statement of Overriding Considerations was adopted as part of the City's certification of the EIR.

3 Purpose and Determination

3.1 Purpose

CEQA Guidelines Section 15164 (Addendum to an EIR or Negative Declaration) provides that an Addendum to an EIR shall be prepared if some changes or additions are necessary but none of the conditions of Section 15162 calling for preparation of a subsequent EIR have occurred (see Section 6.1 below for a description of those conditions). The Guidelines provide that a brief explanation of the decision not to prepare a subsequent or supplemental EIR pursuant to Section 15162 should be included in an addendum, the lead agency's findings or elsewhere in the record and requires that decision to be supported by substantial evidence. The purpose of this Addendum is to: describe the DAP 1 Project in comparison to the Project analyzed in the EIR; provide the required brief explanation of the decision that the DAP 1 Project does not give rise to the conditions calling for preparation of a subsequent environmental impact report; and summarize the substantial evidence supporting that conclusion. This Addendum does not address every applicable CEQA topic or significance threshold, but focuses on those most pertinent to the City's determination that a subsequent or supplemental environmental impact report is not required for the DAP 1 Project because none of the conditions described in CEQA Guidelines Section 15162 (Subsequent EIRs and Negative Declarations) calling for the preparation of a subsequent EIR have occurred.

3.2 Determination

The information presented in this Addendum explains the substantial evidence supporting a finding that the DAP 1 Project does not call for preparation of a subsequent or supplemental environmental impact report under CEQA Guidelines Section 15162 and therefore the only additional CEQA documentation necessary is an addendum under CEQA Guidelines Section 15164.

4 Project Description

4.1 DAP 1 Project

4.1.1 Project Location and Surroundings

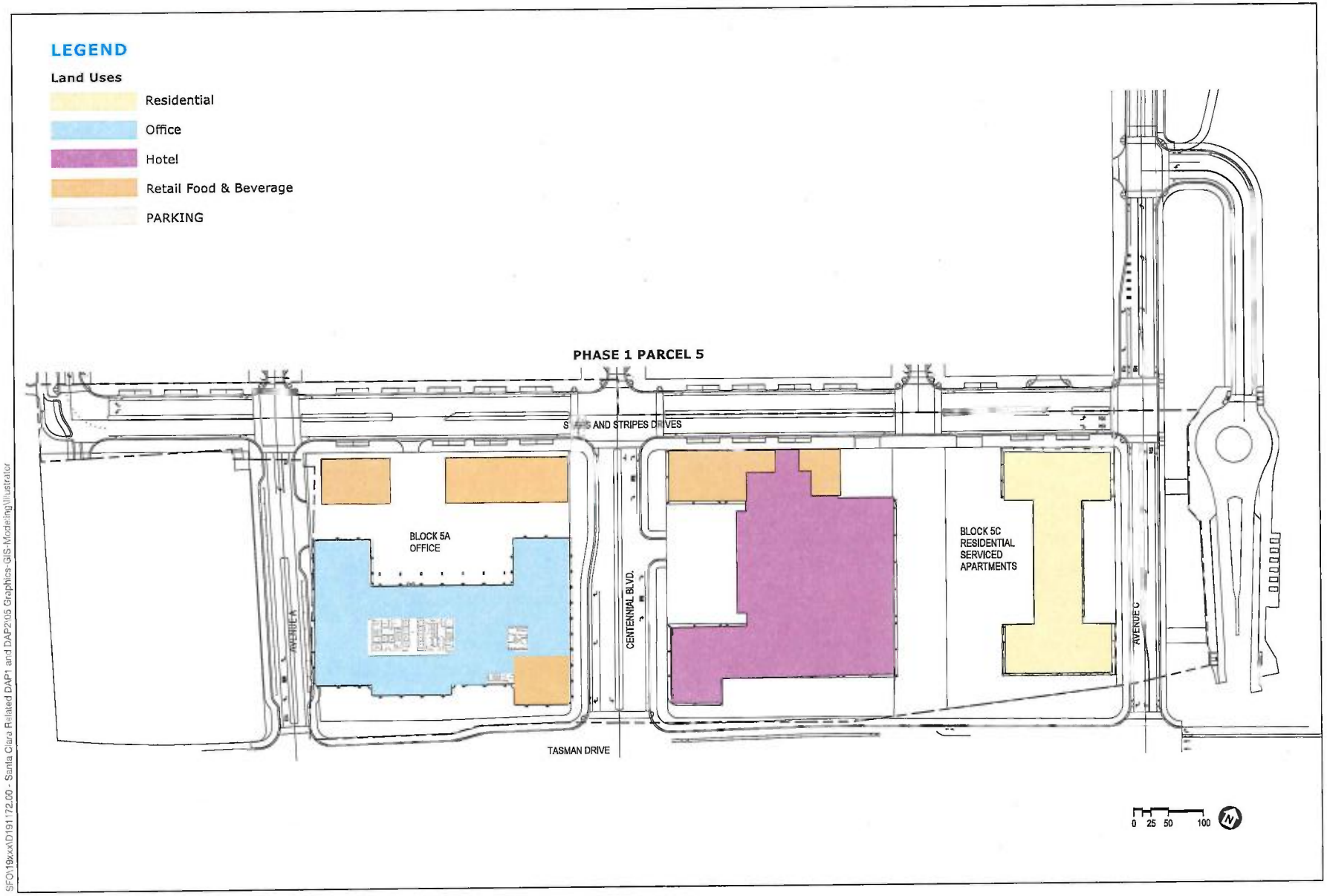
The DAP 1 project site is located generally on Parcel 5 of the City Place Santa Clara Project. Parcel 5 is the southernmost and smallest parcel on the site. It aligns with Tasman Drive to the south, Lafayette Street to the east, and the City Parking Garage and San Tomas Aquino Creek to the west. The DAP 1 Project follows the "New Tasman Drive Intersection Variant 2," which includes the relocation of Stars and Stripes Drive 100 feet to the north and an increase in the developable acreage on Parcel 5. A very small portion of the Phase 1 infrastructure work—the planned connection between proposed Avenue C and relocated Stars and Stripes Drive—is located in Parcel 4. Phase 1 does not include any structures on Parcel 4. With this variant, the DAP 1 project site includes the existing Stars and Stripes Drive as well as facilities and structures immediately north of Stars and Stripes Drive in its current location. This includes tennis courts and facilities associated with the closed Santa Clara Golf & Tennis Club (including a restaurant and banquet hall) as well as Santa Clara Fire Station 10. The portion of the site south of Stars and Stripes Drive is currently undeveloped and paved for surface parking.

Surrounding uses include Levi's Stadium and a youth soccer park to the south across Tasman Drive, and the Santa Clara City Garage and Santa Clara Convention Center to the west. The Tasman East Specific Plan envisions a high-density transit-oriented neighborhood in the existing industrial park to the east of Parcel 5. The area north of the DAP 1 project site is Phase 2 of the Project and was most recently used as a golf course, which as of October 31, 2019 is no longer in operation. Primary access to the site is at the junction of Tasman Drive and the west side of Centennial Boulevard.

The General Plan land use designation is Urban Center/Entertainment District and the Zoning district is Planned Development - Master Community (PD-MC). The building height limit across the DAP 1 Project site is 219 feet. As noted above, development on the DAP 1 Project site is governed by the approved MCP dated April 2017.

4.2 Project Characteristics

The DAP 1 Project site includes three proposed blocks, 5A, 5B and 5C, which are located facing Levi's Stadium on Tasman Drive. Development on block 5A would provide office, retail/food & beverage uses. A portion of the retail would be in separate buildings fronting on the relocated Stars and Stripes Drive. The 9-story (198-foot-tall) office building would align with Tasman Drive with a 2-story portion along Centennial Boulevard, which is the internal street between blocks 5A and 5B. Development on block 5B would contain a business hotel with some retail/food and beverage uses along Stars and Stripes Drive. The 12-story (218-foot-tall) business hotel would mark the center of the block as well as the center of the parcel. Single-story portions of the building would align with the eastern boundary of block 5B. Development on block 5C would contain residential serviced apartments in a single 7-story (135-foot-tall) building. The project site plan and building renderings are shown in Figures 3 and 4.



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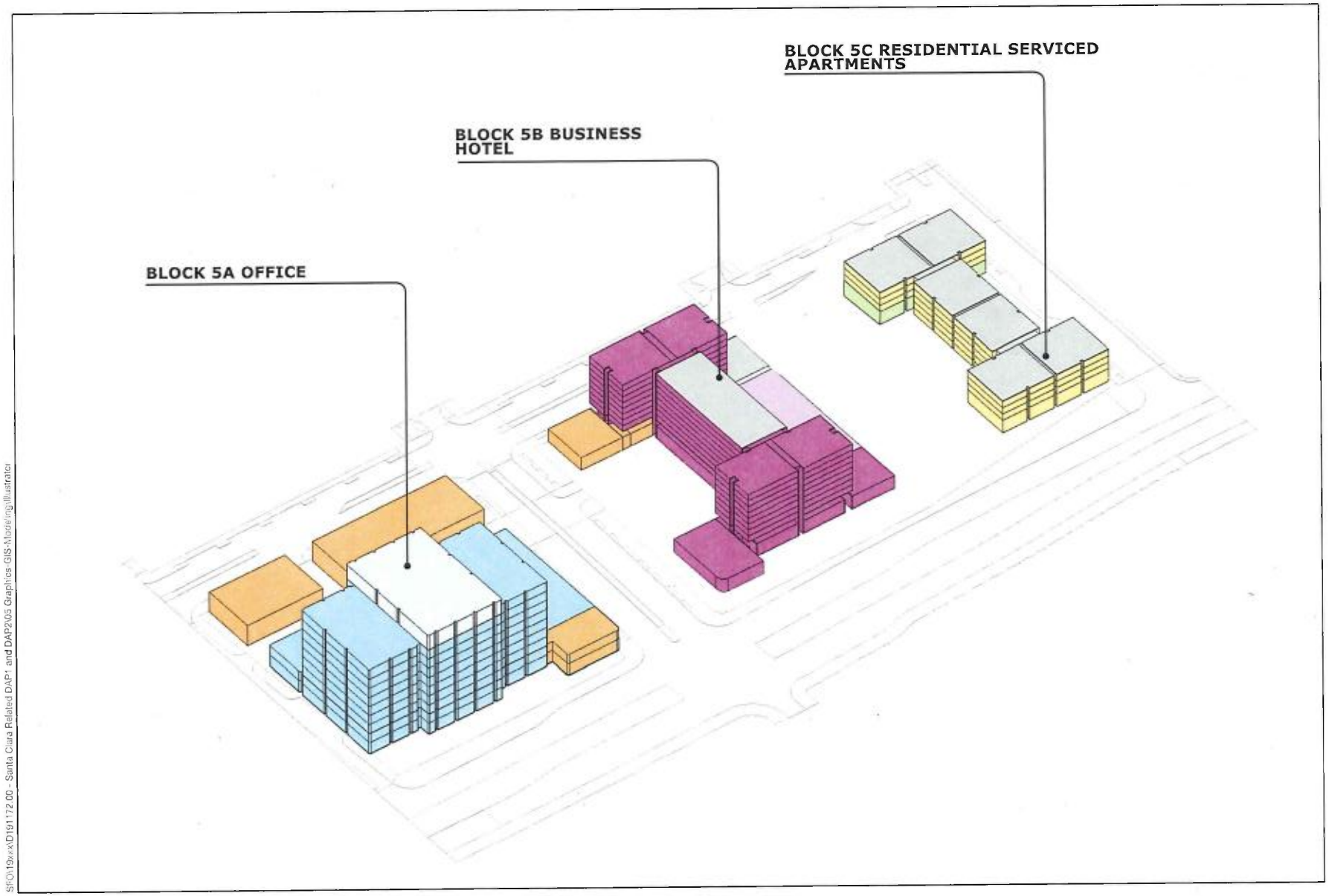
SOURCE: Gensler, 2019

Related Santa Clara DAP 1

Figure 3
DAP 1 Project Site Plan

ESA



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SOURCE: Gensler, 2019

Related Santa Clara DAP 1

Figure 4
DAP 1 Project Conceptual Massing

ESA

In addition, the DAP 1 Project would include a 1,186-space parking garage on two basement levels below the three blocks on Parcel 5 to serve the office, hotel guests, and residential units, including valet and visitors (see Table 1).

TABLE 1
DAP 1 PROJECT CHARACTERISTICS

	Area (gsf)
Block 5A	440,000 (Office) 35,200 (Retail/Food & Beverage)
Block 5B	381,000 (480 rooms) 15,800 (Retail/Food & Beverage)
Block 5C	175,000 (200 units)
Total GSF	**1,047,000**

SOURCE: Related Santa Clara, City Place Santa Clara, Development Area Plan 1 Phase 1 Parcel 5, November 2019

4.2.1 Open Space

No publicly-owned open space (parks) would be provided as a part of the DAP 1 Project as the requirement for parks to serve the residential units would be deferred to Phase 2. This deferral is permitted under the Development Agreement with the City, which was approved in connection with approval of the overall Project in 2016.

4.2.2 Streetscape and Infrastructure Improvements

The EIR acknowledged that as each phase is built, the on-site infrastructure necessary (e.g., road network, and wet and dry utility installations) to support the development of the phase would be constructed in the portion of the site where that phase is being developed. In some cases, it would be necessary to construct infrastructure in portions of the site where future phases would be developed to connect to existing infrastructure and provide a path that would serve the phase that is under development.

As noted above, the DAP 1 Project would relocate Stars and Stripes Drive approximately 100 feet north of its current position. The DAP 1 Project would develop all new roadways within the DAP 1 Project area, including sidewalks, cross walks, bike lanes and street parking where possible. Drop off zones for Uber/Lyft type services would be provided at strategic locations. In addition, the DAP 1 Project would include a new storm drainage system, new water main connections, recycled water system, and sanitary sewer system. The DAP 1 Project would also provide required infrastructure to extend electric, gas, and telephone service to the site.

4.2.3 Project Construction

Construction activities would consist of demolition of the existing buildings, facilities, and roadway; excavation and grading, foundation and below-grade construction, construction of the buildings and finishing interiors; and construction of required infrastructure improvements on- and off-site. As noted above, the DAP 1 Project proposal includes more square footage of

development on a slightly larger project site than what was analyzed in the EIR for Phase 1. However, the DAP 1 Project construction-related activity would be well within the construction anticipated and analyzed in the EIR for the Project.

4.3 Comparison of Project Analyzed in EIR and DAP 1 Project

The development plan for Phase 1 on Parcel 5 that was analyzed in the EIR was the same under both land use schemes (Scheme A and Scheme B). Under the EIR, Development on Parcel 5 was expected to provide a mix of uses, including residential, hotel, retail, and office uses. The proposed buildings were described as including approximately 87,000 gsf of commercial uses (retail and food/beverage) and 258,000 gsf of office uses. In addition, the EIR analyzed as part of Phase 1 approximately 200,000 gsf of residential uses with development of approximately 200 units, and approximately 280,000 gsf for 400 rooms in one or more hotels. In total, Parcel 5 was described as including approximately 825,000 gsf of development and having a FAR of 2.37, subject to the development transfer provisions described in the MCP. Parking would be provided in above- and below-finished-grade parking structures and within surface parking lots.

The approved MCP description for Parcel 5 differs slightly from the Project analyzed in the EIR in that it permits up to 306,000 gsf of office uses. In addition, the MCP allows for up to 20 percent deviation from this base entitlement through a density transfer provision along with other provisions allowing flexibility as DAPs are designed. The built-in flexibility may result in increases or decreases in density per phase while not exceeding the maximum build-out for the entire Project.

The DAP 1 Project follows the "New Tasman Drive Intersection Variant 2" that was analyzed in the EIR and includes the relocation of Stars and Stripes Drive 100 feet to the north and an increase in the developable acreage on Parcel 5. The DAP 1 Project proposal also relies on the development transfer provision and thus is compliant with the MCP while differing slightly from the Phase 1 plan analyzed in the EIR. The DAP 1 Project would include approximately 51,000 gsf of commercial uses (21,400 gsf of retail and 29,600 gsf of food/beverage), 440,000 gsf of office uses, 175,000 gsf of residential uses (200 units), and a 381,000 gsf hotel (480 keys). The DAP 1 Project would defer public park open space requirements to Phase 2 and develop on a total of 14.3 acres (see Table 2). These deviations from Parcel 5 as analyzed in the EIR are consistent with the overall CEQA Project and compliant with the MCP.

TABLE 2
PROJECT CHARACTERISTICS COMPARISON

	DAP 1 Project Area (gsf)	EIR Project Area (gsf)
Commercial (Retail/Food & Beverage)	51,000	87,000
Office	440,000	258,000
Residential	175,000 (200 units)	200,000 (200 units)
Hotel	381,000 (480 rooms)	280,000 (400 rooms)
Total GSF	1,047,000	825,000
Total Acreage	14.3	8
Floor-Area Ratio	1.68	2.37

NOTE:
The final square footages in the adopted MCP vary slightly from the CEQA Project analyzed in the certified EIR.

SOURCES:
Related Santa Clara, City Place Santa Clara, Development Area Plan 1 Phase 1 Parcel 5, November 2019
City of Santa Clara, City Place Santa Clara Project Draft Environmental Impact Report, October 2015.

4.4 Project Approvals

The DAP 1 Project would require a number of actions and approvals, including without limitation:

4.4.1 Actions by the City of Santa Clara

- Planning Commission consideration of and City Council approval of a Phase 1—Development Area Plan and one or more tentative subdivision maps.
- Community Development Director approval of the Architectural Materials component of the Phase 1 DAP, as allowed pursuant to the MCP zoning.
- City administrative approvals for such items as demolition permits, grading permits, building permits, on- and off-site work permits (e.g., public right-of-way improvements, and tie backs), encroachment permits, utilities and stormwater protection measures.
- Various implementation agreements between the applicant and the City, as needed.

4.4.2 Actions by Other Agencies

- Bay Area Air Quality Management District (BAAQMD) – Issuance of permits for asbestos abatement activities, if any.
- Regional Water Quality Control Board (RWQCB) – Acceptance of a Notice of Intent to obtain coverage under the General Construction Activity Storm Water Permit, and Notice of Termination after construction is complete.

5 Summary of Findings

An evaluation of the DAP 1 Project is provided in the CEQA Analysis in Section 6 that follows. This evaluation concludes that the DAP 1 Project qualifies for an addendum. It is consistent with the development density and land use characteristics established by the City of Santa Clara General Plan and zoning, and any potential environmental impacts associated with its development were adequately analyzed and covered by the analysis in the City Place EIR.

The DAP 1 Project would be required to comply with the applicable mitigation measures identified in the City Place EIR and presented in Attachment A to this document. With implementation of the applicable mitigation measures, the DAP 1 Project would not result in a substantial increase in the severity of previously identified significant impacts in the City Place EIR, or result in any new significant impacts that were not previously identified in the City Place EIR.

The City Place EIR analyzed the impacts of development within the City Place project site. The DAP 1 Project would not result in substantial changes or involve new information not already analyzed in the City Place EIR because the level of development now proposed for the site is within the broader development assumptions analyzed in the EIR. The DAP 1 Project would not cause new significant impacts not previously identified in the City Place EIR, or result in a substantial increase in the severity of previously identified significant impacts. No new mitigation measures would be necessary to reduce significant impacts. No changes have occurred with respect to surrounding circumstances that would cause significant environmental impacts to which the DAP 1 Project would contribute considerably, and there is no new information of substantial importance that shows that the DAP 1 Project would cause new or substantially more severe significant environmental impacts. Therefore, no supplemental environmental review is required in accordance with Public Resources Code Section 21166, and CEQA Guidelines Sections 15162 through 15164.

Overall, based on an examination of the analysis, findings, and conclusions of the City Place EIR, which are summarized in the CEQA Analysis in Section 6 of this document, the potential environmental impacts associated with the DAP 1 Project have been adequately analyzed and covered in the City Place EIR. Therefore, no further review or analysis under CEQA is required.

6 CEQA Analysis

6.1 Overview

The analysis in this Chapter summarizes the impacts and findings of the certified City Place EIR. The analysis in this Chapter also provides a comparison of the DAP 1 Project to the Project analyzed in the EIR as well as a summary of the potential environmental impacts that may result from the DAP 1 Project. All mitigation measures identified in the City Place EIR that would apply to the DAP 1 Project are listed in Attachment A to this document, which is incorporated by reference into this CEQA Analysis. If this Addendum or its attachment inadvertently misidentifies or omits a mitigation measure identified in the EIR, the applicability of that mitigation measure to the DAP 1 Project is not affected.

As demonstrated in this Addendum, none of the conditions for preparation of a subsequent EIR per CEQA Guidelines Section 15162 apply to the DAP 1 Project:

> (a) When an EIR has been certified or a negative declaration adopted for a project, no subsequent EIR shall be prepared for that project unless the lead agency determines, on the basis of substantial evidence in the light of the whole record, one or more of the following:
>
> > (1) Substantial changes are proposed in the project which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;
> >
> > (2) Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR or Negative Declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or
> >
> > (3) New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete or the Negative Declaration was adopted, shows any of the following:
> >
> > > (A) The project will have one or more significant effects not discussed in the previous EIR or negative declaration;
> > >
> > > (B) Significant effects previously examined will be substantially more severe than shown in the previous EIR;
> > >
> > > (C) Mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or
> > >
> > > (D) Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant

effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.

(b) If changes to a project or its circumstances occur or new information becomes available after adoption of a negative declaration, the lead agency shall prepare a subsequent EIR if required under subdivision (a). Otherwise the lead agency shall determine whether to prepare a subsequent negative declaration, an addendum, or no further documentation.

(c) Once a project has been approved, the lead agency's role in project approval is completed, unless further discretionary approval on that project is required. Information appearing after an approval does not require reopening of that approval. If after the project is approved, any of the conditions described in subdivision (a) occurs, a subsequent EIR or negative declaration shall only be prepared by the public agency which grants the next discretionary approval for the project, if any. In this situation no other responsible agency shall grant an approval for the project until the subsequent EIR has been certified or subsequent negative declaration adopted.

(d) A subsequent EIR or subsequent negative declaration shall be given the same notice and public review as required under Section 15087 or Section 15072. A subsequent EIR or negative declaration shall state where the previous document is available and can be reviewed.

This CEQA Analysis hereby incorporates by reference the discussion and analysis of all potential environmental impact topics as presented in the certified City Place EIR. This CEQA Analysis uses a checklist approach to determine if the conditions of Section 15162 calling for preparation of a subsequent EIR are met. This checklist approach is based on significance criteria in the City Place EIR to organize the analysis and provide a determination of whether the DAP 1 Project would result in:

- Equal or Less Severity of Impact Previously Identified in the City Place EIR;
- Substantial Increase in Severity of Previously Identified Significant Impact in the City Place EIR; and/or
- New Significant Impact.

Where the severity of the impacts of the DAP 1 Project would be the same as or less than the severity of the impacts described in the City Place EIR, the checkbox for "Equal or Less Severity of Impact Previously Identified in the City Place EIR" is checked.

Where the checkbox for "Substantial Increase in Severity of Previously Identified Significant Impact in the City Place EIR" or "New Significant Impact" is checked, there would be significant impacts that are:

- Due to substantial changes in the Project);
- Due to substantial changes in circumstances under which the Project will be undertaken); and/or
- Due to substantial new information not known at the time the City Place EIR was certified.

The City Place EIR includes a robust cumulative analysis based on specific local projects in the City and adjacent cities, full implementation of City and County general plans, and where applicable, full implementation of the general plans of the nine Bay Area counties and associated cities. Therefore, any development and/or traffic increases that have occurred since certification of the EIR were included in the EIR's analysis and there has been no change in circumstances that would result in new or more severe environmental impacts (see the City Place EIR Chapter 3).

Further, no new information of substantial importance has been provided or otherwise identified that would result in new or substantially more severe significant impacts. Although there may have been changes and updates to the relevant regulatory setting or the Appendix G of the CEQA Guidelines, these changes are not considered new information of substantial importance as described in the CEQA Guidelines. Furthermore, they would not result in new physical impacts not previously analyzed or in substantially increasing the severity of previously identified physical impacts. Therefore, none of the aforementioned conditions were found for the DAP 1 Project, as demonstrated above and throughout the following CEQA Analysis.

6.2 Land Use and Planning

Would the project:	Equal or Less Severity of Impact Previously Identified in the City Place EIR	Substantial Increase in Severity of Previously Identified Significant Impact in the City Place EIR	New Significant Impact
a. Physically divide an established community;	☒	☐	☐
b. Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, a general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect.; or	☒	☐	☐
c. Conflict with any applicable habitat conservation plan or natural community conservation plan.	☒	☐	☐

6.2.1 City Place EIR Findings

The City Place EIR found significant and unavoidable land use impacts related to conflicts with adopted City land use plans. Specifically, the Project would conflict with the City's General Plan policies related to jobs/housing balance with secondary significant and unavoidable impacts on traffic, air quality, and GHG emissions. The City Place EIR identified mitigation measure **LU-1.1, Increase Residential Density in the City's General Plan**, which directed the City to explore permitting higher residential densities, as well as allowing residential land uses in existing non-residential areas in the City's General Plan. This mitigation measure would be implemented by the City during the next General Plan update. However, because this mitigation measure relies on an iterative General Plan process ultimately requiring approval from City Council, it cannot be stated with certainty whether and when the mitigation measure can be implemented. In addition, adding new housing to the City's General Plan would only potentially reduce some of the impacts within the more immediate Project vicinity, but would not fully mitigate the Project's effect on induced growth in the region and beyond. As a result, the measure would not reduce the effect to a less-than-significant level.

The Project would also conflict with the Comprehensive Land Use Plan for the San Jose International Airport although this impact is disclosed with the noise analysis (see Section 6.7, *Noise*). No other land use plan conflicts were identified for the Project. The Project would result in no impacts related to the physical division of an established community or a conflict with a habitat conservation plan or natural community conservation plan.

6.2.2 Project Analysis

The DAP 1 Project would be developed on the same project site and thus would have no impact related to the physical division of an established community or a conflict with a habitat conservation plan or natural community conservation plan.

The DAP 1 Project would provide a mix of uses, including residential, hotel, retail, and office uses generally on Parcel 5. Although the DAP 1 Project site and square footage of development is slightly larger than what was analyzed in the EIR for Parcel 5, the potential for this change was anticipated with the EIR analysis of project variants. Further, the DAP 1 Project land uses are

well within the maximum build-out for the entire project and thus within the impact envelope of the EIR. For these reasons, impacts related to land use would be the same as those identified in the EIR and described above.

The DAP 1 Project would introduce a mix of commercial and residential uses which may not, in and of itself, present a conflict with the City's General Plan policies related to jobs/housing balance. Nonetheless, when considered together with the whole Project and as a part of the cumulative scenario, the DAP 1 Project would result in the same significant and unavoidable land use impact and secondary significant and unavoidable land use impacts identified in the EIR.

6.2.3 Conclusion

Based on an examination of the analysis, findings, and conclusions of the City Place EIR, implementation of the DAP 1 Project would not substantially increase the severity of significant impacts identified in the City Place EIR, nor would it result in new significant impacts related to land use and planning that were not identified in the City Place EIR.

6.3 Aesthetics

Would the project:	Equal or Less Severity of Impact Previously Identified in the City Place EIR	Substantial Increase in Severity of Previously Identified Significant Impact in the City Place EIR	New Significant Impact
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 along a scenic highway;	☒	☐	☐
c. Substantially degrade the existing visual character or quality of the site and its surroundings; or	☒	☐	☐
d. Create a new source of substantial light or glare which would substantially and adversely affect daytime or nighttime views in the area.	☒	☐	☐

6.3.1 City Place EIR Findings

The City Place EIR found that project construction would temporarily degrade visual character and quality and identified mitigation measures that would reduce these impacts to less-than-significant levels. Similarly, mitigation measures addressing significant impacts related to new sources of light and glare would reduce impacts to less-than-significant levels. No project impacts were identified for scenic resources along a State Scenic Highway or scenic vistas.

6.3.2 Project Analysis

The DAP 1 Project would be constructed on the same project site, which is not along a Scenic Highway and thus would have no impact on scenic resources along a State Scenic Highway; there are also no scenic vistas in the City. Although the EIR found significant impacts related to visual character and quality during construction, those impacts were limited to areas visible from the Guadalupe River Trail and mitigation measures were identified for construction on Parcels 1 and 2 only. The DAP 1 Project involves Parcel 5, and thus would not be visible from the trail or require mitigation.

Although the DAP 1 Project site and square footage of development is slightly larger than what was analyzed in the EIR for Parcel 5, the potential for this change was anticipated with the EIR analysis of project variants. Further, the DAP 1 Project design is within the general building height, mass, and bulk analyzed in the EIR and thus within the impact envelope of the EIR. Impacts related to visual quality would be the same as those identified in the EIR.

Light and glare associated with the DAP 1 Project would be the same as those analyzed in the EIR because the proposed land uses and general building height, mass, and bulk are consistent with the Project. Therefore, the DAP 1 Project's impacts related to new sources of light and glare would be less than significant with applicable mitigation measures. Required mitigation measures include **AES-2.1, Installation of Low-Profile Lighting**; **AES-2.2, Installation of Shielded Fixtures**; **AES-2.3: Treat Reflective Surfaces**; and **AES-2.4: Provide Obstruction for Glare from Vehicle Headlights in the Proposed Garages** (see Attachment A). In addition, the DAP 1 Project would be

required to adhere to the MCP standards and guidelines including design principles related to light and glare.

6.3.3 Conclusion

Based on an examination of the analysis, findings, and conclusions of the City Place EIR, implementation of the DAP 1 Project would not substantially increase the severity of significant impacts identified in the City Place EIR, nor would it result in new significant impacts related to aesthetics that were not identified in the City Place EIR. Mitigation measures **AES-2.1, Installation of Low-Profile Lighting**; **AES-2.2, Installation of Shielded Fixtures**; **AES-2.3: Treat Reflective Surfaces**; and **AES-2.4: Provide Obstruction for Glare from Vehicle Headlights in the Proposed Garages** (see Attachment A) would be applicable to and would be implemented by the DAP 1 Project, and would ensure that impacts related to aesthetics would be less than significant.

6.4 Transportation and Circulation

Would the project:	Equal or Less Severity of Impact Previously Identified in the City Place EIR	Substantial Increase in Severity of Previously Identified Significant Impact in the City Place EIR	New Significant Impact
a. Cause an impact to signalized intersection level of service (LOS) per the criteria for each jurisdiction within the study area as described below.	☒	☐	☐

City of Santa Clara

Significant impacts at signalized City of Santa Clara intersections would occur when the addition of project traffic would cause one of the following:

- Intersection operations degrade from an acceptable level (LOD D or better) to an unacceptable level (LOS E or F), or
- Unacceptable operations are exacerbated by increasing critical delay by more than 4 seconds and increasing the V/C ratio by 0.01 or more, or
- Unacceptable operations are exacerbated by increasing the V/C ratio by 0.01 or more when the change in critical delay is negative (i.e., decreases). This can occur if the critical movements change.

The City of Santa Clara has established a minimum acceptable operation level of service of LOS D for local streets and LOS E for CMP designated facilities (City of Santa Clara 2010).

City of Sunnyvale

Significant impacts at signalized City of Sunnyvale intersections would occur when the addition of project traffic would cause one of the following:

- Intersection operations (except those on designated regionally significant roads) degrade from an acceptable level (LOS D or better) to an unacceptable level (LOS E or LOS F), or
- Operations for regionally significant designated intersections deteriorate from an acceptable level (LOS E or better) to an unacceptable level (LOS F), or
- Unacceptable operations are exacerbated by increasing critical delay by more than 4 seconds and increasing the V/C ratio by 0.01 or more, or
- Unacceptable operations are exacerbated by increasing the V/C ratio by 0.01 or more when the change in critical delay is negative (i.e., decreases). This can occur if the critical movements change.

The City of Sunnyvale uses a, LOS D standard for local street intersections and a, LOS E standard for regionally significant roadways (also CMP facilities), including Caribbean Drive, Mathilda Avenue, Sunnyvale/Saratoga Road, El Camino Real, Central Expressway, Lawrence Expressway, and CMP facilities that are under the Sunnyvale General Plan, consolidated in July 2011 (City of Sunnyvale 2011).

Would the project:	Equal or Less Severity of Impact Previously Identified in the City Place EIR	Substantial Increase in Severity of Previously Identified Significant Impact in the City Place EIR	New Significant Impact
City of San José Significant impacts at signalized City of San José study intersections would occur when the addition of project traffic would cause one of the following: • Intersection operations degrade from an acceptable level (LOS D or better) to an unacceptable level (LOS E or F), or • Unacceptable operations (LOS E or F) are exacerbated by increasing critical delay by more than 4 seconds and increasing the V/C ratio by 0.01 or more, or • Unacceptable operations are exacerbated by increasing the V/C ratio by 0.01 or more when the change in critical delay is negative (i.e., decreases). This can occur if the critical movements change. The City of San José's minimum threshold for acceptable signalized intersection operations is LOS D, unless governed by an Area Development Policy or protected intersection designation. Several San José intersections are within the boundaries of the North San José Development Area (see Figure 3.3-1) [see the City Place EIR Section 3.3]. For the purpose of this analysis, LOS D is used as the minimum threshold for all signalized study intersections in San José, including Santa Clara County and CMP intersections in the North San José Development Area (City of San José 2009).			
City of Milpitas Significant impacts at signalized City of Milpitas intersections would occur when the addition of project traffic would cause one of the following: • Intersection operations degrade from an acceptable level (LOS D or better) to an unacceptable level (LOS E or F), or • Unacceptable operations (LOS E or F) are exacerbated by increasing critical delay by more than 4 seconds and increasing the V/C ratio by 0.01 or more, or • Unacceptable operations (LOS E or F) are exacerbated by increasing the V/C ratio by 0.01 or more when the change in critical delay is negative (i.e., decreases). This can occur if the critical movements change. The City of Milpitas has established a minimum acceptable operating level of LOS D for intersections that are excluded from the CMP (City of Milpitas 2002).			
Santa Clara County and Congestion Management Program The LOS standard for Santa Clara County (2013 VTA Congestion Management Program) expressway and CMP intersections is LOS E. Traffic impacts at these intersections would occur when the addition of traffic associated with a project would cause one of the following:			

Would the project:	Equal or Less Severity of Impact Previously Identified in the City Place EIR	Substantial Increase in Severity of Previously Identified Significant Impact in the City Place EIR	New Significant Impact
• Intersection operations degrade from an acceptable level (LOS E or better) to an unacceptable level (LOS F), or • Unacceptable operations (LOS F) are exacerbated by increasing critical delay by more than 4 seconds and increasing the V/C ratio by 0.01 or more, or • Unacceptable operations (LOS F) are exacerbated by increasing the V/C ratio by 0.01 or more when the change in critical delay is negative (i.e., decreases). This can occur if the critical movements change.			
b. Cause a significant impact to occur at an unsignalized intersection due to the addition of project traffic causing the average intersection delay for all-way stop-controlled intersections or the worst movement/approach for side-street stop-controlled intersections to degrade to LOS F when the intersection satisfies the peak-hour signal warrant from CA MUTCD.	☒	☐	☐
c. Cause an impact to freeway segment LOS per the criteria for each jurisdiction within the study area as described below.	☒	☐	☐
Santa Clara County Significant traffic impacts to freeway segments would occur when the addition of project traffic would cause: • Freeway segment operations to degrade from an acceptable level (LOS E or better) to an unacceptable level (LOS F), or • Traffic to increase by more than 1 percent of the capacity of a segment that operates at LOS F.			
San Mateo County Significant traffic impacts to freeway would occur when: • The addition of project traffic causes the freeway segment to operate at an LOS that violates the LOS standard adopted in the current Congestion Management Program (CMP), or • When the cumulative analysis indicates that the combination of the project and future cumulative traffic demand will cause the freeway segment to operate at an LOS that violates the standard adopted in the current CMP and the project increases traffic demand on that freeway segment by an amount equal to 1 percent or more of the segment capacity or causes the freeway segment V/C ratio to increase by 1 percent. o The LOS standards for freeway study segments on US 101 are LOS F (between Embarcadero Road and Whipple Avenue) and LOS E (between SR 92 and Whipple Avenue).			

Would the project:	Equal or Less Severity of Impact Previously Identified in the City Place EIR	Substantial Increase in Severity of Previously Identified Significant Impact in the City Place EIR	New Significant Impact
Alameda County Significant traffic impacts on freeway segments in Alameda County would occur when the addition of project traffic would cause: • A freeway segment with an LOS E standard to, either individually or cumulatively, operate at LOS F, or • The V/C ratio to increase by 0.03 or more for a freeway segment that would operate at LOS F without the project.			
d. Cause the following regarding transit service: • Create demand for public transit services above the capacity that is provided or planned for by: o exceeding established peak-hour peak load factor standards, or o exceeding passenger rail platform waiting areas, or • Disrupt existing transit services or facilities,[2] or • Conflict with an existing or planned transit facility, or • Conflict with transit policies adopted by the City of Santa Clara for facilities within the City of Santa Clara portion of the study area.	☒	☐	☐
e. Conflict with City of Santa Clara General Plan (2010) policies that ensure that bicycle and pedestrian facilities are safe and effective for City residents such that the Project or an element of the Project would: • Create a hazardous condition that currently does not exist for bicyclists and pedestrians or otherwise interfere with bicycle and pedestrian accessibility to the site and adjoining areas, or • Conflict with an existing or planned bicycle or pedestrian facility, or • Conflict with policies related to bicycle and pedestrian activity adopted by the City of Santa Clara for facilities within the City of Santa Clara portion of the study area.	☒	☐	☐
f. Cause a significant safety impact to site access and on-site circulation facilities including roadways, driveways, parking garages, sidewalks, crosswalks, bicycle lanes, and bicycle parking areas by not adhering to City of Santa Clara design standards and standard engineering practices, thereby resulting in a hazardous condition for motorists, bicyclists, and/or pedestrians.	☒	☐	☐

2 This includes disruptions caused by proposed driveways on transit streets, impacts on transit stops/shelters, and impacts on transit operations from traffic improvements proposed or resulting from a project.

Would the project:	Equal or Less Severity of Impact Previously Identified in the City Place EIR	Substantial Increase in Severity of Previously Identified Significant Impact in the City Place EIR	New Significant Impact
g. Conflict with City of Santa Clara General Plan (2010) policies pertaining to maintaining standards for emergency response times such that the Project or an element of the Project would: • Conflict with an existing or planned emergency response facility or route, or • Increase emergency response time beyond the threshold of an average of 3 minutes.	☒	☐	☐
h. Cause a significant parking impact by the Project or any element of the Project would: Result in parking demand that exceeds the parking supply in the Project description and either require the construction of additional parking facilities or cause vehicles to travel off-site for parking, thereby causing excessive vehicular circulation.	☒	☐	☐

6.4.1 City Place EIR Findings

The City Place EIR Transportation/Traffic section describes the existing transportation services and facilities on or near the Project site, including the roadway system (including signalized intersections, unsignalized intersections, and freeway segments), bus and rail service, bicycle facilities, and pedestrian facilities. The EIR presents the results of the evaluation of the Project's effect on those facilities and services, including impacts related to signalized intersections, unsignalized intersections, freeway segments, transit services, bicycle and pedestrian facilities, emergency access, and parking for multiple scenarios: Existing with Project Conditions, Background with Project Conditions, and Cumulative (2040) with Project Conditions. Where significant impacts are projected to occur with the Project, an additional informational scenario was evaluated to identify intersection and freeway segment impacts associated with Phases 1, 2, and 3 (parcels 4 and 5 only). This scenario is intended to inform the public of near-term Project effects and is used to formulate and properly phase mitigation measures.

The transportation analysis that was prepared for the Project followed the guidelines of the City of Santa Clara (City) and the Santa Clara Valley Transportation Authority (VTA), which acts as the Congestion Management Agency (CMA) for Santa Clara County (County). Potential impacts on intersections, freeway segments, transit, and bicycle and pedestrian facilities were evaluated using the standards, methods, and significance criteria of these agencies. Mitigation measures for identified significant impacts were identified where such measures are available and feasible.

Intersection Analysis

The City Place EIR found significant and unavoidable transportation impacts related to conflicts with adopted signalized and unsignalized intersection level of service (LOS) criteria. One hundred and twenty-five (125) intersections were studied in the City of Santa Clara and the surrounding jurisdictions of Sunnyvale, San José, Milpitas, and Santa Clara County.

Signalized Intersections

The City Place EIR found that the Project would result in significant impacts at 51 signalized intersections under Existing with Project and Background with Project Conditions. The City Place EIR identified mitigation measure **TRA-1.1, Vehicle Trip Reduction with Transportation Demand Management (TDM)** to decrease office-generated and residential-generated daily and peak hour Project traffic. This mitigation measure specifies details regarding vehicle trip reduction targets; vehicle trip thresholds; TDM measures and strategies for office, residential, and retail uses; monitoring and reporting; and remedial action. In addition, mitigation measure **TRA-1.2, Intersection Improvements** specifies intersection improvements, where improvements to increase lane capacity are physically feasible, and off-setting mitigation measures, where there are no feasible physical improvements, to be implemented as part of the project development. These measures were determined to result in either full mitigation, partial mitigation, off-set mitigation (improvements to other modes of travel), or no feasible mitigation to affected intersections. Although improvement measures to intersections located outside of Santa Clara jurisdiction were identified, implementation cannot be guaranteed. Therefore, the impacts to these intersections would remain significant and unavoidable.

Mitigation measure TRA-1.2 details whether the Project Developer would be wholly responsible for discrete improvement measures or partially responsible and thus required to pay a fair-share contribution as a "percent of total traffic" (see City Place EIR Table 3-3.20). The EIR MMRP includes **Exhibit MMRP-1, Intersection Mitigation Sensitivity Analysis Results: Full Funding Responsibility**, establishing the number of project trips at which each of the required intersection mitigation measures that are wholly the Project's responsibility to implement must be in place. The exhibit also indicates the likely phase of project development where each project trip threshold will be reached.

Further, the EIR identified mitigation measure **TRA-1.3, Prepare and Implement a Multimodal Improvement Plan (MIP)** to address impacts to Santa Clara County Congestion Management Program (CMP) intersections that are only partially mitigated by TRA-1.1 and TRA-1.2 or where no feasible mitigation was identified. Even with Mitigation Measures TRA-1.1, TRA-1.2, and TRA-1.3, some intersections would still have significant Project impacts. Thus, the Project impact on signalized intersection LOS is considered to be significant and unavoidable.

The EIR identified 20 intersections with significant impacts under the Existing with Project Phases 1, 2, and 3 Conditions and **TRA-1a.1, Intersection Improvements for Existing with Project Phases 1, 2, and 3**. TRA-1a-1 serves to identify the specific improvement measures that would be required to mitigate or partially mitigate impacts from this interim scenario and for which the Project Developer would be required to pay fair-share contributions. These impacts would be reduced but not fully mitigated with implementation of TRA-1.1 and TRA-1a.1 resulting in a significant and unavoidable impact.

The City Place EIR identified impacts on 71 signalized study intersections under Cumulative (2040) Conditions and the Project's contribution would be considerable on all of them. Mitigation measure **TRA-14.1, Signalized Intersection Improvements**, specifies additional intersection

improvements although impacts at some affected intersections would remain significant and unavoidable with implementation of this measure.

Unsignalized Intersections

The affected unsignalized study intersections were located only within the City of Santa Clara and the City of San José. In order to mitigate impacts to unsignalized intersections, mitigation measure **TRA-2.1 Traffic Signal Installation** (intersection 109) and **TRA-2.2, Traffic Signal Installation** (intersection 114) would be implemented so that traffic signals are installed once traffic volumes meet the warrant requirements (projected to occur in phases 7 and 8, well after DAP 1). However, with implementation of mitigation measures TRA-1.1, TRA-2.1, and TRA-2.2, one unsignalized intersection may still operate at an unacceptable level under Background with Project conditions, and the impact would remain significant and unavoidable (intersection 109). Under the Existing with Project Phases 1, 2, and 3, no unsignalized study intersections would have a significant impact. Under Cumulative (2040) Conditions, unsignalized study intersections would be fully mitigated with implementation of mitigation measures TRA-1.1 and TRA-2.2.

On-Site Intersections

An on-site intersection analysis was conducted to assess operations of the on-site intersections and queuing into the parking facilities and local streets. The analysis was conducted for intersections on parcels 4 and 5 and concluded that the design guidelines from the MCP would ensure less-than-significant impacts. Mitigation measure **TRA-5.1, Transportation Design Review**, was identified to reduce impacts to on-site intersections on parcels 1, 2, and 3. Although not used for this environmental addendum, an on-site transportation analysis for Background with DAP 1 Phase 1 Project conditions was prepared to evaluate non-CEQA operational analysis conditions for DAP 1 Project conditions. This non-CEQA analysis is described further below for informational purposes and is provided as Attachment B of this Addendum.

Variant Access Scheme

A Variant Access Scheme that would redistribute how Project traffic would approach and depart the site, would affect the operation of 23 off-site intersections as well as the on-site intersections. Of these 23 intersections, 11 would have significant impacts under Existing with Project and Background with Project conditions. Mitigation measures TRA-1.1, **TRA-6.1, Intersection Improvements with Variant Access Scheme**, and **TRA-6.2, Intersection Improvements for Phases 1, 2, and 3**, were identified for the Project and would reduce but not fully mitigate significant impacts on 7 intersections. Therefore, the impacts would remain significant and unavoidable. Of the 23 affected intersections, the Variant Access Scheme would have a considerable contribution to 10 signalized intersections and two unsignalized intersection under cumulative 2040 with Project conditions. This impact would remain significant and unavoidable with implementation of TRA-1.1 and **TRA-16.1, Intersection Improvements for cumulative with-Project for Access Variants**. Cumulative impacts and mitigation measures for the other off-site intersections would be the same as with the Project.

Freeway Segments

The City Place EIR study area included freeway segments within Santa Clara County, San Mateo County, and Alameda County and found significant and unavoidable transportation impacts related to conflicts with adopted freeway level of service criteria. Complete mitigation of freeway impacts is considered beyond the scope of an individual development project because, due to jurisdiction and funding constraints, individual projects and Cities are unable to approve and acquire right-of-way for freeway widening. Nonetheless, EIR mitigation measure **TRA-3.1: Freeway Segment Improvements** specifies that the Project Developer will make a voluntary contribution toward the Valley Transportation Plan (VTP) 2040 Express Lane Projects (VTP 2040 project numbers H2, H3, H4, H5, H6, H7, and H15) and Countywide Freeway Traffic Operation System and Ramp Metering Improvements (VTP 2040 project number S83). These VTP 2040 projects (H2, H3, H4, H5, H6, H7, H15, and S83), once fully funded and constructed, will enhance travel choices for Project travelers and make more efficient use of the transportation network.

In addition to the complete project, the City Place EIR analyzed project impacts to affected freeway segments under existing plus Project conditions with traffic generated by Phases 1, 2, and 3 only (parcels 4 and 5). Even with implementation of TRA-3.1, the impacts to freeway segments under this interim scenario would remain significant and unavoidable.

Other Modes of Transportation, Emergency Access, and Parking

Pedestrian, bicycle and transit facilities were also evaluated. The City Place EIR found a significant and unavoidable transportation impact related to the project generating a substantial number of pedestrians travelling to transit stops along routes where sidewalk gaps exist, thus creating a hazardous condition for pedestrians. Mitigation measure **TRA-7.1: Sidewalk Gap Closure on Tasman Drive on Lafayette Street overcrossing extend east to Calle Del Sol** was identified as a Project Developer responsibility. The City Place EIR found a significant and unavoidable impact on transit operations because the Project would generate considerable amounts of traffic congestion at intersections on bus and light-rail routes in the study area. No feasible transit improvements were identified to address this impact.

Construction

The City Place EIR evaluated the Project's construction activities for impacts to intersections; parking; and bicycle, pedestrian, and transit circulation. The impacts were found to be significant and unavoidable with implementation of mitigation measure **TRA-18.1, Construction Management**, requiring the preparation of a construction management plan.

Game Day

The City Place EIR evaluated Project traffic impacts on game-day (pre-game and post-game) conditions. The EIR identified mitigation measure **TRA-19.1: Modified City's Traffic Management and Operations Plan (TMOP) and Prepare a Project-Specific Traffic and Parking Management Plan** requiring the Project Developer to coordinate with City Planning and Public Works to direct stadium traffic to the new parking locations on the site and develop a separate traffic and parking management plan.

6.4.2 Project Analysis

To determine consistency with the transportation findings of the City Place EIR, including trip generation estimates and baseline conditions, this analysis includes two main components:

- A trip generation comparison of the DAP 1 Project as compared to the phased trip generation studied in the EIR. The trip generation number at each phase DAP is used to identify the off-site transportation improvements as specified in the Mitigation Monitoring Report Program associated with such phase of development.
- Recent traffic counts collected in connection with other recent projects (see Attachment D for a list of intersections with recent counts) as compared to the volumes for the EIR's baseline conditions and forecasted scenarios to determine if additional transportation analysis was needed because of any changes in background traffic conditions.

Trip Generation Comparison

The DAP 1 Project trip generation methods are consistent with the methods described in the EIR **Appendix 3.3-J: City Place Santa Clara – Trip Generation Estimates**. Attachment C of this Addendum provides a more detailed summary of the mixed-use trip generation models (*Getting Trip Generation Right: Eliminating the Bias Against Mixed Use Development*, 2013). The mixed-use trip generation models used in the EIR are unchanged for these DAP 1 Project trip generation estimates. However, to represent Existing Conditions the input data for demographics, cost of automobile ownership, land use patterns (e.g., density, diversity, distance to transit, etc.), and available transportation were updated to reflect baseline conditions today. The input data was drawn from the 2012 American Community Survey (ACS), DAP 1 project data, and national research values where local data is not available. They include attributes of the surrounding area (e.g., employment within one-mile, average household size, intersection density, etc.), as well as demographic characteristics of the project site (e.g., household size and vehicle ownership) (see Attachment C of this addendum). Using the mixed-use trip generation models from the EIR populated with updated input data for the built environment, mixed-use trip reductions are taken from the gross Institute of Transportation (ITE) trips as shown in Table 3.1 (Attachment C includes the gross trip generation documenting the ITE equations used in the mixed use trip generation models).

Table 3.1 below summarizes the DAP 1 Project trip generation for Phase 1 as currently proposed and a comparison to the Phase 1 trip generation used in the EIR. The DAP 1 Project combined land uses would generate 13,000 daily vehicle trips, 740 AM peak hour trips (570 inbound and 170 outbound), and 990 PM peak hour trips (390 inbound and 600 outbound). This land use mix would generate 3,660 fewer daily trips, 190 fewer AM peak hour trips (90 inbound and 100 outbound), and 310 fewer PM peak hour trips (170 inbound and 140 outbound) compared with the Phase 1 trip generation analyzed in the EIR. Therefore, the DAP 1 Project traffic-related impacts would be less than those identified in the EIR and described above.

TABLE 3.1
PHASE 1 TRIP GENERATION COMPARISON

Land Use (Units)	ITE Code	Size	Daily	AM Peak Hour			PM Peak Hour		
			Total	In	Out	Total	In	Out	Total
Retail, Residential, Hotel, and Restaurant Uses Trip Generation									
Shopping Center (1,000 square feet)	820	21.4	2,490	40	20	60	100	110	210
Apartment (Dwelling Units)	220	200	1,340	20	80	100	80	50	130
Hotel (Rooms)	310	480	3,920	150	100	250	150	140	290
Quality Restaurant (1,000 square feet)	931	23.4	2,110	10	10	20	120	60	180
Fast Casual Restaurant (1,000 square feet)	930	6.2	1,950	10	0	10	50	40	90
Subtotal			*11,810*	*230*	*210*	*440*	*500*	*400*	*900*
Mixed-Use Reductions			*-2,930*	*-80*	*-80*	*-160*	*-190*	*-160*	*-350*
Subtotal Net New Trips [A]			*8,880*	*150*	*130*	*280*	*310*	*240*	*550*
Office Use Trip Generation									
Office (1,000 square feet)	Local Rates	440	4,800	450	50	500	100	390	490
Subtotal Office Trips [B]			*4,800*	*450*	*50*	*500*	*100*	*390*	*490*
Total Project Trip Generation									
Project Trip Subtotal [A + B = C]			13,680	600	180	780	410	630	1,040
Public Transit Reduction [5%*C = D]			-680	-30	-10	-40	-20	-30	-50
Total Project Trips [C + D = E]			13,000	570	170	740	390	600	990
Comparison									
FEIR Trip Generation [F]			16,660	660	270	930	560	740	1,300
Difference (Results Less than FEIR Estimates) [E - F = G]			-3,660	-90	-100	-190	-170	-140	-310

NOTES:

Trip Generation Estimates using the same mixed-use equations in the City of Santa Clara, *City Place Santa Clara Project Environmental Impact Report*, 2016, and updated built environment inputs.

Trip generation estimates do not account for transportation network company (TNCs) (e.g., Uber and Lyft) activity or other emerging trends like autonomous vehicles.

SOURCE: Fehr & Peers, 2020

These trip generation estimate were also used in the *City Place Santa Clara Phase 1 DAP Traffic Report* (ARUP, January 2020; see Attachment B), which is focused on the vehicle operations of the internal street network and access points for the Phase 1 DAP. This transportation analysis report is a requirement for each DAP per Exhibit MMRP 1 (see Attachment A). The report was submitted by the applicant and peer reviewed by City staff and a transportation consultant with specific focus on 1) the number of project trips to result and the allocation of such trips by building and/or uses, and 2) site access improvements required and the trip thresholds or development states at which those improvements must be construction. The *City Place Santa*

Clara Phase 1 DAP Traffic Report is focused on traffic operations analysis and street design purposes; rather than for CEQA environmental analysis reasons.

Baseline Condition Comparison

Also, as a part of the Phase 1 DAP Project analysis, a comparison of newer AM and PM peak hour counts provided by the City to the baseline volumes and Background forecasts (2020 volumes) was conducted to determine if the more recent counts (collected between November 2017 and November 2018) are similar to the vehicle volumes studied in the EIR. This count comparison was conducted at the following intersections near or adjacent to the project site:

- Tasman Drive and Patrick Henry Drive
- Tasman Drive and Old Ironsides Drive
- Tasman Drive and Great America Parkway
- Tasman Drive and Calle Del Sol
- Tasman Drive and Lick Mill Boulevard
- Great America Parkway and Great America Way
- Great America Parkway and Old Mountain View-Alviso Road
- Great America Parkway and Bunker Hill Lane
- Great America Parkway and Old Glory Lane
- Great America Parkway and Mission College Boulevard
- Great America Parkway and US 101 Northbound Ramps

The counts were compared on a turn by turn and an intersection total basis (see Attachment D of this Addendum Tables 1 to 3C for the AM peak hour and Tables 4 to 6C for the PM peak hour). The turn-by-turn comparison shows some variation; however, the turning movements that exhibit the greatest percentage variation are movements with low numbers of vehicles and the differences are insubstantial. The more aggregated comparisons at the intersection level show that the volumes used in the EIR are on average higher than the recent counts. Where the recent counts are higher than the previous counts contained in the EIR, they are lower than 2020 volumes forecasted in the EIR. Therefore, the updated information about background traffic conditions does not affect the current utility of the analysis or the significance determinations in the EIR, because the EIR projected more traffic than recent counts have identified. The traffic analysis in the EIR remains adequate, and no additional analysis is needed.

6.4.3 Conclusion

Based on an examination of the analysis, findings, and conclusions of the City Place EIR, implementation of the DAP 1 Project would not substantially increase the severity of significant impacts identified in the City Place EIR, nor would it result in new significant impacts related to traffic that were not identified in the City Place EIR. Mitigation measures **TRA-1.1, Vehicle Trip Reduction with Transportation Demand Management (TDM)**; **TRA-1.2, Intersection Improvements**; **TRA-1.3. Prepare and Implement a Multimodal Improvement Plan** (as of the

date of this Addendum, the City and applicant have entered into an MIP Funding Agreement under which the MIP measures are being funded.); **TRA-3.1, Freeway Segment Improvements**; **TRA-1a.1, Intersection Improvements for Existing with Project Phases 1, 2 and 3**; **TRA-6.1, Intersection Improvements With Access Variant Scheme**; **TRA-6.2, Intersection Improvements for Phases 1, 2 and 3**; **TRA-7.1, Sidewalk Gap Closure on Tasman Drive on the Lafayette Street overcrossing extending east to Calle Del Sol**; **TRA-14.1, Signalized Intersection Improvements**; **TRA-16.1, Intersection Improvements for Cumulative with-Project Access Variants**; **TRA-18.1, Construction Management**; and **TRA-19.1, Modified City's Traffic Management and Operations Plan (TMOP) and Prepare a Project-Specific Traffic and Parking Management Plan** (see Attachment A of this Addendum which includes the Mitigation Monitoring and Reporting Program) would be applicable to and would be implemented by the DAP 1 Project. These mitigation measures would ensure that impacts related to traffic would be equal to, or less severe than, those previously identified and disclosed in the EIR.

6.5 Air Quality

Would the project:	Equal or Less Severity of Impact Previously Identified in the City Place EIR	Substantial Increase in Severity of Previously Identified Significant Impact in the City Place EIR	New Significant Impact
a. Conflict with or obstruct implementation of the applicable air quality plan. For the purposes of this analysis, "conflict with or obstruct implementation" is defined as circumstances in which the project would worsen existing air quality violations or exceed the growth assumptions utilized by the City of Santa Clara and Association of Bay Area Governments (ABAG);	☒	☐	☐
b. Violate any air quality standard or substantially contribute to an existing or projected air quality violation. For the purposes of this analysis, "violate any air quality standard or substantially contribute to an existing or projected air quality violation" is defined as circumstances in which construction or operational emissions exceed the pertinent BAAQMD thresholds, as described under *Local Air District Thresholds* [see the City Place EIR Section 3.4];	☒	☐	☐
c. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is a nonattainment area for an applicable federal or State ambient air quality standard. For the purposes of this analysis, a "cumulatively considerable net increase" is defined as circumstances in which total direct emissions exceed BAAQMD thresholds identified in Table 3.4-5 [see the City Place EIR Section 3.4]. The emissions thresholds presented in Table 3.4-5 represent the average daily emissions that a project may generate before contributing to a cumulative impact on regional air quality. Therefore, exceedances of the project-level thresholds, as identified in Table 3.4-5, would be cumulatively considerable [see the City Place EIR Section 3.4];	☒	☐	☐
d. Expose sensitive receptors to substantial pollutant concentrations. For the purpose of this analysis, schools, daycare facilities, places of assembly, medical facilities, parks, and residences are considered sensitive receptor locations. A "substantial pollutant concentration" is defined as levels in excess of applicable BAAQMD thresholds, as described below under Local Air District Thresholds; or	☒	☐	☐
e. Create objectionable odors that would affect a substantial number of people. For the purpose of this analysis, an odor-producing facility, as defined by BAAQMD,7 creates an "objectionable odor" if it receives five complaints per year averaged over 3 years.	☒	☐	☐

6.5.1 City Place EIR Findings

The City Place EIR determined that construction of the Project would generate criteria pollutant emissions and toxic air contaminants. Mitigation measures associated with construction equipment and measures to reduce dust and emissions were identified to reduce these impacts to less-than-significant levels. The City Place EIR found that Project operations would result in

regional criteria pollution emissions in excess of BAAQMD thresholds. Mitigation measures were identified to exceed Title 24 energy efficiency requirements by 15 percent and to implement Transportation Demand Management (TDM) strategies to reduce mobile-source emissions; however, implementation of these mitigation measures would not reduce this impact to less-than-significant levels. Further, because the overall project will involve concurrent construction and operational activities, the EIR considered the impacts of the combined Project construction and operation, and it too would result in regional criteria pollution emissions in excess of BAAQMD thresholds. Even after implementation of the mitigation measures described above, these impacts were determined to be significant and unavoidable.

Although Project operations would also expose new on-site sensitive receptors to toxic air contaminant emissions, the resulting impact is considered an impact of the environment on a project is therefore not a CEQA impact. Nonetheless, a potential condition of approval requiring filtration systems was included for consideration by the City Council, which adopted it as Condition of Approval 6.

The City Place EIR determined that the Project would contribute to unplanned regional growth. Further, as noted above, the Project's long-term operational emissions would exceed BAAQMD's thresholds of significance even with mitigation incorporated. Accordingly, the EIR determined that the Project would conflict with implementation of the applicable air quality plan and the impact would be significant and unavoidable.

Potential Project impacts related to objectionable odors were found to be less than significant with mitigation. Impacts related to carbon monoxide hot spots and asbestos were found to be less than significant.

6.5.2 Project Analysis

The DAP 1 Project construction-related activity, including demolition, required infrastructure improvements on- and off-site, and general building locations and envelopes were anticipated and analyzed in the EIR. Although the DAP 1 Project site and square footage of development is slightly larger than what was analyzed in the EIR for Parcel 5, the potential for this change was anticipated with the EIR analysis of project variants and is well within the maximum build-out for the entire project. The DAP 1 Project construction-related activity would be well within the construction anticipated and analyzed in the EIR for the Project and thus within the impact envelope of the EIR. Impacts related to air quality would be the same as those identified in the EIR and described above, except that for Phase 1 there would be no simultaneous construction and occupancy, and so no combined impacts would result. All mitigation measures would apply including **AQ-2.1** through **AQ-2.4**, and **HAZ-2.1, Finalize Waste Management Plan for Construction** to reduce odor impacts from construction over the landfill.

The impacts of existing emissions on new Project occupants is not considered an impact under CEQA. The Project EIR provided a potential condition of approval for informational purposes for consideration by the City Council if it determined that the Project would expose new sensitive receptors to toxic air contaminant emissions and that these impacts should be addressed as part of the Project approval process outside of the CEQA context. However, because the DAP 1 Project is

Phase 1 and no residential uses or daycare centers exist on the project site or in the immediate vicinity at the time of this CEQA analysis, it would not expose sensitive receptors to toxic air contaminants during construction and the associated condition of approval adopted by the City Council as Condition of Approval 6 would not apply.

6.5.3 Conclusion

Based on an examination of the analysis, findings, and conclusions of the City Place EIR, implementation of the DAP 1 Project would not substantially increase the severity of significant impacts identified in the City Place EIR, nor would it result in new significant impacts related to air quality that were not identified in the City Place EIR. Mitigation measures **AQ-2.1, Utilize Clean Diesel-Powered Equipment during Construction to Control Construction-Related Reactive Organic Gas (ROG) and Oxides of Nitrogen (NOX) Emissions**; **AQ-2.2, Use Modern Fleet for On-Road Material Delivery and Haul Trucks during Construction**; **AQ-2.3, Implement Bay Area Air Quality Management District (BAAQMD) Additional Construction Mitigation Measures to Reduce Construction-Related Dust and Exhaust Emissions**; **AQ-2.4, Offset NOX Emissions Generated during Construction that Are above BAAQMD NOX Average Daily Emission Threshold**; **IM-AQ-1, Implement Measures to Reduce Construction-Related Dust Emissions**; **IM-AQ-2, Implement Measures to Reduce Construction-Related Exhaust Emissions**; **and HAZ-2.1, Finalize Waste Management Plan for Construction** (see Attachment A) would be applicable to and would be implemented by the DAP 1 Project. These mitigation measures would ensure that impacts related to air quality would be equal to, or less severe than, those previously identified and disclosed in the EIR.

6.6 Greenhouse Gas Emissions

Would the project:	Equal or Less Severity of Impact Previously Identified in the City Place EIR	Substantial Increase in Severity of Previously Identified Significant Impact in the City Place EIR	New Significant Impact
a. Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment. For the purposes of this analysis, a "significant impact" from GHG emissions would occur if emissions exceed thresholds described below; or	☒	☐	☐
b. Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs. For the purposes of this analysis, applicable plans include the AB 32 Scoping Plan and the City's CAP (consistency with the goals in EO B-30-15 and EO S-03-05 is also evaluated).	☒	☐	☐

6.6.1 City Place EIR Findings

The City Place EIR determined that, with implementation of the identified mitigation strategies, the applicable Project's emissions would not exceed BAAQMD significance thresholds, based on consistency with Assembly Bill 32's greenhouse gas reduction target for 2020, but would exceed BAAQMD's "Substantial Progress" efficiency metric for 2030. Therefore, the impact with respect to greenhouse gas (GHG) emissions was determined to be significant and unavoidable.

The Project was found to be consistent with Assembly Bill 32 Scoping Plan (less than significant), and, with implementation of GHG and Traffic mitigation measures, consistent with the Santa Clara Climate Action Plan (2013), although the Project was not included in the socioeconomic forecasts underlying the CAP, and so the project was not able to tier from the CAP for purposes of a significance determination. Mitigation measures were identified to utilize alternative fuels during construction and implement operational emissions reduction strategies, but these will not achieve the long-term GHG reduction targets of Executive Orders S-03-05 and B-30-15, and the impact with respect to plan consistency was found to be significant and unavoidable.

6.6.2 Project Analysis

Although slightly larger than what was analyzed for Parcel 5, the DAP 1 Project construction-related activity, including demolition, required infrastructure improvements on- and off-site, and general building locations and envelopes were anticipated and analyzed in the EIR. Therefore, relative to the overall Project, no increase in construction-related activity would occur and resulting emissions of GHG would be the same as those identified in the EIR and described above. To reduce GHG emissions from construction, the DAP 1 Project would be required to implement mitigation measures **HAZ-2.1, Finalize Waste Management Plan for Construction**; **AQ-2.4, Offset NOX Emissions Generated during Construction that Are above BAAQMD NOX Average Daily Emission Threshold**; and **GHG-1.1, Utilize Alternative Fuels during Construction**. Further, to reduce secondary impacts from required intersection improvements, the DAP 1 Project would be required to implement **IM-GHG-1, Utilize Alternative Fuels during Construction**.

To reduce GHG emissions from operations (including construction emissions amortized over 30 years), the DAP 1 Project would be required to implement mitigation measures related to construction listed above as well as mitigation measures **TRA-1.1, Vehicle Trip Reduction with Transportation Demand Management (TDM)** and **GHG-1.2, Operational GHG Emissions Reduction Measures**. Whether or not the DAP 1 Project's operational emissions would exceed BAAQMD's "Substantial Progress" efficiency metric for 2030 would be determined through the process of implementing of **GHG-1.2**. Should the process disclose that the DAP 1 Project would exceed this threshold, the resulting significant and unavoidable impact would still be within the impact envelope of the EIR.

6.6.3 Conclusion

Based on an examination of the analysis, findings, and conclusions of the City Place EIR, implementation of the DAP 1 Project would not substantially increase the severity of significant impacts identified in the City Place EIR, nor would it result in new significant impacts related to GHG emissions that were not identified in the City Place EIR. Mitigation measures **GHG-1.1, Utilize Alternative Fuels during Construction**; **GHG-1.2, Operational GHG Emissions Reduction Measures**; **IM-GHG-1, Utilize Alternative Fuels during Construction**; **AQ-2.4, Offset NOX Emissions Generated during Construction that Are above BAAQMD NOX Average Daily Emission Threshold**; **HAZ-2.1, Finalize Waste Management Plan for Construction**; and **TRA-1.1, Vehicle Trip Reduction with Transportation Demand Management (TDM)** (see Attachment A) would be applicable to and would be implemented by the DAP 1 Project. These mitigation measures would ensure that impacts related to GHG emissions would be equal to, or less severe than, those previously identified and disclosed in the EIR.

6.7 Noise

Would the project:	Equal or Less Severity of Impact Previously Identified in the City Place EIR	Substantial Increase in Severity of Previously Identified Significant Impact in the City Place EIR	New Significant Impact
a. Expose persons to or generate noise levels in excess of standards established in a local general plan or noise ordinance or applicable standards of other agencies;	☒	☐	☐
b. Expose persons to or generate excessive ground-borne vibration or ground-borne noise levels;			
c. Result in a substantial permanent increase in ambient noise levels in the Project vicinity above levels existing without the Project;	☒	☐	☐
d. Result in a substantial temporary or periodic increase in ambient noise levels in the Project vicinity above levels existing without the Project;	☒	☐	☐
e. Be located within an airport land use plan area or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport and expose people residing or working in the Project area to excessive noise levels; or	☒	☐	☐
f. Be located in the vicinity of a private airstrip and expose people residing or working in the Project area to excessive noise levels.	☒	☐	☐

6.7.1 City Place EIR Findings

While the project site is located within an airport land use plan area and near the San Jose International Airport, there are no private airstrips in the Project site vicinity and no related noise impact would occur. The City Place EIR identified mitigation measures to prepare and implement a construction noise control plan that would reduce Project impacts related to construction noise for both on-site and off-site land uses. Project operations, however, would result in significant and unavoidable impacts for off-site land uses, primarily associated with increased traffic noise. Although the EIR imposed mitigation measures to construct noise barriers and implement an off-site noise control plan, the impact would remain significant unavoidable even with implementation of mitigation measures.

Regarding ground-borne vibration, mitigation measures addressing pile driving were found to mitigate noise impacts to on-site receptors. No ground-borne vibration impacts were identified for off-site receptors.

Significant noise and vibration impacts for on-site land uses related to traffic noise, light rail service, passenger train service, and San Jose International Airport operations are considered to be impacts of the environment on a project and therefore not CEQA impacts. Nonetheless, potential strategies to address the noise and vibration problems, including a design-level operational vibration control plan, were included for consideration by the City Council, which the Council adopted as Condition of Approval 8.

6.7.2 Project Analysis

The DAP 1 Project would be developed on the same project site and thus would have no noise impact related to private airstrips. There are no existing on-site receptors and therefore the DAP 1 Project would not result in impacts related to ground-borne vibration.

The DAP 1 Project construction-related activity, including demolition, required infrastructure improvements on- and off-site, and general building locations and envelopes were anticipated and analyzed in the EIR. Although the DAP 1 Project site and square footage of development is slightly larger than what was analyzed in the EIR for Parcel 5, the potential for this change was anticipated with the EIR analysis of project variants. Further, the DAP 1 Project development and associated construction is well within the maximum build-out for the entire project and thus within the impact envelope of the EIR. Therefore, construction-related noise impacts would be reduced to less-than-significant levels with implementation of mitigation measures **NOI-1.1, Prepare and Implement a Construction Noise Control Plan to Reduce Construction Noise at Adjacent Land Uses**; **NOI-1.2, Implement Off-Site Traffic Noise Reduction Measures,** and **NOI-2.1, Restrict Pile Driving**.

The DAP 1 Project would include outdoor residential areas located within the San José International Airport's 65 decibel Community Noise Equivalent Level contour and would therefore result in a land use conflict with the Comprehensive Land Use Plan for San José International Airport. Consistent with the EIR, the impact would remain significant and unavoidable even with implementation of **NOI-5.1, Prepare and Implement a Noise Control Plan to Reduce Interior Noise at Sensitive Land Uses**.

6.7.3 Conclusion

Based on an examination of the analysis, findings, and conclusions of the City Place EIR, implementation of the DAP 1 Project would not substantially increase the severity of significant impacts identified in the City Place EIR, nor would it result in new significant impacts related to noise that were not identified in the City Place EIR. Mitigation measures **NOI-1.1, Prepare and Implement a Construction Noise Control Plan to Reduce Construction Noise at Adjacent Land Uses**; **NOI-1.2, Implement Off-Site Traffic Noise Reduction Measures; NOI-2.1, Restrict Pile Driving**; and **NOI-5.1, Prepare and Implement a Noise Control Plan to Reduce Interior Noise at Sensitive Land Uses** (see Attachment A) would be applicable to and would be implemented by the DAP 1 Project. These mitigation measures would ensure that impacts related to noise would be equal to, or less severe than, those previously identified and disclosed in the EIR.

6.8 Cultural Resources

Would the project:	Equal or Less Severity of Impact Previously Identified in the City Place EIR	Substantial Increase in Severity of Previously Identified Significant Impact in the City Place EIR	New Significant Impact
a. Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5;	☒	☐	☐
b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5;	☒	☐	☐
c. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature; or	☒	☐	☐
d. Disturb any human remains, including those interred outside of formal cemeteries.	☒	☐	☐

6.8.1 City Place EIR Findings

Although the City Place EIR found that there was a potential for Project impacts to previously undiscovered archaeological and paleontological resources and human remains, the EIR imposed mitigation measures including resource monitoring and stop-work plans for discovery of resources and remains, which resulted in a less than significant impact with mitigation. The structures to be demolished as part of the Project were not more than 50 years old and were not eligible for the California Register of Historical Resources. Therefore, no historical structures would be affected by the Project and no impact was identified.

6.8.2 Project Analysis

All of the buildings on the project site were constructed between 1984 and 1999 and therefore none of these structures are more than 50 years old at the time of this CEQA analysis. Therefore, consistent with the findings in the EIR, the DAP 1 Project would not affect any historical structures.

The DAP 1 Project construction-related activity, including demolition, required infrastructure improvements on- and off-site, and general building locations and envelopes were anticipated and analyzed in the EIR. Further, the DAP 1 Project would be developed on the same project site with the same potential impacts to archaeological and paleontological resources and human remains. All related mitigation measures would apply. Specifically, DAP 1 Project construction is anticipated to require excavation for two levels of below grade parking and piles greater than 30 feet in depth in native soils and therefore mitigation measures **CR-1.1, Conduct Extended Phase I (XPI) Archaeological Investigations within the Project Site near Recorded Resources and within an Area of Archaeological Sensitivity**; **CR-1.2, Provide Archaeological Monitoring of the Project Site When in Native Soil**; **CR-1.3, Stop Work if Cultural Resources Are Encountered during Ground- Disturbing Activities**; **CR-2.1, Paleontological Resource Mitigation Plan**; **CR-2.2, Paleontological Resource Monitoring** (each of which will include the requirements of **CR-2.3, Paleontological Resource Reporting**); and **CR-3.1, Stop work if human remains are encountered during ground-disturbing activities** would apply.

For potential secondary cultural resources impacts associated with intersection improvements required as traffic mitigations, mitigation measures **IM-CR-1, Conduct Cultural Resource Investigations and Protect and Recover Significant Resources** and **IM-CR-2, Stop Work if Cultural Resources Are Encountered during Ground-Disturbing Activities** would be required and would be implemented by the City of Santa Clara. Mitigation measure **IM-CR-3, Stop Work if Human Remains Are Encountered during Ground- Disturbing Activities** (also referred to as CR-3.1) would be required of the project developer.

6.8.3 Conclusion

Based on an examination of the analysis, findings, and conclusions of the City Place EIR, implementation of the DAP 1 Project would not substantially increase the severity of significant impacts identified in the City Place EIR, nor would it result in new significant impacts related to cultural resources that were not identified in the City Place EIR. Mitigation measures **CR-1.1, Conduct Extended Phase I (XPI) Archaeological Investigations within the Project Site near Recorded Resources and within an Area of Archaeological Sensitivity**; **CR-1.2, Provide Archaeological Monitoring of the Project Site When in Native Soil**; **CR-1.3, Stop Work if Cultural Resources Are Encountered during Ground- Disturbing Activities**; **CR-2.1, Paleontological Resource Mitigation Plan; CR-2.2, Paleontological Resource Monitoring** (CR-2.1 and CR-2.2 will include the requirements of **CR-2.3, Paleontological Resource Reporting**); **CR-3.1, Stop work if human remains are encountered during ground-disturbing activities; IM-CR-1, Conduct Cultural Resource Investigations and Protect and Recover Significant Resources**; **IM-CR-2, Stop Work if Cultural Resources Are Encountered during Ground-Disturbing Activities**; and **IM-CR-3, Stop Work if Human Remains Are Encountered during Ground- Disturbing Activities** (also referred to as CR-3.1) (see Attachment A) would be applicable to and would be implemented by the DAP 1 Project, and would ensure that impacts related to cultural resources would be less than significant.

Mitigation and Avoidance Measures	Action	Implementing Party	Monitoring Party	Timing[1]
AESTHETICS (cont.)				
AES-2.1: Installation of Low-Profile Lighting. The Project Developer shall install low-profile, low-intensity lighting directed downward to minimize light and glare.	Project Developer to submit catalog cuts of the fixtures proposed to the City demonstrating compliance.	Project Developer	City Planning & Inspection Division	Concurrent with Architectural Review submittal, which may be included within Development Area Plans
AES-2.2: Installation of Shielded Fixtures. The Project Developer shall use shielded fixtures for street lighting and park lighting to minimize spill onto the public right-of- way and glare produced by the lighting on the Project site.	Project Developer to submit catalog cuts of the fixtures proposed to the City demonstrating compliance.	Project Developer	City Planning & Inspection Division	Concurrent with Architectural Review submittal, which may be included within Development Area Plans
AES-2.3: Treat Reflective Surfaces. The Project Developer shall ensure application of low-emissivity glass at exterior surfaces of the proposed structures for the purpose of reducing reflection of visible light that strikes the glass exterior and reduction in the amount of interior light being emitted through the glass.	Project Developer to provide evidence that low-emissivity glass at exterior surfaces will be used.	Project Developer	City Planning & Inspection Division	Concurrent with Architectural Review submittal, which may be included within Development Area Plans
AES-2.4: Provide Obstruction for Glare from Vehicle Headlights in the Proposed Garages. The Project Developer shall ensure that through the architectural design of the parking garages and through or in combination with landscaping or physical screening at the parking structures glare from vehicle headlights shall be screened from off-site viewers.	Project Developer to provide garage sections to City showing how vehicle headlights in the proposed garages will be obstructed.	Project Developer	City Planning & Inspection Division	Concurrent with Architectural Review submittal, which may be included within Development Area Plans

6.9 Biological Resources

Would the project:	Equal or Less Severity of Impact Previously Identified in the City Place EIR	Substantial Increase in Severity of Previously Identified Significant Impact in the City Place EIR	New Significant Impact
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 DFW or FWS;	☒	☐	☐
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 DFW or FWS;	☒	☐	☐
c. Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marshes, vernal pools, coastal wetlands, 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.	☒	☐	☐

6.9.1 City Place EIR Findings

The City Place EIR identified significant impacts related to the movement of native migratory wildlife species, burrowing owl habitat, the western pond turtle, Central California Coast steelhead, chinook salmon, and loss or damage to wetland and other waters. Mitigation measures were identified for each of these significant impacts to monitor for and protect such species and replace habitat lost during construction; implementation of these measures would reduce Project impacts to less-than-significant levels.

The Project would adhere to the City of Santa Clara General Plan, Policy 5.3.1-P10, which requires developments to replace trees at a ratio of 2:1 (replaced/lost), pursuant to which the developer will be required to plant as many as 2,810 new trees on the project site, and up to 676 additional trees could be planted on off-site removal locations. A separate policy in the General Plan, 5.10.1-P3, protects heritage trees, but there are no heritage trees located on the Project Site. Through adherence to Policy 5.3.1-P10, the impact to trees was determined to be less than significant.

No special-status plant species were documented on the Project site and no impact on special-status plant species was identified for the Project. As also noted in Section 6.2, *Land Use and Planning*, the Project would have no impact on a Habitat Conservation Plan or a Natural Community Conservation Plan.

6.9.2 Project Analysis

The DAP 1 Project would be constructed on the same project site that was analyzed in the EIR, which does not contain special-status plant species, and thus the DAP 1 Project would have no impact on special-status plant species. Also, development on Parcel 5 would not involve construction, operations, or maintenance on the riverbank, or in areas within 200 feet of the Guadalupe River. Therefore, the DAP 1 Project would not result in potentially significant impacts to the Central California Coast steelhead, chinook salmon or related critical habitat and mitigation measure **BIO-4.1, Protect Central California Coast Steelhead, Critical Habitat, and Chinook Salmon**, would not apply. However, as described in the EIR, development on Parcel 5 would contribute to potential impacts to the movement of native migratory wildlife species, burrowing owl habitat, the western pond turtle, and loss or damage to wetland and other waters. The DAP 1 Project would implement all biological resources mitigation measures identified in the EIR to address these impacts and would adhere to City of Santa Clara General Plan, Policy 5.3.1-P10 related to heritage trees. Therefore, as with the Project, the DAP 1 Project's impacts related to biological resources would be less than significant with applicable mitigation measures.

6.9.3 Conclusion

Based on an examination of the analysis, findings, and conclusions of the City Place EIR, implementation of the DAP 1 Project would not substantially increase the severity of significant impacts identified in the City Place EIR, nor would it result in new significant impacts related to biological resources that were not identified in the City Place EIR. Mitigation measures **BIO-1.1, Protect Nesting Birds**; **BIO-1.2, Implement Bird-Safe Design Standards into Project Buildings and Lighting Design**; **BIO-2.1, Detection of Burrowing Owls; BIO-2.2, Mitigation for Loss of Burrowing Owl Habitat during Construction**; **BIO-3.1, Protect Western Pond Turtles; BIO-5.1, Protect Retention Pond and Eastside Retention Drainage Swale, and San Tomas Aquino Creek and the Guadalupe River Aquatic Habitat during Construction**; **BIO-5.2, Compensate for Loss of Waters of the U.S. and State (including Wetlands)**; **BIO-C.1, Make a Fair-Share Nitrogen Deposition Fee Contribution to the Santa Clara Habitat Agency's Voluntary Fee Payment Program; IM-BIO-1, Replace Removed Trees; IM-BIO-2, Preconstruction Surveys; IM-BIO-3, Site-Specific Surveys and Species/Habitat Avoidance, Minimization, and Compensation Measures** (see Attachment A) would be applicable to and would be implemented by the DAP 1 Project, and would ensure that impacts related to biological resources would be less than significant.

6.10 Geology and Soils

Would the project:	Equal or Less Severity of Impact Previously Identified in the City Place EIR	Substantial Increase in Severity of Previously Identified Significant Impact in the City Place EIR	New Significant Impact
a. Expose people or structures to substantial 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 or Seismic Hazards Map issued by the State Geologist for the area or based on other substantial evidence of a known fault; • Strong seismic ground shaking; • Seismic-related ground failure, including liquefaction, lateral spreading, subsidence, collapse; or • 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 an on-site 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), or on corrosive subsurface materials, creating substantial risks to life or property; or	☒	☐	☐
e. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems in areas where sewers are not available for the disposal of wastewater.	☒	☐	☐

6.10.1 City Place EIR Findings

No septic tanks or alternative wastewater systems are proposed as a part of the Project and no related impact would occur. The project site is not within a mapped Earthquake Fault Zone and the City Place EIR determined that impacts related to ground shaking or a seismic event were less-than-significant. The City Place EIR found potentially significant impacts with respect to settlement, liquefaction, slope instability, expansive soils, and corrosive soils, but concluded that such impacts to geology and soils would be less than significant with implementation of mitigation measures, such as preparation and implementation of a detailed grading and erosion control plan, geotechnical reports, construction quality assurance plans, and a site operation, monitoring, and maintenance plan.

6.10.2 Project Analysis

The DAP 1 Project construction-related activity, including demolition, required infrastructure improvements on- and off-site, and general building locations and envelopes were anticipated and analyzed in the EIR. Further, the DAP 1 Project would be developed on the same project site with the same geology and soils, subject to the same or more stringent building codes. Therefore, all related mitigation measures would apply.

Only Parcels 1 through 4 are considered to be all or partly over landfill and therefore mitigation measure **GEO-2.6, Review and Approval by Relevant Regulatory Agencies** applies only to those parcels. A very small portion of the Phase 1 infrastructure work—the planned connection between proposed Avenue C and relocated Stars and Stripes Drive—would be in Parcel 4. The project applicant is therefore not required to implement this mitigation measure for the bulk of the DAP 1 work that is on Parcel 5, but is required to implement this mitigation measure prior to obtaining a permit for grading this small portion of Phase 1 work on Parcel 4; the grading permit for this work will be obtained separately from, and after, the grading permit for the remainder of Phase 1.

6.10.3 Conclusion

Based on an examination of the analysis, findings, and conclusions of the City Place EIR, implementation of the DAP 1 Project would not substantially increase the severity of significant impacts identified in the City Place EIR, nor would it result in new significant impacts related to geology and soils that were not identified in the City Place EIR. Mitigation measures **GEO-1.1, Detailed Grading and Erosion Control Plan**; **GEO-2.1, Design-Level Geotechnical Investigation**; **GEO-2.2, Final Geotechnical Report Review**; **GEO-2.3, Construction Quality Assurance Plan**; **GEO-2.4, Final Project Design Review**; **GEO-2.5, Site Operation, Monitoring, and Maintenance Plan**; **GEO-2.6, Review and Approval by Relevant Regulatory Agencies**; and **IM-GEO-1, Prepare a Geotechnical Investigation** (see Attachment A) would be applicable to and would be implemented by the DAP 1 Project, and would ensure that impacts related to geology and soils would be less than significant.

6.11 Hydrology and Water Quality

Would the project:	Equal or Less Severity of Impact Previously Identified in the City Place EIR	Substantial Increase in Severity of Previously Identified Significant Impact in the City Place EIR	New Significant Impact
a. Violate any water quality standards or WDRs;	☒	☐	☐
b. Substantially deplete groundwater supplies or interfere substantially with groundwater recharge, resulting in a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted);			
c. Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or proposed uses for which permits have been granted);	☒	☐	☐
d. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on-site or off-site;	☒	☐	☐
e. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on-site or off-site;	☒	☐	☐
f. Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff;	☒	☐	☐
g. Otherwise substantially degrade water quality;	☒	☐	☐
h. Place housing within a 100-year flood hazard area, as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map;	☒	☐	☐
i. Place within a 100-year flood hazard area structures that would impede or redirect flood flows;			
j. Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam; or	☒	☐	☐
k. Contribute to inundation by seiche, tsunami, or mudflow.	☒	☐	☐

6.11.1 City Place EIR Findings

The City Place EIR determined there would be no impact related to seiche, tsunami, or mudflow because project site is not within a tsumani inundation area or a designated landslide area and there are no reservoirs adjacent to the project area.

The Project would not result in a significant decrease in infiltration and groundwater recharge and would result in less than significant impacts with respect to groundwater supplies. The Project would result in additional water demand for both surface and groundwater resources. This impact is addressed in Section 6.15, *Utilities*.

The City Place EIR found all other hydrology and water quality impacts, including those related to water quality standards, drainage, and stormwater runoff, would be less than significant with implementation of mitigation measures.

Impacts related to placing structures within the 100-year flood zone are considered to be impacts of the environment on a project therefore not CEQA impacts. Nonetheless, a potential condition of approval requiring flood warnings for areas subject to flooding was included for consideration by the City Council, and was adopted by the Council as Condition of Approval 9. The City Place EIR found that the risk of dam failure affecting the project site is considerably remote and the potential impacts related to the failure of a levee or dam were less than significant. This impact also is considered to be an impact of the environment on a project and therefore not a CEQA impact.

6.11.2 Project Analysis

The DAP 1 Project site was included in the EIR analysis and the finding of no impact related to seiche, tsunami, or mudflow would be the same.

The DAP 1 Project construction-related activity, including demolition, required infrastructure improvements on- and off-site, and general building locations and envelopes were anticipated and analyzed in the EIR. This includes the addition of new impervious surfaces and changes to groundwater recharge. The DAP 1 Project would develop a storm drainage system that would connect to the existing pump station located by the existing tennis courts via an underground gravity network of pipes, catch basin, manholes, water quality treatment measures and other appurtenances. Internal pipes would connect the DAP 1 Project building drainage to the storm drains. The new public streets that would be developed as a part of the DAP 1 Project would be designed such that the 100-year event flow would remain within the roadway limits and not extend into private property. The DAP 1 Project would be required to implement mitigation measure **WQ-1.1, Design and Implement Stormwater Control Measures**. Further, to reduce secondary impacts from required intersection improvements, **IM-WQ-1, Prepare a Hydrology and Water Quality Technical Report** would also apply to the DAP 1 Project (see Section 6.4, *Transportation*). Consistent with the conclusions of the EIR, DAP 1 Project's potential hydrology and water quality impacts would be less-than-significant with implementation of mitigation measures.

Mitigation measure **WQ-3.1, Design New Bridge and Outfall Structures to Avoid Increase in 100-year Flow and Channel Erosion** would not apply to the DAP 1 Project as no new bridge or outfall structures would be required.

6.11.3 Conclusion

Based on an examination of the analysis, findings, and conclusions of the City Place EIR, implementation of the DAP 1 Project would not substantially increase the severity of significant impacts identified in the City Place EIR, nor would it result in new significant impacts related to

hydrology and water quality that were not identified in the City Place EIR. Mitigation measures **WQ-1.1, Design and Implement Stormwater Control Measures**; and **IM-WQ-1, Prepare a Hydrology and Water Quality Technical Report** (see Attachment A) would be applicable to and would be implemented by the DAP 1 Project, and would ensure that impacts related to hydrology and water quality would be less than significant.

6.12 Hazards and Hazardous Materials

Would the project:	Equal or Less Severity of Impact Previously Identified in the City Place EIR	Substantial Increase in Severity of Previously Identified Significant Impact in the City Place EIR	New Significant Impact
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 which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 (i.e., the "Cortese List") and, as a result, would create a significant hazard to the public or the environment;	☒	☐	☐
e. For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, result in a safety hazard for people residing or working in the project area;	☒	☐	☐
f. Impair or physically interfere with an adopted emergency response plan or emergency evacuation plan;	☒	☐	☐
g. Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands; or	☒	☐	☐
h. Expose people or structures to a significant risk of loss, injury, or death involving subsurface fires caused by the heating of landfill waste materials.	☒	☐	☐

6.12.1 City Place EIR Findings

The project site is surrounded by urban development and there are no private airstrips in the Project site vicinity. Therefore, there would be no impact related to private airstrips or wildland fire hazards.

The City Place EIR determined that Project operations would have a less-than-significant impact with respect to routine hazardous materials use and, as further detailed in the air quality analysis, the potential hazards to the closest school (0.2 miles from the project site) would also be less than significant. The Project would be consistent with the San Jose International Airport's Airport Influence Area restrictions and with the City's Local Hazards Mitigation Plan. Therefore, the Project would result in less-than-significant impacts with respect to aviation hazards and emergency access.

Other hazards and hazardous materials impacts include the potential for accidental release of hazardous materials during construction; the presence of hazardous materials in areas not underlain by the landfill; landfill-related hazards including the potential significant hazard to human health

from landfill gas, contaminated soils or groundwater, and subsurface fires related to the landfill. Further, project construction would disturb existing leachate collection and removal systems (LCRSs) which could impact groundwater quality. The City Place EIR concluded that each of these hazards and hazardous materials impacts would be less than significant with implementation of mitigation measures.

6.12.2 Project Analysis

The DAP 1 Project's proposed land uses and general building locations and envelopes were anticipated and analyzed in the EIR and impacts related to private and public air strips, schools, and wildland fire hazards would be the same as those identified in the EIR. The DAP 1 Project site includes Parcel 5, construction over the tennis courts, and structures within 1,000 feet of the landfill. Although the DAP 1 Project site and square footage of development is slightly larger and the construction-related activity is more than what was analyzed in the EIR for Parcel 5, the potential for this change was anticipated with the EIR analysis of project variants. Only Parcels 1 through 4 are considered to be all or partly over landfill. A very small portion of the DAP 1 Project, Phase 1 infrastructure work—the planned connection between proposed Avenue C and relocated Stars and Stripes Drive—would be in Parcel 4 and therefore over landfill. The DAP 1 Project would not include any structures on Parcel 4 or over the landfill itself.

The EIR identified mitigation measures **HAZ-5.1, Phase II Site Investigation**; **HAZ-5.2, Soil and Groundwater Management Plan**; and **HAZ-5.3, Implement Measures Included in CCR Title 27, Section 21190(g)** to reduce potential hazards impacts from development on Parcel 5 and the vicinity to a less-than-significant level. Further, to reduce secondary impacts from required intersection improvements, **IM-HAZ-1, Prepare a Phase I Environmental Site Assessment**, would also apply to the DAP 1 Project (see Section 6.4, *Transportation*). These measures would apply to the DAP 1 Project.

Only Parcels 1 through 4 are considered to be all or partly over landfill and therefore mitigation measures **HAZ-2.1, Finalize Waste Management Plan for Construction; HAZ 4.1** through **HAZ-4.6; HAZ 6.1, Finalize Draft Technical Memorandum: Leachate Collection and Removal System**; **HAZ 9.1, Subsurface Fire Prevention, Detection, and Response Plan**; and **HAZ-9.2, Subsurface Fire Prevention and Detection Measures**; and **HAZ-9.3 Subsurface Fire Suppression** apply only to those parcels. A very small portion of the Phase 1 infrastructure work—the planned connection between proposed Avenue C and relocated Stars and Stripes Drive—is in Parcel 4. The project applicant is therefore not required to implement these mitigation measures for the bulk of the DAP 1 work that is on Parcel 5, but is required to implement these mitigation measures prior to obtaining a permit for grading this small portion of Phase 1 work on Parcel 4; the grading permit for this work would be obtained separately from, and after, the grading permit for the remainder of Phase 1.

6.12.3 Conclusion

Based on an examination of the analysis, findings, and conclusions of the City Place EIR, implementation of the DAP 1 Project would not substantially increase the severity of significant impacts identified in the City Place EIR, nor would it result in new significant impacts related to

hazards and hazardous materials that were not identified in the City Place EIR. Mitigation measures **HAZ-2.1, Finalize Waste Management Plan for Construction**; **HAZ-4.1, Landfill Closure, Monitoring, and Maintenance Plans**; **HAZ-4.2, Landfill Gas Collection and Removal System**; **HAZ-4.3, Landfill Gas Protection System**; **HAZ-4.4, Landfill Gas Monitoring and Control System Maintenance**; **HAZ-4.5, Building Restrictions**; **HAZ-4.6, Landfill Hazards Disclosure**; **HAZ-5.1, Phase II Site Investigation**; **HAZ-5.2, Soil and Groundwater Management Plan**; **HAZ-5.3, Implement Measures Included in CCR Title 27, Section 21190(g)**; **HAZ-9.1, Subsurface Fire Prevention, Detection, and Response Plan**; **HAZ-9.2, Subsurface Fire Prevention and Detection Measures**; **HAZ-9.3 Subsurface Fire Suppression**; and **IM-HAZ-1, Prepare a Phase I Environmental Site Assessment** (see Attachment A) would be applicable to the extent described above and would be implemented by the DAP 1 Project in the manner described above, and would ensure that impacts related to hazards and hazardous materials would be less than significant

6.13 Population and Housing

Would the project:	Equal or Less Severity of Impact Previously Identified in the City Place EIR	Substantial Increase in Severity of Previously Identified Significant Impact in the City Place EIR	New Significant Impact
a. Induce substantial 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 a substantial number of existing housing units, necessitating the construction of replacement housing elsewhere; or	☒	☐	☐
c. Displace a substantial number of people, necessitating the construction of replacement housing elsewhere.	☒	☐	☐

6.13.1 City Place EIR Findings

No residential buildings would be demolished as a part of the Project and there would be no impact related to the displacement of housing. Although the Project would displace approximately 510 on- and off-site workers from existing commercial operations to be demolished, these workers could be accommodated within the proposed project or existing surrounding office, industrial, and warehouse sites and the impact would be less-than-significant.

The Project would result in new on-site population including construction workers, residents, employees, and guests. The City Place EIR found that new housing demand from Project employees would not result in a significant impact as the demand would represent just over 20 percent of the City's projected household growth between 2015 and 2040.

6.13.2 Project Analysis

The DAP 1 Project site does not include any existing residents, and thus its implementation would have no impact related to the displacement of housing and a less-than-significant impact related to the displacement of on- and off-site workers.

The DAP 1 Project would provide a mix of uses, including residential, hotel, retail, and office uses generally on Parcel 5. Although the DAP 1 Project site and square footage of development is slightly larger than what was analyzed in the EIR for Parcel 5, the potential for this change was anticipated with the EIR analysis of project variants. Further, the DAP 1 Project land uses and associated population growth (construction workers, residents, employees, and guests) are well within the maximum build-out for the entire project and thus within the impact envelope of the EIR. Impacts related to population and housing would be the same as those identified in the EIR.

6.13.3 Conclusion

Based on an examination of the analysis, findings, and conclusions of the City Place EIR, implementation of the DAP 1 Project would not substantially increase the severity of significant impacts identified in the City Place EIR, nor would it result in new significant impacts related to population and housing that were not identified in the City Place EIR.

6.14 Public Services and Recreation

Would the project:	Equal or Less Severity of Impact Previously Identified in the City Place EIR	Substantial Increase in Severity of Previously Identified Significant Impact in the City Place EIR	New Significant Impact
a. 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 fire protection, police protection, schools, parks, or other public services and facilities;	☒	☐	☐
b. Increase the use of existing neighborhood or regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated; or	☒	☐	☐
c. Include recreational facilities or require the construction or expansion of recreational facilities which might have a substantial adverse physical effect on the environment.	☒	☐	☐

6.14.1 City Place EIR Findings

The City Place EIR found less-than-significant impacts related to public services and recreational facilities; no mitigation measures were warranted.

6.14.2 Project Analysis

The DAP 1 Project land uses and associated demand for public services are well within the maximum build-out for the entire project and thus within the impact envelope of the EIR.

The DAP 1 Project would provide a mix of uses, including residential, hotel, retail, and office uses generally on Parcel 5. Although the DAP 1 Project site is slightly larger than what was analyzed in the EIR for Parcel 5 and would require demolition of the existing Santa Clara Fire Station 10, the potential for this change was anticipated within the EIR analysis of the Project and project variants. The DAP 1 Project would include the temporary relocation of Fire Station 10 personnel to Fire Station 8 where they will remain until completion and occupancy of the new replacement Fire Station 10. The demolition, temporary relocation, and replacement of Fire Station 10 was analyzed in the EIR for the development of Parcel 4. The EIR determined that no suspension of service or significant environmental impacts would result. Potential construction-related impacts associated with the replacement fire station was analyzed throughout the EIR.

The DAP 1 Project would defer to Phase 2 the development of the public park open space requirements for residential units. This deferral is provided for in the project development agreement. The DAP 1 Project residential uses could be occupied prior to the development of Phase 2 open space, resulting in a temporary increase in demand for existing recreational facilities. As noted in the EIR, new residents and employees could use the nearby park facilities, such as Fairway Glen Park, the Santa Clara Youth Soccer Park, the Ulistac Natural Area, the

San Tomas Aquino/Saratoga Creek Trail, and the Guadalupe River Trail. These parks and trails with benches, pathways, and other socializing and exercise spaces could attract new residents and employees due to their proximity. Therefore, although required open space might not be developed concurrently with the DAP 1 Project, the impact would be less than significant due to the temporary nature of the increased demand and the availability of ample nearby recreational facilities. Impacts related to recreation would be the same as those identified in the EIR.

6.14.3 Conclusion

Based on an examination of the analysis, findings, and conclusions of the City Place EIR, implementation of the DAP 1 Project would not substantially increase the severity of significant impacts identified in the City Place EIR, nor would it result in new significant impacts related to public services and recreation that were not identified in the City Place EIR.

6.15 Utilities and Service Systems

Would the project:	Equal or Less Severity of Impact Previously Identified in the City Place EIR	Substantial Increase in Severity of Previously Identified Significant Impact in the City Place EIR	New Significant Impact
a. Exceed wastewater treatment requirements of the San Francisco Bay Regional Water Quality Control Board;	☒	☐	☐
b. Require or result in construction of new storm water drainage facilities or expansion of existing facilities, construction of which could cause significant environmental effects;	☒	☐	☐
c. Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;	☒	☐	☐
d. Have insufficient water supplies available to serve the project from existing entitlements and resources, or would new or expanded entitlements be needed;	☒	☐	☐
e. Result in a determination by the wastewater treatment provider which serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the providers' existing commitments;	☒	☐	☐
f. Be served by a landfill with insufficient permitted capacity to accommodate the project's solid waste disposal needs;	☒	☐	☐
g. Violate applicable federal, state, and local statutes and regulations related to solid waste; or	☒	☐	☐
h. Result in wasteful, inefficient, or unnecessary energy use.	☒	☐	☐

6.15.1 City Place EIR Findings

The City Place EIR concluded that the Project would not generate unique types of solid waste that would conflict with existing regulations applicable to solid waste disposal and there would be no impact related to solid waste regulation. The Water Supply Assessment (WSA) prepared for the Project demonstrated that sufficient water supplies exist to accommodate the Project's total water demand. The EIR also found that sufficient permitted landfill capacity exists to accommodate the Project's solid waste disposal needs. These impacts were determined to be less than significant.

The City Place EIR found significant impacts related to the Project's required water delivery and stormwater drainage systems. Construction of public water mains over landfills are prohibited and thus both on- and off-site improvements would be required. Similarly, the Project's proposed stormwater drainage system could require both on- and off-site improvements. Construction of these improvements would be mitigated to a less-than-significant level with implementation of all relevant mitigation measures included for construction within the City Place EIR.

The City Place EIR concluded that the Project would contribute considerably to the need for additional off-site wastewater delivery systems due to future insufficient pumping capacity. This

is considered a significant cumulative impact that would be mitigated to a less-than-significant level through a fair-share contribution to the City for necessary upgrades.

The EIR determined that any potential for the Project to use energy in a wasteful, inefficient, or unnecessary manner would be mitigated to a less-than-significant level through mitigation measures related to greenhouse gas and transportation in addition to all relevant mitigation measures included for construction within the City Place EIR.

Although the City Place EIR found a less-than-significant impact with respect to landfill capacity and significant but mitigable impacts with respect to efficient energy use and energy demands, these impacts were nonetheless found to have a considerable contribution to existing cumulative impacts. These cumulative impacts were determined to be significant and unavoidable.

6.15.2 Project Analysis

The DAP 1 Project construction-related activity, including demolition, required infrastructure improvements on- and off-site, and general building locations and envelopes were anticipated and analyzed in the EIR. Although the DAP 1 Project site and square footage of development is slightly larger than what was analyzed in the EIR for Parcel 5, the potential for this change was anticipated with the EIR analysis of project variants. Further, the DAP 1 Project is well within the maximum build-out for the entire project and thus within the impact envelope of the EIR. Impacts related to utilities and service would be the same as those identified in the EIR.

Although the EIR identified mitigation measure **UT-3.1, Make a Fair-Share Contribution to Upgrading the Rabello and Northside Pump Station System's Capacity** to reduce future insufficient pumping capacity impacts to less than significant levels, the measure specifies implementation is required concurrent with construction of Phase 2. Therefore, this mitigation measure would not apply to the DAP 1 Project.

Consistent with the Project, the DAP 1 Project's impacts associated with construction and energy demand would require implementation of mitigation measures related to greenhouse gas and transportation in addition to all relevant mitigation measures included for construction within the City Place EIR. The DAP 1 Project would contribute to the existing cumulative impacts for landfill capacity and energy demand and thus to the Project's associated significant and unavoidable impact.

6.15.3 Conclusion

Based on an examination of the analysis, findings, and conclusions of the City Place EIR, implementation of the DAP 1 Project would not substantially increase the severity of significant impacts identified in the City Place EIR, nor would it result in new significant impacts related to utilities and service systems that were not identified in the City Place EIR. Mitigation measures related to greenhouse gas and transportation in addition to all relevant mitigation measures included for construction (see Attachment A) would be applicable to and would be implemented by the DAP 1 Project. These mitigation measures would ensure that impacts related to utilities and service systems would be equal to, or less severe than, those previously identified and disclosed in the EIR.

Attachments

A. Mitigation Monitoring and Reporting Program
B. Related Santa Clara DAP1, Phase 1 Traffic Report
C. Getting Trip Generation Right: Eliminating the Bias Against Mixed Use Development, 2013
D. Transportation Tables

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Attachment A

Mitigation Monitoring and Reporting Program

MITIGATION MONITORING & REPORTING PROGRAM
Related Santa Clara DAP 1, Phase 1, Parcel 5 Project
Planning/CEQA File # PLN2019-14186 (PLN2014-10554/CEQ2014-01180)
State Clearinghouse # 2014072078

Mitigation and Avoidance Measures	Action	Implementing Party	Monitoring Party	Timing[1]
LAND USE				
LU-1.1: Increase Residential Density in the City's General Plan. During the next General Plan Update cycle, the City shall explore permitting higher residential densities in the City as well as allowing residential land uses in existing non-residential areas. Where feasible, the City shall target strategic areas of the City, specifically those closest to major employment and transit hubs, for new residential land uses and/or increased residential density. In order to maintain projected 2035 jobs/housing ratios, the City shall explore permitting up to 11,000 units.	Not Applicable City to explore permitting higher residential densities in the City.	Director of Planning and Inspection	Director of Planning and Inspection	During the next General Plan Update cycle
AESTHETICS				
AES-1.1: Imported Material Storage. Soils from other parcels that are imported to Parcel 2 shall be stored in areas that are not within view of the Guadalupe River Trail. Alternatively, imported soils within view of the Guadalupe River Trail shall be distributed across Parcel 2 at a depth of 2 feet or less.	Not Applicable Project Developer to provide applicable provisions of construction contracts to the City incorporating requirement.	Project Developer/ Project Contractor	City Planning & Inspection Division	Prior to issuance of grading and building permits
AES-1.2: Early Implementation of Master Community Plan Landscaping Plan for Parcels 1 and 2. The existing golf course trees along the eastern edge of Parcel 2 shall be retained (leaving the view from the Guadalupe River trail unchanged) until such time as development on the eastern portion of Parcel 2 would necessitate their removal. The Project Developer shall implement the Landscaping Plan, as presented in the Master Community Plan, at the earliest feasible period, given the constraints and pacing of the development. Prior to planting and installation, the Landscaping Plan shall be submitted to the Planning Director for approval.	Not Applicable Project Developer to submit a landscape plan to replace removed trees to the City for review and approval.	Project Developer/ Project Contractor	City Director of Planning & Inspection	Prior to issuance of grading and building permits for Parcel 2

[1] Where the timing of an action is specified as taking place before a permit is issued, that action must be taken with respect to the action underlying the permit, except where otherwise specifically noted.

Mitigation and Avoidance Measures	Action	Implementing Party	Monitoring Party	Timing[1]
TRANSPORTATION				
TRA-1.1: Vehicle Trip Reduction with Transportation Demand Management (TDM). The Project Developer shall prepare and implement a TDM Plan approved by the Santa Clara Director of Community Development. The TDM Plan shall include trip reduction measures necessary to achieve an overall target of reducing Project office- generated daily traffic by a minimum of 4 percent and peak-hour traffic by a minimum of 10 percent, with an overall target of reducing Project residential-generated daily traffic by a minimum of 2 percent and peak-hour traffic by a minimum of 4 percent, compared to the traffic estimates used in this EIR. The TDM Plan shall also include and implement TDM Best Management Practices (BMPs) for the retail uses. The TDM Plan shall include measures to reduce the amount of vehicle traffic generated by City Place by shifting employees, customers, and residents from driving alone to using transit, carpooling, cycling, and walking modes through TDM measures, strategies, incentives, and policies. The TDM obligation in this measure is to apply for the lifetime of the Project. The TDM Plan may specify a phased implementation approach that provides initially for implementation of the TDM measures that are appropriate for multi-tenant offices (e.g., measures aimed at increased transit use and carpooling), which are expected to be developed during the first three phases of development, and then provide for TDM measures that are appropriate for large corporate office tenants in the remaining phases (such as shuttles). The Santa Clara Director of Community Development shall have theauthority and discretion to permit modification of the measures provided that the modifications continue to achieve the overall trip reduction objective and/or the Santa Clara Director of Community Development is satisfied that all feasible TDM measures are being implemented if the overall trip reduction objective is not being met. Specific requirements as to the TDM Plan, its contents, target reductions, monitoring and remedial action are as follows: A. *Vehicle Trip Thresholds.* Vehicle trip reductions will be measured through counts of vehicles that enter and exit the site and by comparison of the results to established trip thresholds. As part of the annual TDM Plan monitoring process, as described below, vehicle trip generation estimates, based on the land uses and their sizes, will be prepared by a transportation professional funded by the Transportation Management Association described below, and working under the direction of the City, who will use the trip generation rates and internalization and public transit ridership reductions used in the EIR transportation analysis. The TDM reduction targets will be applied to create the thresholds. The estimates and thresholds will be reviewed and approved by the City's Traffic Engineer. While no thresholds are established for retail	Project Developer to submit a TDM Plan to the City for each Development Area Plan and prior to each subsequent Development Area Plan, submit a TDM Plan reviewed by the third party. Submit an annual report documenting compliance with the TDM Plan.	Project Developer/ TMA	Department of Public Works Director of Planning and Inspection	Prior to the issuance of a certificate of occupancy for first building under each DAP for TDM Plan (or expansion of TDM Plan) associated with development under the DAP; obtain approval prior to certificate of occupancy; undertakes annual reporting, surveys and revisions to TDM Plan in accordance with mitigation measure.

Mitigation and Avoidance Measures	Action	Implementing Party	Monitoring Party	Timing[1]
TRANSPORTATION (cont.)				
uses because it is difficult to enforce trip reductions for retail customers, this measure requires implementation of TDM BMPs for retail portions of the Project, as described below.				
B. Management Association (TMA) is a non-profit, organization that provides transportation services in a particular area, such as a commercial district, medical center or office park, controlled by members that are building owners or tenants in that area. A TMA shall be formed to oversee and coordinate implementation of the TDM measures to be implemented for the Project, including coordinating activities of the various employers and tenants. The TDM Plan shall identify the vehicle trip-reducing measures and strategies to be provided and implemented directly by the Project Developer, those to be implemented directly by the TMA and those to be implemented directly by individual tenants/employers, and any to be implemented directly by the City. The TDM Plan shall describe the roles and responsibilities of the TMA and its members, which shall be codified in a binding agreement with the City of Santa Clara, approved by the Director of Community Development, and recorded with the County of Santa Clara Clerk Recorder.				
C. *Office TDM Measures.* TDM measures that target office employees shall be described in detail in the TDM Plan, including information regarding the direct implementing party (e.g., Project Developer, TMA, City, and tenants and employers.), The following TDM measures shall be considered for inclusion in the TDM Plan for some or all portions of the office development, to the extent feasible and appropriate, either as part of an initial TDM Plan or as options for enhanced or remedial measures if trip reduction targets are not being met:				
• On-site Support Facilities: shuttle bus stops with shelters, bicycle paths and lanes, pedestrian paths linking buildings and transit stations, priority parking for carpools and vanpools				
• In-building Support Facilities: showers and changing rooms, bicycle storage rooms and bicycle racks, and bicycle repair stands, cafes, and fitness centers				
• Private shuttles for both long distance commute and last-mile service from nearby public transit				
• Ridesharing options for long distance commuters such as carpool and vanpool matching services				
• Guaranteed ride home services for commuters who carpool, take transit, or bicycle to work				

Mitigation and Avoidance Measures	Action	Implementing Party	Monitoring Party	Timing[1]
TRANSPORTATION (cont.)				
• Financial incentives such as pre-tax benefits for transit and bicycle expenses (e.g., Commuter Check) or subsidized transit passes (e.g., Commuter Checks, Clipper Cards or VTA EcoPass) for all employees • Additional support services for employees who use transit or rideshare, such as flexible work hours • A website and marketing program to disseminate information on commute options; access to TMA management services • A TDM information packet to be provided to all new City Place employees upon commencement of work at City Place and, the benefits ofalternative commute methods stressed during new employee orientation programs • Incentives for employees to live in locations well served by transit or shuttles • Bike share pods to enable trips on-site and to nearby destinations to be made by bicycle • Car share services with cars on-site for use by employees (or others) who use alternative modes to travel to the site but need a car to run an errand, travel to a meeting, etc. • Multi-passenger demand responsive ride services for local employees that are competitive with drive alone including transportation network/ride-sharing services such as Uber Pool, Lyft Line and Chariot on-demand and crowd-sourced bus services • Yet-to-be developed new services, programs, strategies and emerging technologies • Congestion cordon (boundary) pricing scheme[2] • Parking management strategies such as paid parking and unbundled parking to restrict the parking supply[3]				

[2] Cordon pricing would entail charging vehicles a fee as they enter an area. The fees would be higher during congested periods. This type of strategy is most effective with limited access points and requires a high quality transit system to accommodate travel by a non-automobile mode.
[3] These parking management strategies can be paired with a residential permit parking program (RPPP) to ensure that Project residents seeking parking do not park in nearby neighborhoods.

Mitigation and Avoidance Measures	Action	Implementing Party	Monitoring Party	Timing[1]
TRANSPORTATION (cont.)				
D. *Residential TDM Measures.* TDM measures that target residents shall be described in the TDM Plan, including information regarding the direct implementing party (e.g., Project Developer, TMA, City, tenants and employers). The following TDM measures shall be considered for inclusion in the TDM Plan for some or all portions of the residential development, to the extent feasible and appropriate, either as part of an initial TDM Plan or as options for enhanced or remedial measures if trip reduction targets are not being met: • Bicycle infrastructure improvements • Bicycle parking room or lockers • Bicycle riders guide • On-site bicycle repair facilities • Financial subsidies for residents who commute by carpool, transit, walking or bicycle, such as VTA EcoPasses • A website and marketing program to disseminate information on commute options; access to TMA management services • Rideshare matching services • On-site shuttle services, shuttle bus stops with shelters, pedestrians path linking buildings and transit stations • Bus stops located near buildings • Pedestrian-oriented site design • Congestion cordon (boundary) pricing scheme • Parking management strategies such as paid parking and unbundled parking to restrict the parking supply.				
E. *Retail Site Design BMPs.* BMPs that target retail employees and customers shall be described in the TDM Plan, including information regarding the direct implementing party (e.g., Project Developer, TMA, City, tenants and employers). The following BMPs shall be considered for inclusion in the TDM Plan for some or all portions of the retail development, to the extent feasible and appropriate: • Bicycle infrastructure improvements • Bicycle rider encouragement program • Bicycle parking, showers and lockers • Bicycle riders guide • On-site bicycle repair facilities				

Mitigation and Avoidance Measures	Action	Implementing Party	Monitoring Party	Timing[1]
TRANSPORTATION (cont.)				
• Pre-tax commuter incentives • Rideshare matching services • On-site shuttle services, shuttle bus stops with shelters, pedestrians path linking buildings and transit stations • A website and marketing program to disseminate information on commute options; access to TMA management services • Bus stop locations near building entrances • Pedestrian-oriented site design • Congestion cordon (boundary) pricing scheme				
F. *Monitoring and Reporting.* The TDM Plan shall be monitored annually to gauge its effectiveness in meeting the thresholds; while general guidelines are provided here, the monitoring and reporting process shall be explained in detail in the TDM Plan. A transportation professional working at the City's direction and pursuant to a scope of work approved by the City's Traffic Engineer shall conduct traffic counts annually using mechanical counters or other devices approved by the City of Santa Clara to measure the daily and peak-hour entering and exiting vehicle volumes for a 72-hour period, Tuesday through Thursday. The counts shall include traffic counts at all City Place driveways, traffic counts at the driveways to office parking locations, and traffic counts at the driveways to residential parking locations. The counts shall be conducted when schools are in session and during non-holiday weeks with fair weather. The individual driveway volumes will be summed to provide the total site traffic volumes. The volumes at the driveways to the office and residential parking locations will be summed to provide the office- and residential-generated traffic volumes. The volumes will be compared to the trip thresholds to determine whether the reduction in vehicle trips is being met. The TMA will assist with the monitoring activities that will be conducted. In addition to monitoring driveway volumes, a survey will be developed by the transportation professional and administered in coordination with the TMA and individual office employers to determine actual mode splits for employees. The survey will also gather information on usage of individual TDM Plan components as well as gauge employee perception of the overall TDM Plan After an initial survey is conducted, subsequent surveys shall be conducted in years where the previous year's annual report has concluded that trip thresholds and trip reduction targets are not being met.				

Mitigation and Avoidance Measures	Action	Implementing Party	Monitoring Party	Timing[1]
TRANSPORTATION (cont.)				
The results of the annual vehicle counts and survey (if one is conducted that year) will be reported in writing by the transportation professional to the Santa Clara Director of Community Development. The report will include descriptions of the TDM measures in place, highlighting new or modified measures, summarize the results of the counts, summarize the results of the employee survey (if one is conducted that year), and conclude whether the trip thresholds and trip reduction targets are being met. The report (as well as any remedial action taken as a result) will be summarized in an annual informational report to the Planning Commission on the progress of TDM efforts throughout the City of Santa Clara. G. *Remedial Action.* If TDM Plan monitoring results show that the trip reduction targets are not being met, the TDM Plan shall be updated to identify replacement and/or additional feasible TDM measures to be implemented. The updated TDM Plan shall be submitted to the City and approved by the Santa Clara Director of Community Development. The updated TDM Plan shall also identify other TDM measures that were considered but determined to be infeasible or ineffective. The TMA shall oversee and coordinate the implementation of the feasible additional TDM measures and continue to explore methods of making other potential TDM measures feasible.				
TRA-1.2: Intersection Improvements. The intersection improvements and off-setting mitigation measures summarized in Table 3.3-20 shall be implemented, and Project Developer shall pay the fair-share contributions for the mitigation measures summarized in Table 3.3-20. The intent of the table is to identify, based on a preliminary feasibility determination, physically feasible intersection mitigation measures (e.g., lane additions) that increase the intersection's vehicle carrying capacity and reduce vehicle delay while fully mitigating the impacts. As described below, feasible mitigation measures that fully mitigate the impacts were identified at some locations. However, at other locations, measures that provide only partial mitigation were identified because of physical constraints. Although these mitigation measures do not fully address the impact, they do help reduce the severity of the impact. For intersections where there are no feasible physical improvements, off- setting mitigation measures were investigated. These measures would provide improvements to other modes of travel, thereby increasing the capacity of the transportation system. At some intersections no feasible improvement or off-setting mitigation measures were identified.	Partially Applicable in accordance with Exhibit MMRP-1 Implement intersection improvements included in Table 3.3-20 of the Draft EIR and pay fair share contribution in accordance with Exhibit MMRP-1.	Project Developer (as noted in Table 3.3-20 of Draft EIR)	Department of Public Works	In accordance with Exhibit MMRP-1

Mitigation and Avoidance Measures	Action	Implementing Party	Monitoring Party	Timing[1]
TRANSPORTATION (cont.)				
The four potential entries are: • Full Mitigation: At the affected intersection, a physical modification to the intersection that would fully mitigate the impact was identified. This could be accomplished by adding vehicle lanes or upgrading an intersection to an interchange or "fly-over." These improvements would reduce vehicle delays and fully mitigate Project impacts at several intersections by allowing the intersections to operate at acceptable levels, with delays that would be lower than they would be under no-project conditions, or with less than a 4-second increase in critical delay at intersections that operate at unacceptable levels. • Partial Mitigation: At the affected intersection, a physical modification to the intersection that would partially mitigate the impact was identified. The proposed measure mitigates the impact during one peak hour but not the other or reduces the delay but not enough to mitigate the impact. • Off-setting Mitigation: In the North San José Deficiency Plan area, off-setting local street network, transit, bicycle, or pedestrian improvements were identified to accommodate future travel growth but not directly mitigate the intersection with the identified impact. • No Feasible Mitigation: No physical improvements or off-setting mitigation measures were identified, typically because of physical limitations, costs, and/or right-of-way constraints. Some of the intersection improvements would require right-of-way (ROW) acquisition. A preliminary review of ROW constraints was done by viewing aerial photography as a part of the mitigation measure feasibility assessment. An intersection was identified as having ROW constraints if the mitigation measure would include widening the roadway or relocating aboveground utilities. (Use of the center median and "pork-chop" islands was not considered as roadway widening.) If the removal of bicycle facilities was required, the ROW required was defined as "possible." If the City makes a final determination that a portion or all of an improvement is not feasible because ROW cannot be acquired or for other reasons, the improvement, or infeasible portion, shall not be implemented and, if none of the improvement is feasible, and no off-setting mitigation measure is identified, that intersection shall be considered to have "no feasible mitigation."				

Mitigation and Avoidance Measures	Action	Implementing Party	Monitoring Party	Timing[1]
TRANSPORTATION (cont.)				
The Project Developer's responsibility is included in Table 3-3.20, which indicates if the Project Developer would be wholly or partially responsible for the mitigation measure. • As seen in the table, "100 percent" indicates that the cost and construction of the proposed mitigation measure is the full responsibility of the Project Developer. These are discrete mitigation measures that either fully or partially mitigate significant Project impacts. • "Percent of total traffic" indicates that the Project Developer shall pay a fair-share contribution to the proposed mitigation measure, which is typically a larger transportation improvement, such as an expressway interchange, that has been identified in an adopted plan. Twelve of the intersections are on the County expressway system and are identified in the County's Expressway Plan to be upgraded to an interchange or "fly-over." The Project Developer shall pay its fair share toward these interchange upgrades per agreements between Santa Clara County and the City of Santa Clara. • "Pay the North San José fee or fair-share contribution of alternative or off-setting mitigation" is identified for affected intersections in the North San José area. There are two options for these locations. The Project Developer can pay the North San José fee or a fair-share contribution for the mitigation measure or off-setting mitigation measure based on the Project's percent contribution of added traffic at the intersection. • Where there is no feasible mitigation measure, no fair share is identified (0 percent). The City-preferred mitigation measure is identified where there is more than one mitigation option.				
TRA-1.3: Prepare and Implement a Multimodal Improvement Plan. The Project Developer shall fund the preparation of (including CEQA review for) a Multimodal Improvement Plan (MIP) addressing at least the Congestion Management Program (CMP) intersections within the City of Santa Clara that are forecasted to operate at Level of Service F with the Project, either on a project level or cumulative basis. City shall reimburse the Project Developer for any cost of preparation of the MIP that exceeds the Project Developer's fair share of such cost. Such MIP shall be prepared in accordance with the guidelines and regulations of the Valley Transportation Authority (VTA) and shall be adopted by the City Council for submission to the VTA for consideration and approval no later than one year after approval of the Project. Once the MIP is adopted by the VTA, it shall be implemented in accordance with its terms and commensurate with the phasing of the development that its measures are intended to offset.	Provide requisite funding for City preparation of the MIP as City Costs under Development Agreement. City to prepare and approve MIP for submission to VTA, and implement MIP once it is approved.	Project Developer/City	Department of Public Works and Division of Planning and Inspection	City to submit approved MIP to VTA within 1 year of project approval, and implement MIP according with its terms.

Mitigation and Avoidance Measures	Action	Implementing Party	Monitoring Party	Timing[1]
TRANSPORTATION (cont.)				
TRA-2.1: Traffic Signal Installation. Install a traffic signal at Intersection 109, Liberty Street/Taylor Street once the traffic volumes meet the warrant requirements. The intersection of Liberty Street/Taylor Street is located in San José; the installation of a traffic signal would need to be approved by the City of San José.	Not Applicable Project Developer shall provide funding for traffic signal installation at Liberty Street/Taylor Street in the City of San José and submit evidence of compliance to City.	Project Developer	Department of Public Works	Prior to issuance of building permits for the building that triggers improvement in accordance with Exhibit MMRP-1.
TRA-2.2: Traffic Signal Installation. Install a traffic signal at Intersection 114, Calle Del Sol/Calle De Luna, once the traffic volumes meet the warrant requirements.	Not Applicable Project Developer to install a traffic signal at Intersection 114, Calle Del Sol/Calle De Luna.	Project Developer	Department of Public Works	Prior to issuance of certificate of occupancy for the building that triggers improvement in accordance with Exhibit MMRP-1.
TRA-3.1: Freeway Segment Improvements. The Project Developer will make a voluntary contribution toward the VTP's 2040 Express Lane Projects (VTP 2040 project numbers H2, H3, H4, H5, H6, H7, and H15) and Countywide Freeway Traffic Operation System and Ramp Metering Improvements (VTP 2040 project number S83). These VTP 2040 projects (H2, H3, H4, H5, H6, H7, H15, and S83), once fully funded and constructed, will enhance travel choices for Project travelers and make more efficient use of the transportation network.	Project Developer shall pay per trip fee to the City in accordance with Exhibit MMRP-1.	Project Developer	Department of Public Works	Prior to issuance of certificate of occupancy for a new or expanded structure.
TRA-1a.1: Intersection Improvements for Existing with Project Phases 1, 2, and 3. The intersection improvements and off-setting mitigation measures summarized in Table 3.3-26 shall be implemented, and Project Developer shall pay the fair-share contributions for the mitigation measures summarized in Table 3.3-26. (This table also includes impacts and mitigation measures for the full Project for comparison purposes.) These improvements will reduce vehicle delays and fully mitigate Project impacts at several intersections by allowing the intersections to operate at acceptable levels, with delays that would be lower than they would be under no-project conditions, or with less than a 4-second increase in critical delay at intersections that operate at unacceptable levels. Table 3.3-26 also contains physical improvements for select intersections that will reduce the delay, but not to a level that mitigates the impact.	Partially Applicable in accordance with Exhibit MMRP-1 See TRA-1.2	Project Developer	Department of Public Works	In accordance with Exhibit MMRP-1

Mitigation and Avoidance Measures	Action	Implementing Party	Monitoring Party	Timing[1]
TRANSPORTATION (cont.)				
Some of the intersection improvements would require ROW acquisition. A preliminary review of ROW constraints was done by viewing aerial photography as a part of the mitigation measure feasibility assessment. An intersection was identified as having ROW constraints if the mitigation measure would include widening the roadway or relocating aboveground utilities. (Use of the center median and "pork-chop" islands was not considered as roadway widening.) If the removal ofbicycle facilities was required, the ROW required was defined as "possible." If the City makes a final determination that a portion or all of an improvement is not feasible because ROW cannot be acquired or for other reasons, the improvement, or infeasible portion, shall not be implemented and, if none of the improvement is feasible, and no off-setting mitigation measure is identified, that intersection shall be considered to have "no feasible mitigation."				
TRA-5.1: Transportation Design Review. The site plans for Parcels 1 and 2 will undergo a design review by the City to ensure that City design standards are adhered to prior to construction. This review shall include an on-site intersection analysis prior to development plan approval. The on-site analysis shall include an intersection operations analysis to develop intersection traffic controls and lane geometries that meet City of Santa Clara traffic standards. These parcels shall also be reviewed for: • Inbound queuing at parking facilities to ensure that queues do not block public streets and local streets • Emergency vehicle access and circulation • Vehicular circulation • Parking layout and circulation within the site • Bicycle access and circulation • Pedestrian access and circulation • Pedestrian access to and from transit stops • Truck circulation and loading dock access for commercial parcels	Not Applicable Project Developer to prepare site plans for Parcels 1 and 2 to be submitted to the City to ensure that City street design and traffic standards are accommodated in each Development Area Plan.	Project Developer	Department of Public Works	Concurrent with Development Area Plan submittal for each phase to the extent that data is available and with Architectural Review to the extent minor details are not known at DAP

Mitigation and Avoidance Measures	Action	Implementing Party	Monitoring Party	Timing[1]
TRANSPORTATION (cont.)				
TRA-6.1: Intersection Improvements With Access Variant Scheme. The intersection improvements summarized in Table 3.3-35 shall be implemented. These improvements will reduce vehicle delays and fully mitigate Project impacts at several intersections by allowing them to operate at acceptable levels, with delays that would be lower than they would be under no-project conditions, or with less than a 4-second increase in critical delay for intersections that operate at unacceptable levels. Table 3.3-35 also contains physical improvements for select intersections that will reduce the delay, but not to a level that fully mitigates the impact. Some of the intersection improvements would require ROW acquisition. A preliminary review of ROW constraints was done by viewing aerial photography as a part of the mitigation measure feasibility assessment. An intersection was identified as having ROW constraints if the mitigation measure would include widening the roadway or relocating aboveground utilities. (Use of the center median and "pork-chop" islands was not considered as roadway widening.) If the removal of bicycle facilities was required, the ROW required was defined as "possible." If the City makes a final determination that a portion or all of an improvement is not feasible because ROW cannot be acquired or for other reasons, the improvement, or infeasible portion, shall not be implemented and, if none of the improvement is feasible, that intersection shall be considered to have "no feasible mitigation."	Partially Applicable in accordance with Exhibit MMRP-1 Implement intersection improvements summarized in Table 3.3-35 of the Draft EIR and pay fair share contribution in accordance with Exhibit MMRP-1.	Project Developer	Department of Public Works	In accordance with Exhibit MMRP-1
TRA-6.2: Intersection Improvements for Phases 1, 2 and 3. The intersection improvements summarized in Table 3.3-36 shall be implemented. These improvements will reduce vehicle delays and fully mitigate Project impacts at several intersections by allowing the intersections to operate at acceptable levels, with delays that would be lower than they would be under no-project conditions, or with less than a 4-second increase in critical delay for intersections that operate at unacceptable levels. Table 3.3-36 also contains physical improvements for select intersections that will reduce the delay, but not to a level that mitigates the impact. Some of the intersection improvements would require ROW acquisition. A preliminary review of ROW constraints was done by viewing aerial photography as a part of the mitigation measure feasibility assessment. An intersection was identified as having ROW constraints if the mitigation measure would include widening the roadway or relocating aboveground utilities. (Use of the center median and "pork- chop" islands was not considered as roadway widening.) If the	Partially Applicable in accordance with Exhibit MMRP-1 Implement the intersection improvements for Phases 1, 2, and 3, as summarized in Table 3.3-36 of the Draft EIR and pay fair share contribution in accordance with Exhibit MMRP-1.	Project Developer	Department of Public Works	In accordance with Exhibit MMRP-1

Mitigation and Avoidance Measures	Action	Implementing Party	Monitoring Party	Timing[1]
TRANSPORTATION (cont.)				
removal of bicycle facilities was required, the ROW required was defined as "possible." If the City makes a final determination that a portion or all of an improvement is not feasible because ROW cannot be acquired or for other reasons, the improvement, or infeasible portion, shall not be implemented and, if none of the improvement is feasible, that intersection shall be considered to have "no feasible mitigation."				
TRA-7.1: Sidewalk Gap Closure on Tasman Drive on the Lafayette Street overcrossing extending east to Calle Del Sol. The Project Developer shall construct a sidewalk on the north side of Tasman Drive on the Lafayette Street overcrossing and extending east to Calle Del Sol. The Project Developer shall fully fund the construction of this sidewalk segment between the Project frontage on Tasman Drive and Calle Del Sol.	Project Developer to construct a sidewalk on the north side of Tasman Drive on the Lafayette Street overcrossing, extending east to Calle Del Sol.	Project Developer	Department of Public Works	Prior to the issuance of certificate of occupancy for first building within Phase 1
TRA-14.1: Signalized Intersection Improvements. The intersection improvements and off-setting mitigation measures summarized in Table 3.3-20 shall be implemented and Project Developer shall pay the fair-share contributions for the mitigation measures summarized in Table 3.3-20, The Project Developer shall also pay the fair-share contribution for the additional intersections or off-setting mitigation measure identified in Table 3.3-50. The improvements will reduce vehicle delays and fully mitigate cumulative impacts at several intersections by allowing the intersections to operate at acceptable levels, with delays that would be less than they would be under no-project conditions, or with less than a 4-second increase in critical delay for intersections that operate at unacceptable levels. Table 3.3-50 also contains physical improvements for select intersections that will reduce the delay, but not to less than no-project conditions such that the Project's effects would remain cumulatively considerable. Some of the intersection improvements would require ROW acquisition. A preliminary review of ROW constraints was done by viewing aerial photography as a part of the mitigation measure feasibility assessment. An intersection was identified as having ROW constraints if the mitigation measure would include widening the roadway or relocating aboveground utilities. (Use of the center median and "pork- chop" islands was not considered as roadway widening.) If the removal of bicycle facilities was required, the ROW required was defined as "possible." If the City makes a final determination that a portion or all of an	Project Developer to implement intersection improvements mitigation measures summarized in Table 3.3-20 of the Draft EIR and pay the fair-share contributions for the mitigation measures in accordance with Exhibit MMRP-1.	Project Developer	Department of Public Works	In accordance with Exhibit MMRP-1

Mitigation and Avoidance Measures	Action	Implementing Party	Monitoring Party	Timing[1]
TRANSPORTATION (cont.)				
improvement or mitigation is not feasible because ROW cannot be acquired or for other reasons, the improvement, or infeasible portion, shall not be implemented and, if none of the improvement is feasible, that intersection shall be considered to have "no feasible mitigation."				
TRA-16.1: Intersection Improvements for Cumulative with-Project Access Variants. The intersection improvements summarized in Table 3.3-54 shall be implemented. Some of the intersection improvements would require ROW acquisition. A preliminary review of ROW constraints was done by viewing aerial photography as a part of the mitigation measure feasibility assessment. An intersection was identified as having ROW constraints if the mitigation measure would include widening the roadway or relocating aboveground utilities. (Use of the center median and "pork-chop" islands was not considered as roadway widening.) If the removal of bicycle facilities was required, the ROW required was defined as "possible." If the City makes a final determination that a portion or all of an improvement or mitigation is not feasible because ROW cannot be acquired or for other reasons, the improvement, or infeasible portion, shall not be implemented and, if none of the improvement is feasible, that intersection shall be considered to have "no feasible mitigation."	Project Developer to implement the intersection improvements summarized in Table 3.3-54 of the Draft EIR and pay the fair-share contributions for the mitigation measures in accordance with Exhibit MMRP-1.	Project Developer	Department of Public Works	In accordance with Exhibit MMRP-1
TRA-18.1: Construction Management. Prior to the issuance of each building permit, the Project Developer and construction contractor shall meet with the Public Works Department to determine traffic management strategies to reduce, to the maximum extent feasible, traffic congestion during construction of the Project and develop acceptable detour routes for emergency vehicles and for shuttles to the Great America ACE/Capitol Corridor station. The City will coordinate with appropriate transit agencies. The Project Developer shall prepare a Construction Management Plan for review and approval by the Public Works Department, which shall share the plan with interested the Capitol Corridor Joint Power Authority, the VTA, and ACE for review and comment. The plan, which shall be implemented during construction, shall include at least the following items and requirements: • A set of comprehensive traffic control measures, including detour signs if required, lane closure procedures, sidewalk closure procedures, signs, cones for drivers, and designated construction access routes. • Notification procedures for adjacent property owners, the public, transit operators, and public safety personnel regarding when detours and lane closures will occur.	Project Developer to prepare and submit a Construction Management Plan for the purpose of managing traffic and reducing traffic congestion during construction. City to review and approve Plan.	Project Developer/ Project Contractor	Department of Public Works	Prior to issuance of each building permit

Mitigation and Avoidance Measures	Action	Implementing Party	Monitoring Party	Timing[1]
TRANSPORTATION (cont.)				
• Location of construction staging areas for materials, equipment, and vehicles (must be located on the Project site). • Identification of haul routes for movement of construction vehicles that would minimize impacts on vehicular, pedestrian, and transit vehicle traffic, circulation and safety; and provision for monitoring surface streets used for haul routes so that any damage and debris attributable to the haul trucks can be identified and corrected. Construction vehicles shall be required to use designated truck/haul routes. • Provisions for removal of trash generated by Project construction activity. • A process for responding to and tracking complaints pertaining to construction activity. • Construction vehicles and construction workers shall not be allowed to park in adjacent residential neighborhoods. Construction vehicles will be required to park either in the construction zone or in the temporary parking lots.				
TRA-19.1: Modified City's Traffic Management and Operations Plan (TMOP) and Prepare a Project-Specific Traffic and Parking Management Plan. Modify the City's TMOP to include plans to direct stadium traffic to the new parking locations on the site. (Some of the office parking areas will be used during special events.) A separate traffic and parking management plan shall be developed for the Project by the Project Developer and approved by the Director of Community Development and/or the Director of Public works. This plan would address: • Parking areas to be used by office employees (versus stadium parking); • Project customer/employee parking (versus stadium parking); • Access and egress routes for vehicles to the site, taking into consideration the lane and roadway segment closures used to direct stadium traffic; • A communications plan to inform customers and employees of game-day operations; and • Operational improvements such as signal timing and coordination to maximize efficiency of the streets during peak periods. Performance goals that reflect a successful traffic and parking management plan would be contained in the plan and may include items such as: • Maintaining vehicular access to the Project with acceptable increases in travel times compared to non-game day conditions; • Limited vehicle queuing within the Project site such that no internal circulation roadways are blocked; and	Project Developer to modify the City's TMOP to include plans to direct stadium traffic to the new parking locations on the site, and a site traffic and parking management plan for review and approval by City.	Project Developer	Director of Community Development and/or Director of Public Works	Prior to the issuance of first certificate of occupancy within each DAP area

Mitigation and Avoidance Measures	Action	Implementing Party	Monitoring Party	Timing[1]
TRANSPORTATION (cont.)				
• Limited vehicle queuing extending from parking facilities within the Project onto external public roadways. Even with mitigation, the local streets near the Project site would operate at an unacceptable LOS due to vehicle demand exceeding capacity. Widening roadways or intersections to increase capacity was considered as mitigation but rejected due to utility and secondary impacts. Street widening would provide capacity that would be needed only on game days and not at other times. The City of Santa Clara General Plan has policies to discourage the widening of existing roadways without first considering operational improvements such as the items included in the existing TMOP and items that will be included in the TDM Plan.				
AIR QUALITY				
AQ-2.1: Utilize Clean Diesel-Powered Equipment during Construction to Control Construction-Related Reactive Organic Gas (ROG) and Oxides of Nitrogen (NOX) Emissions. The Project Developer shall ensure that all off-road diesel-powered equipment used during construction between 2017 and 2022 is equipped with the U.S. Environmental Protection Agency (EPA) Tier 3 or cleaner engines, except for specialized construction equipment for which an EPA Tier 3 engine is not available. Consistent with advancements of the statewide fleet average, the Project Developer shall ensure that all off-road diesel-powered equipment used during construction between 2023 and 2030 is equipped with EPA Tier 4 engines, except for specialized construction equipment for which an EPA Tier 4 engine is not available. This requirement will ensure construction equipment remains cleaner than the fleet-wide average.[4]	Project Developer to provide to City applicable provisions of construction contracts requiring that all off- road diesel-powered equipment used for construction between 2017 and 2022 is equipped with the U.S. EPA Tier 3 or cleaner engines and that all off- road diesel-powered equipment used for construction between 2023 and 2030 is equipped with EPA Tier 4 engines.	Project Developer/ Project Contractor	City Planning & Inspection Division	Prior to grading or building permit issuance

[4] As explained in MM AQ-6.1, below, as necessary to reduce cancer risk to on-site sensitive receptors related to construction diesel particulate matter emissions to a level below the BAAQMD, the Project Developer may need to use Tier 4 equipment after occupancy of on-site residences or daycare centers, or may use other appropriate measures (see AQ-6.1). If Tier 4 equipment is used earlier than 2023, this may reduce the amount of mitigation required in MM AQ-2.4.

Mitigation and Avoidance Measures	Action	Implementing Party	Monitoring Party	Timing[1]
AIR QUALITY (cont.)				
AQ-2.2: Use Modern Fleet for On-Road Material Delivery and Haul Trucks during Construction. The Project Developer shall ensure that all on-road heavy-duty diesel trucks with a gross vehicle weight rating of 19,500 pounds or greater used at the Project site comply with EPA 2007 on-road emissions standards for PM10 and NO_X (0.01 grams per brake horsepower-hour [g/bhp-hr] and 0.20 g/bhp-hr, respectively).	Project Developer to provide to City applicable provisions of construction contracts requiring the use of modern fleet for on-road material delivery and that haul trucks comply with EPA 2007 on-road emissions standards for PM10 and NOX.	Project Developer/ Project Contractor	City Planning & Inspection Division	Prior to grading or building permit issuance
AQ-2.3: Implement Bay Area Air Quality Management District (BAAQMD) Additional Construction Mitigation Measures to Reduce Construction-Related Dust and Exhaust Emissions. The Project Developer shall require all construction contractors to implement the specific construction mitigation measures below to reduce fugitive dust and equipment exhaust emissions. Emission reduction measures shall include, at a minimum, the following measures. Alternative measures may be identified by the Project Developer or its contractor, as appropriate, provided that they are as effective as the measures below. Alternative measures shall be submitted to the City of Santa Clara for approval. • All exposed surfaces shall be watered at a frequency adequate to maintain minimum soil moisture of 12 percent. Moisture content can be verified by lab samples or moisture probe. If water infiltration into landfill refuse layers is a concern, non-toxic soil stabilizers may be used instead. • All excavation, grading, and/or demolition activities shall be suspended when average wind speeds exceed 20 miles per hour (mph) for a period of 2 hours or more. • Windbreaks (e.g., fences) shall be installed on the windward side(s) of actively disturbed areas of construction. Windbreaks shall have at maximum 50 percent air porosity. • Exposed ground areas that are to be reworked more than 1 month after initial grading should be sown with fast-germinating native grass seed and watered appropriately until vegetation is established. If grass seeding is not feasible, then non-toxic soil stabilizers may be used.	Project Developer to provide to City applicable provisions of construction contracts requiring the use of BAAQMD additional construction mitigation measures to reduce construction-related dust and exhaust emissions.	Project Developer/ Project Contractor	City Planning & Inspection Division	Prior to grading and building permit issuance

Mitigation and Avoidance Measures	Action	Implementing Party	Monitoring Party	Timing[1]
AIR QUALITY (cont.)				
• All construction trucks and equipment, including tires, involved in ground disturbance or transit through loose soil areas shall be washed off prior to leaving the site. • Site accesses to a distance of 25 feet from the paved road shall be treated with a 6- to 12-inch compacted layer of wood chips, mulch, or gravel. Alternatively, a rumble plate may be used in place of chips, mulch, or gravel. • Sandbags or other erosion control measures shall be installed to prevent silt runoff to public roadways from sites with a slope greater than 1 percent. • Idling time of diesel powered construction equipment shall be limited to 2 minutes. • All construction equipment, diesel trucks, and generators shall be equipped with Best Available Control Technology for emission reductions of PM and NOX. • All contractors shall use equipment that meets the California Air Resources Board's (ARB's) most recent certification standard for off-road heavy-duty diesel engines.				
AQ-2.4: Offset NO_X Emissions Generated during Construction that Are above BAAQMD NOX Average Daily Emission Threshold. The Project Developer shall track construction activity, estimate emissions, and enter into a construction mitigation contract with BAAQMD to offset NO_X emissions that exceed BAAQMD NOX average daily threshold of 54 pounds per day. The average daily emissions shall be calculated on an annual basis by determining total construction-related NO_X emissions in each calendar year and dividing by the number of actual workdays in that calendar year. BAAQMD will use the mitigation fees provided by the Project Developer to implement emissions reduction efforts that offset Project NO_X emissions that exceed BAAQMD threshold. Implementation of this mitigation measure shall apply only to Phase 1 through Phase 4 construction on Parcels 4 and 5 because only construction on Parcels 4 and 5 has the potential to exceed the BAAQMD average daily NO_X threshold on an annual basis, depending on construction sequencing and overlapping activity. This mitigation includes the following specific requirements: • The Project Developer shall require construction contractors to provide annual construction activity monitoring data for Phases 1 through 4 to estimate actual construction emissions, including the effect of equipment emissions reduction measures. The Project Developer shall submit the annual construction activity monitoring data and an estimate of actual annual	City construction mitigation contracts with BAAQMD. Project Developer to provide to City annual construction activity monitoring data for City verification that the data is representative.	Project Developer/ Project Contractor	City Planning & Inspection Division	Approval of agreement prior to grading and building permit issuance, annual submittal of evidence documenting compliance and of construction activity monitoring data during construction of Phases 1 through 4 on Parcels 4 and 5.

Mitigation and Avoidance Measures	Action	Implementing Party	Monitoring Party	Timing[1]
AIR QUALITY (cont.)				

construction emissions to the City and BAAQMD for review by February 1 of each year for the prior construction year. The City shall examine the construction activity monitoring to ensure it is representative, and BAAQMD shall examine the emissions estimate to ensure it is calculated properly.
• After acceptance of the emissions estimates by BAAQMD for the prior year, the Project Developer shall submit mitigation fees to BAAQMD to fund offsets for the portion of annual emissions that exceed the average daily NOX threshold. The mitigation fees shall be based on the mitigation contract with BAAQMD (see discussion below) but shall not exceed the emissions-reduction project cost-effectiveness limit set for the Carl Moyer Memorial Air Quality Standards Attainment Program (Carl Moyer Program) for the year in which mitigation fees are paid. The current Carl Moyer Program cost-effectiveness limit is $18,030 per weighted ton of criteria pollutants (NOX + ROG + [20*PM]). An administrative fee of 5 percent shall be paid by the Project Developer to BAAQMD to implement the program.
• The mitigation fees shall be used by BAAQMD to fund projects that are eligible for funding under the Carl Moyer Program guidelines or other BAAQMD emissions- reduction incentive programs that meet the Carl Moyer Program cost-effectiveness threshold and are real, surplus, quantifiable, and enforceable.
• The Project Developer shall enter into a mitigation contract with BAAQMD for the emissions-reduction incentive program. The mitigation contract shall include the following:
  o Identification of appropriate off-site mitigation fees required for the Project.
  o Timing for submission of mitigation fees.
  o Processing of mitigation fees paid by the Project Developer.
  o Verification of emissions estimates submitted by the Project Developer.
  o Verification that off-site fees are applied to appropriate mitigation programs within the SFBAAB.
The mitigation fees shall be submitted within 4 weeks after BAAQMD accepts an emissions estimate provided by the Project Developer showing that the average daily NOX threshold was exceeded (when measured on an annual basis).				

Mitigation and Avoidance Measures	Action	Implementing Party	Monitoring Party	Timing[1]
AIR QUALITY (cont.)				
AQ-6.1: Assess Construction Diesel Particulate Matter (DPM) Emissions Potential Prior to Construction, Utilize Clean Diesel-Powered Equipment, Filtration Systems, and/or other Measures as Necessary to Reduce Cancer Risks Associated with DPM during Construction. The Project Developer shall implement the following measures, as necessary, to reduce cancer risks associated with DPM during construction to a level less than BAAQMD incremental cancer risk threshold of 10 in 1 million: • Revised Health Risk Assessment (HRA): The Project Developer may choose to assess the potential construction DPM emissions later in the design phase, but prior to construction, and to prepare a revised HRA using updated construction equipment activity data and submit to the City for review. If the revised HRA demonstrates, to the satisfaction of the City, that the cancer risk for construction of the entire Project at all potentially exposed on-site and off-site sensitive receptors will be less than BAAQMD threshold cited, then no additional mitigation is necessary. If the revised HRA demonstrates, to the satisfaction of the City, that the cancer risk for construction of the entire Project at some of the on-site or off-site sensitive receptors will be less than presented in the EIR but still over the BAAQMD threshold, then some of the mitigation below may not be necessary. • As necessary to reduce cancer risks below the BAAQMD threshold in light of projected DPM emissions and exposure and other mitigation (MM AQ-2.1 through MM AQ-2.3 and MM GHG-1.1), one or more of the following measures shall be implemented and the Project Developer will provide updated modeling to the City demonstrating that all on-site risks are reduced to below the BAAQMD threshold level: Tier 4 Construction Equipment. If on-site and residences and daycare centers are occupied, the Project Developer shall ensure that all off-road diesel-powered equipment used during construction after occupancy of on-site residences or on- site daycare centers is equipped with EPA Tier 4 or cleaner engines, except for specialized construction equipment for which an EPA Tier 4 engine is not available. This requirement would be in addition to the clean diesel requirements in Mitigation Measure AQ-2.1. o Install Filtration Systems on Ventilation and Recirculation Systems. Filtration systems shall be installed on ventilation and recirculation systems within on-site residences and for the heating, cooling, or ventilation systems serving daycare centers. All filters must be rated MERV-13 or higher. The Project Developer shall submit a plan for installation and maintenance of all	Not Applicable Project Developer to provide revised HRA (optional) or provide updated modeling and applicable provisions of construction contracts and/or building plans including measures to reduce cancer risks. City to review and approve revised HRA (optional to project Developer) or approve applicable provisions of construction contracts and building plans if no HRA is prepared or if revised HRA shows that cancer risks would not be below regulatory thresholds.	Project Developer/ Project Contractor	City Planning & Inspection Division	Prior to construction that is planned to occur after the first occupancy of on-site residences or daycare centers and/or prior to residential or day care building permit issuance if Project Developer desires to incorporate measures into structure

Mitigation and Avoidance Measures	Action	Implementing Party	Monitoring Party	Timing[1]
AIR QUALITY (cont.)				
filters in accordance with the manufacturer's recommendations to the City prior to approval of the first building permits. o If on-site and residences and daycare centers are occupied, the Project Developer shall employ other reduction measures, such as High Performance Renewable (HPR) Diesel Fuel, that would reduce DPM. Proposals for alternative reduction measures shall be submitted to the City for review and approval, including evidence of the particulate reduction and/or risk reduction effectiveness of the proposed alternative measures.				
GREENHOUSE GAS EMISSIONS				
GHG-1.1: Utilize Alternative Fuels during Construction. Require construction contractors to use alternative fuels in at least 30 percent of the construction equipment that uses diesel fuel. Alternative fuels may include electricity, compressed natural gas (CNG), biodiesel (B-20), or renewable diesel, such as diesel high-performance renewable (HPR).	Developer to provide to City applicable provisions of construction contracts requiring adequate use of alternative fuels.	Project Developer/ Project Contractor	City Planning & Inspection Division	Prior to grading and building permits.
GHG-1.2: Operational GHG Emissions Reduction Measures. The Project Developer shall implement the operational GHG emissions reduction strategies described below: 1. Energy Efficiency: The Project's energy efficiency shall be 15 percent better than the base case energy model developed pursuant to the 2013 Title 24 requirements or shall meet the Title 24 requirements that are applicable at the time of issuance of the building permits for individual phases, whichever is more stringent (Climate Action Plan [CAP] Measure 2.1).[5] 2. On-site Solar Energy: The Project already includes on-site photovoltaics (PV) solar to meet 10 percent of electricity demand. The Project shall obtain renewable energy electricity corresponding to 50 percent[6] of on-site electricity demand by 2030 through a combination of on-site solar, purchase of	#1, 4, 5, 6, 7, 11, 12: Building and landscape plans. #2: Annual reporting unless Project Developer demonstrates at building permit issuance that goal will be met. #10, 13: Ground leases to require	Project Developer	City Planning & Inspection Division	#1, 4, 5 6, 7, 11, 12: Prior to building permit issuance #2: Prior to building permit issuance unless the developer wishes to demonstrate that emissions will meet the 2030 metric.

[5] The CEC intends for residential buildings in 2020 and later to be zero net energy (ZNE) and commercial buildings in 2030 or later to be ZNE, but because pending regulations are not yet adopted, this cannot be assumed in this analysis.

[6] CAP measure 1.1 requires the City's utility (SVP) to replace coal power within its portfolio with natural gas by 2020 and includes a stretch goal to replace the coal power with a combination of 50% natural gas and 50% renewable energy by 2035. Thus the CAP stretch goal is to increase renewable energy within its portfolio from 2020 to 2035. The 29 percent value for the mitigation above was calculated as the difference between the CAP Measure 1.1 reduction amount for the stretch goal for 2035 (71%) and the CAP Measure 1.1 reduction amount for 2020 (42%). As discussed in text, the Project has less than significant impact in comparison to the BAAQMD service population efficiency threshold based on the AB 32 target for 2020. Since the EIR finds that the project's emissions are significant for the period after 2020, the use of the difference in the CAP Measure 1.1 between 2020 and 2035 is appropriate to the impact identified for the Project.

Mitigation and Avoidance Measures	Action	Implementing Party	Monitoring Party	Timing[1]
GREENHOUSE GAS EMISSIONS (cont.)				
renewable energy or other measures (CAP Measure 2.4). This requirement may be phased in as follows: 2020 – 15%; 2025 – 29%; 2030 – 50%. If the Project Developer can demonstrate, to the City's satisfaction, that through Project design, adopted State or federal regulations, or other assured actions that the Project's emissions overall will meet the 2030 metric identified in this document without the implementation of this particular measure of its full implementation, then this measure (or its full implementation) may be waived by the City. 3. Food Waste: All retail restaurants shall be required to participate 100 percent in any extant City food waste and composting programs and any that may be developed in the future (CAP Measure 4.1). 4. Electrical Landscaping Equipment: The Project shall include installation of electrical outlets near all maintained landscaping areas to allow for the use of electrical landscaping equipment (CAP Measure 5.1). In the landscaped City Center, only electrical landscape equipment shall be used. Use of electrical landscaping equipment shall not be required for the extensive natural landscaping contemplated at the edges of the City Center and at Parcels 1, 2, and 3. 5. Electrical Vehicle Charging/Preferential Parking (CAP Measure 6.3). The Project shall provide preferential parking in all parking lots for electric vehicles and shall also provide charging equipment, as follows: a. Residential Use: A total of 10 percent of the required parking spaces shall be provided with a listed cabinet, box, or enclosure and connected to a conduit that links the parking spaces to the electrical service in a manner approved by the building and safety official. Of the listed cabinets, boxes, or enclosures provided, 50 percent shall have the necessary electric vehicle supply equipment installed to provide active charging stations that are ready for use by residents. The remainder shall be installed at such time as they are needed for use by residents. Electrical vehicle batteries and charging technology may change substantially over the next 15 years. As such, the City shall have the discretion to modify the specific requirements for this measure over time, provided that 10 percent of the spaces have electrical service and 5 percent have active charging, depending on what the technology at the time requires.	implementation of measures and incorporation of operational measures into subleases.			#3, 8, 9, 10: Prior to execution of ground leases; provisions must be included in each applicable ground lease.

Mitigation and Avoidance Measures	Action	Implementing Party	Monitoring Party	Timing[1]
GREENHOUSE GAS EMISSIONS (cont.)				
b. Commercial Use: New commercial uses shall provide the electrical service capacity necessary as well as all conduits and related equipment necessary to serve 2 percent of the parking spaces with charging stations in a manner approved by the City's Building Official. Of these parking spaces, 50 percent shall initially be provided with the equipment necessary to function as online charging stations upon completion of the Project. The remainder shall be installed at such time as they are needed for use by customers, employees, or other users. Electrical vehicle batteries and charging technology may change substantially over the next 15 years. As such, the City shall have the discretion to modify the specific requirements for this measure over time, provided that two percent of the spaces have electrical service and one percent have active charging, depending on what the technology at the time requires.				
6. Shade Trees: Where surface parking lots are not covered by PV solar, shade trees shall be planted to reduce urban heat island effects on adjacent buildings (CAP Measure 7.1).				
7. Urban Cooling: Any uncovered parking lots or spaces shall use light-colored pavement (CAP Measure 7.2).				
8. Leases for businesses that base a diesel truck fleet within the Project site: Ensure those fleets meet the highest CARB engine-tier standard in place at the time of issuance of the building permits for the building that such businesses occupy, or the execution of a lease, whichever comes first.				
9. Electrical hook-ups at loading docks for businesses that will receive deliveries from refrigerated diesel trucks: Stipulate in the lease agreement for such businesses a requirement to use the hook-ups if the trucks will be idling for more than two minutes.				
10. Leases for business receiving deliveries: Prohibit all diesel-powered trucks from idling for more than 2 minutes.				
11. Solar hot water heating systems: Incorporate for appropriate applications, including any swimming pools and buildings with swimming pools.				
12. Electric heat pumps, or other energy-efficiency techniques, including radiant systems: Include for space heating and cooling, under appropriate circumstances.				

Mitigation and Avoidance Measures	Action	Implementing Party	Monitoring Party	Timing[1]
NOISE				
NOI-1.1: Prepare and Implement a Construction Noise Control Plan to Reduce Construction Noise at Adjacent Land Uses. The Project Developer shall develop a noise control plan that requires that the Project construction activities comply with the City Code noise limits. The requirements and limitations specified in the plan shall be determined by phase and/or parcel and/or subsections of a parcel or phase. The construction noise control plan shall require the following: • The Project Developer shall appoint a Project noise coordinator who will serve as the point of contact for noise-related complaints during Project construction. The Project noise coordinator shall transmit all construction noise-related complaints to the construction contractor, and the construction contractor shall enhance or refine the noise best management practices discussed herein to address the received noise complaints to the extent feasible. The contact information for the Project noise coordinator shall be sent to residents in the greater vicinity of the Project site that could be affected by Project noise and municipalities affected by Project construction noise. • Construction activities that have the potential to generate noise that is detectableat adjacent residential land uses or within 300 feet of a residentially zoned property shall occur only during the times listed below. Activities that would result in no detectable noise at adjacent land uses, such as interior painting, would not be limited by the hours below. o Between 7:00 a.m. and 6:00 p.m. Monday through Friday. o Between 9:00 a.m. and 6:00 p.m. on Saturdays. o No duration in time on holidays or Sundays. • Construction contractors shall specify noise-reducing construction practices that will be employed to reduce construction noise for construction activities thatwould occur outside of the prohibited hours specified in the City Code and that would have the potential to exceed the receiving zone noise limits specified in the City Code. The measures determined by the Project Developer shall be reviewed and approved by the City prior to the issuance of building permits. Measures that can be used to limit noise include, but are not limited to, those listed below.	Project Developer to provide noise control plan for City review and approval.	Project Developer/ Project Contractor	City Planning & Inspection Division	Prior to issuance of the first building permit within each Development Area Plan area

Mitigation and Avoidance Measures	Action	Implementing Party	Monitoring Party	Timing[1]
NOISE (cont.)				
○ Locating construction equipment as far as feasible from noise-sensitive uses. ○ Requiring that all construction equipment powered by gasoline or diesel engines have sound-control devices that are at least as effective as those originally provided by the manufacturer and that all equipment be operated and maintained to minimize noise generation. ○ Not idling inactive construction equipment for prolonged periods (i.e., more than 2 minutes). ○ Prohibiting gasoline or diesel engines from having unmuffled exhaust systems. ○ Using noise-reducing enclosures around noise-generating equipment that has the potential to disturb nearby off-site land uses, or where otherwise necessary, to comply with the City Code noise limits for receiving zones.				
NOI-1.2: Implement Off-Site Traffic Noise Reduction Measures. The Project Developer shall implement off-site traffic noise reduction measures along the east side of Lafayette Drive between Tasman Drive and Hogan Drive such that the Project- related increase in traffic noise for noise receptors is less than 3 dBA. The Project Developer shall construct a solid barrier between the roadway and adjacent residential uses along Lafayette Drive between Tasman Drive and Hogan Drive unless deemed infeasible for any reason including unavailability of sufficient right of way or inability to secure design review/architectural approval. The Project Developer shall implement off-site traffic noise reduction measures along the south side of Tasman Drive between Lafayette and Calle del Sol such that cumulative with project-related increase in traffic noise for noise receptors is less than 3 dBA or the project contribution to traffic noise is less than 1 dBA. The Project Developer shall construct a solid barrier between the roadway and adjacent residential uses along Tasman Drive between Lafayette and Calle del Sol unless deemed infeasible for any reason including unavailability of sufficient right of way or inability to secure design review/architectural approval. The barriers shall be designed to provide shielding between areas of frequent human use (i.e., residence backyards) and the roadway. This would result in approximately 1,000 feet of noise barriers along this the Lafayette segment (between Tasman Drive and Hogan Drive) and up to 800 feet along the Tasman segment (between Lafayette and Calle del Sol). One effective approach would be to replace the existing privacy fences at single family residences with a solid barrier that is at least 6 feet high. The Project Developer shall prepare an off-site noise	Qualified professional to determine which Phase of the Project triggers the need for the reduction measures. Project Developer to provide noise control plan for City review, determination of feasibility and approval.	Project Developer	City Planning & Inspection Division	Qualified professional to determine which phase triggers noise barrier during Phase 1 of DAP approval. City to determine feasibility of noise barriers, and approve design if feasible, as part of DAP approval. If feasible, barriers to be constructed as part of construction for the Phase triggering the need for the barrier.

Mitigation and Avoidance Measures	Action	Implementing Party	Monitoring Party	Timing[1]
NOISE (cont.)				
control plan that identifies the location, design, and effectiveness of the specific treatments to be implemented. This plan shall be submitted to the City for review and approval prior to the issuance of building permits. The off-site noise improvements shall be completed before Project operations commence.				
NOI-2.1: Restrict Pile Driving. Pile driving occurring 175 feet or less from new residential or commercial buildings shall be conducted prior to those buildings being occupied by future occupants.	City will not approve building permits that include pile driving within 175 feet of occupied residential.	Project Developer/ Project Contractor	City Planning & Inspection Division	Prior to issuance of building permits if driven pile foundations are planned and prior to occupancy of proximate residential or commercial buildings
NOI-5.1: Prepare and Implement a Noise Control Plan to Reduce Interior Noise at Sensitive Land Uses. The Project Developer shall conduct a design-level acoustic study that identifies exterior noise levels for residential and commercial uses on the Project site. This study shall take into account existing airport noise, Project, and reasonably foreseeable future noise sources (such as proposed increases in passenger rail service along the Lafayette Street corridor). Where this study finds that the exterior noise level would exceed the residential compatibility standard of 55 dBA Ldn or the commercial incompatibility standard of 65 dBA Ldn, the Project Developer shall prepare a design-level operational noise control plan to provide acceptable interior noise levels. This plan shall identify all Project features and treatments that will be implemented to ensure that the Project is in compliance with the interior noise standards listed in the City's General Plan and City Code as well as thestandards specified for new construction within the CLUP for SJC. The study and plan shall be developed by an acoustical design professional. Design features and treatments will be identified to ensure that interior noise levels at new proposed uses are in compliance with the noise standards. The report shall be submitted to the City for review and approval prior to the issuance of building permits for the Project. Depending on the noise exposure for a particular site, such treatments may include, but are not limited to, those listed below, as recommended by the acoustical design professional.	Project Developer to provide design-level acoustic study for City review and approval and to incorporate necessary measures into building design when exterior noise levels exceed residential and commercial incompatibility standards.	Project Developer/ Acoustical Design Professional	City Planning & Inspection Division	Prior to issuance of building permits for residential and commercial buildings

Mitigation and Avoidance Measures	Action	Implementing Party	Monitoring Party	Timing[1]
NOISE (cont.)				
• Construction of enclosures around noise-generating mechanical equipment at commercial uses. • Use of setbacks from noise sources to maximum attenuation of noise over distance. • Installation of noise-reducing treatments in new buildings, including: o High-performance, sound-rated double-glazed windows, o Sound-rated doors, o Sound-rated exterior wall construction, o Special acoustical details for vents, o Acoustical caulking at all exterior façade penetrations, o Sound-rated roof and ceiling constructions, and o Adequate mechanical ventilation so that windows and doors may be kept closed at the discretion of the building occupants to control environmental noise intrusion.				
CULTURAL RESOURCES				
CR-1.1: Conduct Extended Phase I (XPI) Archaeological Investigations within the Project Site near Recorded Resources and within an Area of Archaeological Sensitivity. Prior to construction, if it is determined that Project-related ground- disturbing activities may extend into native soil within 100 feet of a previously recorded archaeological site, the Project Developer shall retain the services of a qualified archaeologist to conduct XPI investigations within the Project site. The XPI investigations shall consist of subsurface trench excavations to determine the presence or absence of buried features associated with the known archaeological site. If feasible, at least two trenches shall be placed in recorded location P-43-000025/CA-SCL-5, which is recorded as partially in the Project site, to ensure adequate investigations in this area. If the XPI investigations reveal resources, additional trenches or testing may be necessary. Mitigation Measure CR-1.3, described below, shall be followed.	Project Developer to submit XPI Archaeological Investigation(s) to City.	Project Developer/ Qualified Archaeologist	City Planning & Inspection Division	Prior to issuance of grading permits that would disturb native soils within 100 feet of a previously recorded archaeological site

Mitigation and Avoidance Measures	Action	Implementing Party	Monitoring Party	Timing[1]
CULTURAL RESOURCES (cont.)				
CR-1.2: Provide Archaeological Monitoring of the Project Site When in Native Soil. Prior to construction, if it is determined that Project-related ground-disturbing activities may extend into native soil, within 100 feet of a previously recorded archaeological site, the Project Developer shall retain the services of a qualified archaeologist to monitor earthmoving activities within the Project site. Monitoring shall consist of coordinating subsurface work to allow for the careful examination of vertical and horizontal soil relationships for the purpose of seeking positive archaeological finds (prehistoric and/or historic). The monitor shall maintain a field log of their presence and observations, carefully noting soil conditions. The archaeological monitor shall be pre-approved by the Director of Planning and Inspection. After written approval, the Planning Division shall be notified at least 48 hours prior to any grading or other subsurface work on the site, and the Project Developer shall provide a written protocol for the City's review and approval that stipulates the manner in which the Project Developer shall comply with the monitoring requirements. In the event that cultural resources are encountered, Mitigation Measure CR-1.3, described below, shall be followed.	City to approve monitor, ensure monitor is in place, and approve monitoring protocol, which shall include requirements of CR-1.3.	Project Developer/ Qualified Archaeologist	City Planning & Inspection Division	Monitoring protocol prior to the issuance of grading and building permits that would disturb native soils within 100 feet of a previously recorded archaeological site; monitoring shall occur during earthmoving activities
CR-1.3: Stop Work if Cultural Resources Are Encountered during Ground-Disturbing Activities. In the event that cultural resources are encountered during ground disturbing activities, all work within proximity of the find shall temporarily halt so that the archaeological monitor can examine the find and document its provenience and nature (drawings, photographs, written description). The archaeological monitor shall then direct the work to either proceed if the find is deemed to be insignificant, or instruct the work to continue elsewhere or cease until adequate mitigation measures are adopted. If the find is determined to be potentially significant, the archaeologist, in consultation with the Planning Division, shall develop a Treatment Plan that could include site avoidance, capping, or data recovery. If data recovery is determined to be appropriate, excavation shall target recovery of an appropriate amount of information from archaeological deposits to determine the potential of the resource to address specific research questions. If it occurs, data recovery shall emphasize the understanding of the archaeological deposit's structure, including features and stratification, horizontal and vertical extent, and content, including the nature and quantity of artifacts.	Archaeological monitor (retained by the Project Developer), as necessary, and in consultation with the City, develop a Treatment Plan. See also CR-1.2.	Project Developer/ Qualified Archaeologist	City Planning & Inspection Division	During construction if cultural resources are encountered

Mitigation and Avoidance Measures	Action	Implementing Party	Monitoring Party	Timing[1]
CULTURAL RESOURCES (cont.)				
CR-2.1: Paleontological Resource Mitigation Plan. Prior to any deep excavations below an elevation of -30 feet (North American Vertical Datum of 1988 [NAVD] 88) at the Project site on areas not underlain by landfill refuse, the Planning Division shall be notified at least 48 hours prior to the excavation, and a qualified professional paleontologist shall prepare a Paleontological Resource Mitigation Plan (PRMP) in consultation with the Planning Division. The PRMP shall describe the tasks necessary to monitor, assess, and recover (if present) significant paleontological resources during Project excavation activities. The PRMP shall be implemented by the qualified paleontologist during the deep Project excavations below an elevation of -30 feet (NAVD 88).	Project Developer to submit to City PRMP prepared by paleontologist (retained by the Project Developer).	Project Developer/ Qualified Professional Paleontologist	City Planning & Inspection Division	Prior to issuance of grading permits for excavations below an elevation of -30 feet at Parcel 5 and areas of Parcel 4 not underlain by landfill.
CR-2.2: Paleontological Resource Monitoring. In accordance with the PRMP, a qualified paleontologist shall monitor for fossils in Pleistocene deposits during Project excavations below an elevation of -30 feet (NAVD 88) on areas not underlain by landfill refuse or below other elevations confirmed in the field by the qualified paleontologist. The qualified paleontologist shall be present initially for 100 percent of the excavation activities within the Pleistocene deposits. After 50 percent of the excavation is completed within the rock unit and if no fossils of any kind have been discovered, then the level of monitoring can be reduced or suspended entirely at the Project paleontologist's discretion. If the paleontologist discovers potential paleontological resources, all ground disturbance within 50 feet of the find shall stop immediately until the qualified professional paleontologist can assess the nature and importance of the find and recommend appropriate salvage, treatment, and future monitoring and mitigation actions.	Project Developer to provide to City contract with paleontologist for implementing PRMP, which shall include requirements of CR-2.3.	Project Developer/ Qualified Professional Paleontologist	City Planning & Inspection Division	Prior to issuance of grading permits for excavation below an elevation of -30 feet at Parcel 5 And areas of Parcel 4 not underlain by landfill
CR-2.3: Paleontological Resource Reporting. If significant paleontological resources are identified, the Project qualified paleontologist shall prepare a report summarizing the field and laboratory methods, site geology and stratigraphy, faunal/floral list(s), and a brief statement of the significance and relationship of the fossils discovered to similar fossils found elsewhere. The final report should emphasize the discovery of any new or rare taxa, or paleoecological or taphonomic significance. A complete set of field notes, geologic maps, stratigraphic sections, and a list of identified specimens must be included in or accompany the final report. This report should be finalized only after all aspects of the PRMP are completed, including preparation, identification, cataloging, and curatorial inventory. Full copies of the final report shall be deposited with both the Lead Agency and the repository institution with the request that all locality data remain confidential and not made available to the general public.	Paleontologist to prepare final report for submission to City. See also CR-2.2.	Project Developer/ Qualified Professional Paleontologist	City Planning & Inspection Division	After a significant paleontological resource is identified during construction

Mitigation and Avoidance Measures	Action	Implementing Party	Monitoring Party	Timing[1]
CULTURAL RESOURCES (cont.)				
CR-3.1: Stop work if human remains are encountered during ground-disturbing activities. When human remains are discovered (in either an archaeological or construction context), all work within proximity of the remains shall stop so that the archaeological monitor can examine the remains. The County Coroner shall be notified, who shall make a determination as to whether the remains are of Native American origin. If the remains are determined to be Native American, the Coroner shall notify the Native American Heritage Commission (NAHC) immediately. The NAHC shall notify those persons it believes are most likely descended from the deceased Native American. Once the NAHC identifies the most likely descendants, the descendants will make recommendations regarding proper burial, which will be implemented in accordance with Section 15064.5(e) of the State CEQA Guidelines.	Project Developer to submit to City applicable provisions of construction contracts including applicable requirements.	Project Developer/ Project Contractor	County Coroner/ NAHC	Prior to issuance of grading and building permits
BIOLOGICAL RESOURCES				
BIO-1.1: Protect Nesting Birds. The Project Developer and its contractors shall avoid conducting vegetation removal during the migratory bird nesting season (February 1–August 31). If Project-related activities must commence during the migratory bird nesting season, the Project Developer shall retain a qualified wildlife biologist to conduct a survey for nests of migratory birds. Surveys for nesting migratory birds shall occur within 3 days prior to the commencement of ground disturbance and vegetation removal in areas that will be affected by Project construction activities. Multiple nest surveys shall be required if construction is phased or when construction work stops for more than 2 weeks at a portion of the site where suitable nesting habitat remains. If construction is ongoing for multiple years, these surveys shall be conducted each year prior to construction in areas that have not yet been disturbed and are scheduled to be disturbed during the nesting season. In addition to nesting-season surveys, surveys shall be conducted during the non-nesting season (September 1–January 31) for overwintering burrowing owls in areas scheduled for initial disturbance during the upcoming season. The surveys shall also be conducted as described above, with a goal of identifying overwintering owls so they can be appropriately avoided during construction. If an active nest is discovered, a no-disturbance buffer zone around the nest tree or shrub (or, for ground-nesting species, the nest itself) shall be established. The no-disturbance zone shall be marked with flagging or fencing that is easily identified by the construction crew and shall not affect the nesting bird or attract predators to the nest location. In general, the minimum buffer zone widths shall be as	Project Developer to provide to City applicable provisions of construction contracts including pertinent requirements. If construction will occurs in the nesting season, Project Developer to submit to City agreement with qualified wildlife biologist requiring surveys and protective measures under BIO-1.1 and requirement that wildlife biologist report to City if conditions triggering BIO-2.2 exist.	Project Developer/ Project Contractor/ Qualified wildlife biologist	City Planning & Inspection Division	Prior to the issuance of grading and building permits for construction contracts; prior to commence-ment of grading for biologist agreements; and prior to ground disturbance for surveys

Mitigation and Avoidance Measures	Action	Implementing Party	Monitoring Party	Timing[1]
BIOLOGICAL RESOURCES (cont.)				
follows: 50 feet (radius) for non-raptor ground-nesting species, 50 feet (radius) for non-raptor shrub- and tree-nesting species, and 300 feet (radius) for raptor species. Buffer widths may be modified based on discussion with DFW. Buffers shall remain in place as long as the nest is active or young remain in the area and are dependent on the nest. If a burrowing owl nest is identified during pre-construction surveys, no-activity buffers will adhere to the recommendations in the 2012 California Department of Fish and Game Staff Report on Burrowing Owl Mitigation.[7] Most Project activities would result in a high level of disturbance, constituting a 1,640-foot (500-meter) required buffer around occupied nests during any time of year.[8]				
BIO-1.2: Implement Bird-Safe Design Standards into Project Buildings and Lighting Design. Each Development Area Plan (DAP) approved by the City shall include a set of specific standards for minimizing hazards to birds, to be implemented by the Project Developer. The development of the specific bird safety standards for each Development Area Plan shall be tailored to the specific potential hazards to birds in that development area, taking into account the specific locations, types and heights of buildings, lighting, and landscaping. In addition, the DAP shall require enhanced protective measures for buildings within 300 feet of the retention pond, the Guadalupe River, and San Tomas Aquino Creek, such as siting buildings in relation to existing landscape features to reduce conflicts with existing features that may serve as attractive bird habitat; minimizing the reflection of existing vegetation on building facades; or using soil berms, furniture, landscaping, or architectural features to prevent reflection of water in glazed building facades. The specific bird safety standards in each DAP shall be based on the following bird-friendly building principles, to the extent applicable to the particular development area: • Reduce mirrors and large areas of reflective glass. • Avoid transparent glass skyways, walkways, or entryways, free-standing glass walls, and minimize transparent building corners, or utilize glazing treatments to mitigate the hazard. • Minimize funneling of open space toward a building façade.	City review and approve each Development Area Plan to ensure adequate measures are included.	Project Developer	City Planning & Inspection Division	Approval of each Development Area Plan

[7] California Department of Fish and Game. 2012. Staff Report on Burrowing Owl Mitigation. State of California Natural Resources Agency. March 7. Available: http://www.dfg.ca.gov/wildlife/nongame/survey_monitor.html#Mammals.
[8] Scobie, D., and C. Faminow. 2000. Development of Standardized Guidelines for Petroleum Industry Activities that Affect COSEWIC Prairie and Northern Region Vertebrate Species at Risk. Environment Canada, Prairie and Northern Region, Edmonton, Alberta, Canada.

Mitigation and Avoidance Measures	Action	Implementing Party	Monitoring Party	Timing[1]
BIOLOGICAL RESOURCES (cont.)				
• Strategically place landscaping to reduce reflection and views of foliage inside or through glass. • Reduce potential light and glare by implementing Mitigation Measures AES-2.1 (requiring low-profile, low-intensity lighting directed downward), AES-2.2 (requiring shielded fixtures for outdoor lighting), and AES-2.3 (requiring low-emissivity reflective coating on exterior glass surfaces). • To the extent consistent with the normal and expected operations of the uses planned for the particular development area, take appropriate measures to avoid use of unnecessary lighting at night, especially during bird migration season (February-May and August-November) through the installation of motion sensor lighting, automatic lighting shut-off mechanisms, or other effective measures to the extent feasible. The specific bird safety standards shall also provide for a monitoring program, and placing signs around the buildings with phone numbers for authorized bird conservation organizations.				
BIO-2.1: Detection of Burrowing Owls. The Project Developer shall allow access to the Project site or off-site areas for biologists who participate in the annual burrowing owl nest survey coordinated by the Santa Clara Valley HCP/NCCP. Burrowing owl surveys are conducted between March and August of each year. As many as four surveys may be conducted each year, in accordance with the Staff Report on Burrowing Owl Mitigation[9] to determine whether burrowing owls are nesting and whether nests are successful. Access to the site for burrowing owl surveys shall be granted until the Project site or off-site area is completely built out. The Project Developer shall not, however, be required to postpone planned development activities to provide such access, except to the extent such postponement is necessary to meet regulatory requirements.	The ground lessee shall allow such access until certificate of completion for the phase.	Project Developer/City	City Planning & Inspection Division	Concurrent with execution of each phase ground lease

[9] CDFW 2012. Staff Report on Burrowing Owl Mitigation. State of California Natural Resources Agency.

Mitigation and Avoidance Measures	Action	Implementing Party	Monitoring Party	Timing[1]
BIOLOGICAL RESOURCES (cont.)				
BIO-2.2: Mitigation for Loss of Burrowing Owl Habitat during Construction. Should burrowing owls begin nesting on developable portions of the Project site or off-site areas that remain undeveloped as phases of the Project are constructed, or suitable habitat within 600 meters of an active nest is removed from the Project site, then lost burrowing owl habitat shall be replaced at a ratio of at least 1:1 prior to ground-disturbing activities in the area of the Project site or off-site area with an active nest. Affected habitat shall be defined as suitable habitat (based on the habitat mapping completed for this EIR) within a 600 meter radius of an active burrowing owl nest. Suitable land cover types include annual grassland, ruderal, or barren areas. Mitigation sites shall have documented nesting occurrences from at least 1 year within the previous 3 years. If burrowing owls move onto undeveloped portions of the Project Site or off-site area, including the Retention Basin, once the site is fully constructed, there shall be no requirement to provide replacement habitat, unless that undeveloped habitat is developed in the future.	If required, Project Developer to submit certification to the City that habitat has been replaced at the specified ratio. City to review and approve certification.	Project Developer	City Planning & Inspection Division	Prior to ground-disturbing activities until the Project site or off-site areas are completely built-out in the event that wildlife biologist detects circumstance triggering BIO- 2.2
BIO-3.1: Protect Western Pond Turtles. Prior to the start of construction activities in or within 50 feet of aquatic habitats, the Project Developer shall retain a qualified biologist to conduct preconstruction surveys for western pond turtles in all suitable habitats (aquatic and upland) in the vicinity of the work site. Surveys shall take place no more than 72 hours prior to the onset of site preparation and construction activities with the potential to disturb turtles or their habitat. If preconstruction surveys identify active nests on the Project site, the biologist shall establish no- disturbance buffer zones around each nest using temporary orange construction fencing. The demarcation shall be permeable to allow young turtles to move away from the nest following hatching. The radius of the buffer zone and the duration of exclusion shall be determined in consultation with DFW. The buffer zones and fencing shall remain in place until the young have left the nest, as determined by the qualified biologist. If western pond turtles are found on the Project site, the Project Developer shall still retain a qualified biologist to monitor construction activities in the vicinity of suitable habitat and implement appropriate measures to protect the western pond turtle. Such measures may include removal and relocation of western pond turtles in proposed construction areas to suitable habitats outside the Project limits, consistent with DFW protocols and permits. Relocation sites shall be subject to DFW approval.	Project Developer to submit to City agreement with qualified biologist and applicable provisions of construction contracts, including requirement that biologist submit to City certification that preconstruction surveys have been conducted and protective measures taken.	Project Developer/ Qualified Biologist	City Planning & Inspection Division	Prior to the issuance of grading or building permits for biologist and construction agreements; and 72 hours prior to site construction activities in or within 50 feet of aquatic habitats

Mitigation and Avoidance Measures	Action	Implementing Party	Monitoring Party	Timing[1]
BIOLOGICAL RESOURCES (cont.)				
BIO-4.1: Protect Central California Coast Steelhead, Critical Habitat, and Chinook Salmon. Construction, operations, and maintenance on the riverbank, as well as areas within 200 feet of the Guadalupe River, that could result in disturbed sediment depositing within the banks of the channel shall be limited to the summer low-precipitation period (June 1 to October 15), unless otherwise approved by appropriate resource agencies. Limiting riverbank disturbance during these months would reduce the likelihood of adverse effects on adult and juvenile salmonid migration.	Not Applicable Project Developer to provide to City applicable provisions of construction contract ensuring work on the riverbank as well as within 200 feet of the Guadalupe River that could result in disturbed sediment depositing within the banks of the channel is limited to summer low precipitation periods.	Project Developer/ Project Contractor	City Planning & Inspection Division	Prior to issuance of grading and building permits
BIO-5.1: Protect Retention Pond and Eastside Retention Drainage Swale, and San Tomas Aquino Creek and the Guadalupe River Aquatic Habitat during Construction. For construction activities within 50 feet of the aquatic habitat associated with the retention pond and drainage swale, San Tomas Aquino Creek, and Guadalupe River, protective measures shall be put in place to ensure that impacts on those aquatic features shall be avoided and minimized. The following measures shall be deployed during construction: • A qualified biologist shall determine the locations where orange construction barrier fencing shall be installed around aquatic resources (USACE and the Regional Water Board jurisdictional wetlands/waters and DFW jurisdictional lakes and streams) that are to be avoided prior to initiation of construction activities. • Designate the protected area an Environmentally SensitiveArea and clearly identify the area in the construction specifications. • Maintain jurisdictional wetlands/water protection fencing throughout the grading and construction period. • Prohibit grading, construction activity, traffic, equipment, or materials in fenced wetland areas.	Project Developer to provide to City applicable provisions of construction contract and agreement with qualified biologist that include the specified protective measures.	Project Developer/ Qualified Biologist	City Planning & Inspection Division	Prior to issuance of grading and building permits for construction activities within 50 feet of the pertinent aquatic habitat

Mitigation and Avoidance Measures	Action	Implementing Party	Monitoring Party	Timing[1]
BIOLOGICAL RESOURCES (cont.)				
BIO-5.2: Compensate for Loss of Waters of the U.S. and State (including Wetlands). If impacts to jurisdictional waters of the U.S. or State cannot be avoided, the Project Developer shall obtain permits or approvals to develop from the USACE, the Regional Water Board, and DFW, as appropriate and required. Both the Guadalupe River and San Tomas Aquino Creek are subject to both State and federal jurisdiction because of their connection to the Bay. To ensure that the Project results in no net loss of wetland habitat functions and values, the Project Developer shall compensate for the loss of jurisdictional wetlands/waters through one of the following options. • Purchase of agency-approved mitigation credits from a suitably located mitigation bank prior to construction (ground disturbance that impacts wetlands/waters); • On-site wetland/waters restoration (re-establishment or rehabilitation) establishment (creation) prior to or concurrent with construction impacts; • Off-site wetland/waters restoration (re-establishment or rehabilitation)/establishment (creation) prior to or concurrent with construction; or • A combination of two or more of the above. The amount of agency approved mitigation credits required from a suitably located mitigation bank and/or size and location(s) of the area(s) to be restored (re-established)/established (created) shall be based on appropriate mitigation ratios, as derived in consultation with DFW, USACE, and the Regional Water Board. The Project Developer shall prepare and implement a mitigation and management plan (MMP) as part of the permitting process in conformance with the USEPA/USACE 2008 Mitigation Rule. The mitigation ratios shown in the initial draft MMP submitted to the permitting agencies during Project permitting shall be a minimum of 2:1, as determined through the CEQA process. The MMP, if other than sole purchase of mitigation bank credits, shall include the requirements listed below: • Mitigation implementation plan; • Performance (success) standards or criteria to be met in order to determine that the mitigation has successfully replaced the impacted wetlands/waters in terms of "no net loss" of the impacted functions and values; • 5-year monitoring plan for determining that performance criteria have been successfully met through the collection of wetlands/waters vegetation survival and cover field data; hydrology flooding, ponding, and/or soil saturation field data; and habitat area data;	Project Developer to provide to City wetland delineation, copies of permits obtained as and if required from USACE, the Regional Water Board and DFW, and the MMP, all satisfying the requirements of BIO-5.2 Project Developer to provide to City annual monitoring reports.	Project Developer/ Qualified Wetland Biologist	DFW, USACE, Regional Water Board, City Planning & Inspection Division	Prepare wetland delineation prior to first grading or building permit for the Project. Obtain requisite agency permits and prepare MMP prior to issuance of grading or building permits for construction activities that will impact jurisdictional wetlands. Monitor plan for a minimum of 5 years.

Mitigation and Avoidance Measures	Action	Implementing Party	Monitoring Party	Timing[1]
BIOLOGICAL RESOURCES (cont.)				
• Adaptive management plan to be implemented if mitigation performance is found through annual monitoring not to be progressing towards success within the 5-year monitoring period; • Conservation plan to ensure in-perpetuity land use protection of the mitigation site; • Long-term (in-perpetuity) conservation management plan; and • Funding plan for mitigation implementation, 5-year mitigation performance monitoring and maintenance, and an endowment (non-wasting fund) for long-term conservation management. The final MMP shall be determined in consultation with DFW, USACE, and the Regional Water Board. The mitigation plan shall include measure to avoid and minimize the effects of construction on surrounding native habitats. The required performance standard is no net loss of wetland and waters habitat function and values. Monitoring shall occur for a minimum of 5 years, at which time, if the success criteria are met, wetland compensation shall be deemed complete.				
BIO-C.1: Make a Fair-Share Nitrogen Deposition Fee Contribution to the Santa Clara Habitat Agency's Voluntary Fee Payment Program. Consistent with its voluntary commitment to contribute a nitrogen deposition fee through the fee program of the Santa Clara Habitat Agency, the Project Developer shall make a pro-rated per-vehicle-trip nitrogen deposition fee contribution, which will be based on the amount charged by the Santa Clara Valley Habitat Agency under its Voluntary Fee Payments Policy (http://scv-habitatagency.org/DocumentCenter/View/345). Specifically, the per-vehicle trip fee shall be adjusted as set forth below to take into account the different dispersion characteristics of the Project vs. the average dispersion characteristics for development in the HCP/NCCP area. The Project is located farther from serpentine grassland habitat than average development within the Santa Clara Valley HCP/NCCP area. Thus, the required fair-share contribution shall be figured as 38 percent (based on the ICF analysis) of the established fee of the habitat agency for the year in which the building permits are issued for the Project. The fee may be paid up front or in installments in proportion to mitigated vehicle trip generation for the phase of the Project for which the building permits are issued. For fiscal year 2015–2016, the adopted HCP/NCCP nitrogen deposition fee was $4.20 per new vehicle trip. Using Scheme B's estimated trip generation (140,730 trips/day), taking into account the trip reduction effect of Mitigation Measure TRA-1.1 (reduction to 137,910 trips/day), and the 38 percent adjustment factor, if all fees were paid in 2015, the estimated total would be $220,104.	Project Developer to provide to City proof of payment.	Project Developer	City Community Development Department	Prior to issuance of building permits: to be paid up front or in installments in proportion to mitigated vehicle trip generation for the phase of Project for which the building permits are issued.

Mitigation and Avoidance Measures	Action	Implementing Party	Monitoring Party	Timing[1]
GEOLOGY AND SOILS				
GEO-1.1: Detailed Grading and Erosion Control Plan. A detailed grading and erosion control plan shall be prepared and submitted to the City Building Department. The plan shall cover all Project parcels (not just the landfill portions) and off-site areas and include all information required to demonstrate that earthwork activities will be in compliance with CCR 21190 et seq. and incorporate by reference the Project's Storm Water Pollution Prevention Plan, as required by the Construction General Permit.	Project Developer to provide detailed grading and erosion control plan for review and approval by City.	Project Developer	City Planning and Inspection Division	Prior to the issuance of demolition and grading, permits
GEO-2.1: Design-Level Geotechnical Investigation. Prior to the issuance of demolition, grading, or construction permits at the Project site, a design-level geotechnical investigation shall be conducted by a qualified professional (the qualified professional shall be retained by the Project Developer). The investigation shall include further field exploration (e.g., borings, cone penetration tests, test pits and/or geophysical surveys) to develop design-level recommendations to address erosion and other geotechnical concerns for the Project. The design-level geotechnical investigation shall include: • Evaluation of anticipated settlement. Additional soil borings shall be installed to determine the depth to the refuse layer for aid in preparing grading plans. Additional samples shall be analyzed to determine potential settlement and determine the likely final post-settlement surface elevation. The potential magnitude of differential settlements between improvements supported by a combination of structural slab and deep foundations and those that are supported by other foundation systems shall be fully analyzed and detailed in the design-level geotechnical report. • Evaluation of liquefaction potential. Additional borings shall be drilled at the Project site and off-site areas to fully characterize the liquefaction hazard • associated with the Project. • Evaluation of slope instability. A detailed slope stability analysis for all existing • slopes that would remain under the Project, including the perimeter landfill slopes, and all proposed new slopes shall be prepared. • Evaluation of expansive soils. Additional borings shall be drilled at the Project site • and off-site areas to fully characterize the expansive soil hazard associated with the Project. • Evaluation of corrosive soils. Project site and off-site soils and, in those areas where foundation components would come into contact with landfill materials, refuse shall be evaluated for corrosion potential.	Project Developer to provide design-level geotechnical investigation for review and approval by City. City and Developer to submit such investigation to regulatory agencies per GEO-2.6 with respect to areas underlain by landfill and secure approval as required. Project Developer to incorporate resulting measures into project plans.	Project Developer/ City	City Community Development Department	Prior to the issuance of demolition, grading, and building permits

Mitigation and Avoidance Measures	Action	Implementing Party	Monitoring Party	Timing[1]
GEOLOGY AND SOILS (cont.)				
The design-level geotechnical investigation work plan shall be submitted for review and approval in accordance with Mitigation Measure GEO-2.6.				
GEO-2.2: Final Geotechnical Report Review. A final geotechnical report shall be prepared by a qualified professional based on the findings of the design-level geotechnical investigation (the qualified professional shall be retained by the Project Developer). The final report shall be submitted for review and approval in accordance with Mitigation Measure GEO-2.6. The final geotechnical report shall include: Measures to address anticipated settlement: • Specifications of methods to address differential settlement between improvements supported by a combination of structural slab foundations and those that are supported by other deep foundation systems or unsupported areas. • Exterior slabs and ramps attached to buildings shall be hinged to allow the end of the slab or ramp not attached to the building to move downward as settlement occurs. The design shall not allow building entrance slabs to exceed a 5 percent grade, in compliance with ADA access requirements, and vehicular entrances shall not be allowed to exceed an 11 percent grade to prevent vehicles from scraping during entry or exit. • Settlement vaults and flexible connections shall be required at locations where utilities transfer from a pile-supported building to a non-supported area for all phases of construction. • Roadway and other paving at the Project site not located above an area-wide structural slab shall be constructed with flexible materials, such as asphalt or interlocking pavers. The use of concrete and other non-flexible materials shall be minimized. Where non-flexible material is used, expansion and spacing joints that allow rigid materials to shift without breaking shall be used to allow for anticipated settlement. Measures to address liquefaction: • In those areas not supported by the structural slab foundation (which would effectively mitigate the liquefaction hazard), other measures shall be developed to mitigate the hazard, such as shallow footings constructed over ground improvement. Foundations for structures shall be designed to completely mitigate settlement hazards associated with liquefaction (i.e., no liquefaction-induced settlement damage shall be accepted for the final design).	Project Developer to provide final geotechnical report for review and approval by City. City and Developer to submit such report to regulatory agencies per GEO-2.6 and secure approval as required. Project Developer to incorporate resulting measures into project plans.	Project Developer/City	City Community Development Department	Prior to the issuance of grading and building permits

Mitigation and Avoidance Measures	Action	Implementing Party	Monitoring Party	Timing[1]
GEOLOGY AND SOILS (cont.)				
Measures to address slope instability: • Measures (e.g., reducing slope steepness, providing structural support, or ground improvement) to ensure that an appropriate factor of safety (both static and seismic) is achieved for each slope. Measures to address expansive soils: • In those areas not supported by the structural slab foundation (which would effectively mitigate the hazard), other measures shall be developed to mitigate the hazard, such as removal of the problematic soils, treatment of the soils, or specification of appropriate foundation design. If any soils characterized as highly or moderately expansive (linear extensibility of 3.0 percent or more) are to remain at the surface or be used as fill in the upper 5.0 feet, these soils shall be treated (using calcium-based treatment or similar approach) such that the soils are reduced to a low expansion potential (linear extensibility of less than 3.0 percent). Measures to address corrosive soils: • A corrosion consultant shall be retained to provide specific recommendations regarding the long-term corrosion protection of pile elements and other subsurface materials. The recommendations of the corrosion consultant, which may include use of specific corrosion-resistant materials and/or treatment of corrosive soils, shall be implemented during construction.				
GEO-2.3: Construction Quality Assurance Plan. A Construction Quality Assurance (CQA) Plan that covers both the Project site and off-site areas shall be prepared by the Project Developer for review and approval by the Director of Public Works. The CQA Plan shall establish procedures for testing final cover materials, detail the responsibilities of construction monitoring personnel, and provide procedures for addressing unexpected geologic conditions during grading activities.	Project Developer to provide a CQA Plan that covers both the Project site and off-site areas for review and approval by City. City and Developer to submit CQA to regulatory agencies per GEO-2.6 with respect to areas underlain by landfill and secure approval as required.	Project Developer	Director of Public Works	Prior to the issuance of grading, and building construction permits

Mitigation and Avoidance Measures	Action	Implementing Party	Monitoring Party	Timing[1]
GEOLOGY AND SOILS (cont.)				
GEO-2.3 (cont.)	Project Developer to submit to City applicable provisions of construction contracts incorporating requirements of CQA.			
GEO-2.4: Final Project Design Review. Final Project design plans that cover both Project site and off-site areas shall be prepared by the Project Developer and submitted for review and approval in accordance with Mitigation Measure GEO-2.6. Project site structures shall be designed to accommodate predicted ground settlement, as determined in the design-level geotechnical investigation for the Project improvements (see Mitigation Measure GEO-1.1). For the portion of the Project overlying the Landfill, the Post-Closure Land Use Plan shall demonstrate that Project design will be protective of public health and safety and the environment, as required by 27 CCR 21190. Because of the potential for encountering buried obstructions, contingencies for relocating Auger Cast-in Place Piles and Drilled Displacement Columns during construction shall be included in the foundation design. The Project design plans shall be subject to review and approval by the City Building Department prior to initiation of field activities.	Project Developer to provide final Project design plans meeting criteria of GEO-2.4 for review and approval by City. City and Developer to submit such Project design plans to regulatory agencies per GEO-2.6 with respect to areas underlain by landfill and secure approvals as required.	Project Developer/City	City Community Development Division	Prior to issuance of grading and building permits
GEO-2.5: Site Operation, Monitoring, and Maintenance Plan. A Site Operation, Monitoring, and Maintenance Plan that covers both the Project site and off-site areas shall be prepared by the Project Developer and submitted for review and approval in accordance with Mitigation Measure GEO-2.6. The Site Operation, Monitoring, and Maintenance Plan shall establish procedures for inspecting structures and improvements as well as evaluating the effects of settlement. It will also establish a mechanism for funding and implementing the Plan's activities throughout the life of the Project. Inspections that focus on documenting settlement, particularly at locations where different support systems meet, shall take place at least quarterly during the first 2 years following the completion of each phase of Project construction. Documentation of each inspection shall be submitted to for review and approval in accordance with Mitigation Measure GEO-2.6 within 30 days of inspection completion. After 2 years, the frequency of inspections may be adjusted with written consent from each agency that approved the Site Operation, Monitoring, and Maintenance Plan Site Operation, Monitoring, and Maintenance Plan. The Site Operation, Monitoring, and Maintenance Plan shall detail the qualifications and	Project Developer to provide Site Operation, Monitoring, and Maintenance Plan for review and approval by City. City and Developer to submit Site Operation, Monitoring, and Maintenance Plan to regulatory agencies per GEO-2.6 for areas underlain by landfill and secure approvals as required. Project Developer to submit inspections to City for	Project Developer/City	City Planning & Inspection Division	Plan approval prior to issuance of grading and building permits. Inspections at least quarterly during the first 2 years following the completion of each phase of construction. Documentation of each inspection shall be submitted within 30 days of inspection.

Mitigation and Avoidance Measures	Action	Implementing Party	Monitoring Party	Timing[1]
GEOLOGY AND SOILS (cont.)				
responsibilities of monitoring personnel, including immediate notification of the City Building Department of any settlement that could affect the structural integrity of a building and/or structure or settlement that could create a hazard for the public (e.g., separations that create trip hazards for pedestrians). If the types of settlements are observed that could compromise structural integrity or cause hazards for the public, based on the judgment of the qualified inspector, remedial action shall be promptly completed. The Plan shall designate financial responsibility for remedial actions should the effects of settlement be identified and provide timetables for any required remedial action. All remedial action shall be overseen by the qualified geotechnical consultant designated by the Plan and approved by each agency that approved the Site Operation, Monitoring, and Maintenance Plan. Quarterly reports detailing inspection and remedial activities shall be submitted to each agency that approved the Site Operation, Monitoring, and Maintenance Plan following each inspection for review and approval.	review and approval, and to regulatory agencies as specified in GEO02.6 for areas underlain by landfill, within 30 days or inspections.			
GEO-2.6: Review and Approval by Relevant Regulatory Agencies. To the extent reports and plans required by Mitigation Measures GEO-2.1, -2.2, -2.3, -2.4 or -2.5 address the portion of the Project site overlying the Landfill, they shall be submitted jointly by the City (as owner and operator of the landfill) and the Project Developer for review and approval to the following: (i) the Local Enforcement Agency as principal landfill regulator; (ii) the Regional Water Board for approval of the issues related to the low permeability layer of the final landfill cover pursuant to 27 CCR 21990 (d) and pilings installed in or through the bottom liner of the landfill liner pursuant to 27 CCR 21990 (e)(6), and for review but not approval of other aspects of the plans and reports; (iii) to Cal Recycle for review, but not approval; and (iv) any other agency which is specifically required by applicable law to approve a particular report, plan or component thereof. To the extent reports and plans required by this mitigation measure relate to other portions of the site not overlying the Landfill, they shall be submitted by the Developer to the City, and to any agency which is specifically required by applicable law to approve a particular report, plan or component thereof, for review and approval.	Partially Applicable Refer to GEO-2.1 through GEO-2.5	Refer to GEO-2.1 through GEO-2.5	Refer to GEO-2.1 through GEO-2.5	Refer to GEO-2.1 through GEO-2.5

Mitigation and Avoidance Measures	Action	Implementing Party	Monitoring Party	Timing[1]
HYDROLOGY AND WATER QUALITY				
WQ-1.1: Design and Implement Stormwater Control Measures. In compliance with Provision C.3 of the San Francisco Bay MS4 Permit and the Santa Clara Valley Water District's 100-year peak flood requirements, post-construction stormwater controls shall be implemented to reduce total runoff rates and associated pollutant discharges. According to the Santa Clara Valley Urban Runoff Pollution Prevention Program's C.3. Stormwater Handbook, the three methods for hydraulically sizing flow-based stormwater treatment control measures are (1) volume-based, (2) flow-based, or (3) a combination of volume-/flow-based hydraulic sizing criteria. The simplified method for sizing bioretention areas and flow-through planters, known as the "4 percent method," is based on a runoff inflow of 0.2 inch per hour, with an infiltration rate through biotreatment soil of 5 inches per hour. The 4 percent method requires the treatment measure to be 4 percent of the impervious area that drains to it. The design of the stormwater treatment measures is currently at the conceptual level and further details will be addressed as part of the planning, construction, and operation of the development. The treatment measures shall be designed to remove pollutants from stormwater using filtration, infiltration, and sedimentation. Because infiltration is not feasible due to the landfill, the treatment measures must be built into the structure of the development above the landfill itself. The stormwater treatment measures that provide infiltration shall be lined with an impermeable liner on the bottom and sides. Just above the liner there must be a layer of clean gravel and a network of perforated piping (underdrains). These underdrains must connect to solid drain piping at the exit of the treatment area and ultimately be connected to the storm drainage infrastructure. All of these components shall exist above the podium structure. The impermeable liner would prevent any leaks or ruptures into the landfill and structures. There shall also be perforated underdrain piping connected to solid piping at the exit of the treatment measure/planter solid piping that will connect to the storm drain infrastructure at manholes where leak monitoring can be performed. More information on the potential hazards of a leak or rupture of the stormwater treatment measures causing flooding of the landfill gas venting lines is provided in Section 3.11, *Hazards and Hazardous Materials*. The following stormwater treatment (or Low Impact Development [LID]) measures are examples that will be considered and carefully selected as part of the final design process for the different sections of the proposed development:	Project Developer to provide to City Stormwater Management Report.	Project Developer	Department of Public Works	Prior to issuance of building permits

Mitigation and Avoidance Measures	Action	Implementing Party	Monitoring Party	Timing[1]
HYDROLOGY AND WATER QUALITY (cont.)				
• Bioretention Areas (impermeable liner with underdrain—no infiltration into landfill) • Flow-through Planters • Tree Well and Media Filters • Infiltration Trenches (impermeable liner with underdrain—no infiltration into landfill) • Rainwater Harvesting and Reuse • Green Roofs • Green Streets (with bioretention, impermeable liner, and underdrain) • Pervious Pavements (impermeable liner with underdrain—no infiltration into landfill) As noted above, a minimum of 4 percent of the site area shall be used for the stormwater treatment measures. As part of final design, these treatment measures for the Project site shall be incorporated into the aesthetics of the landscape. Some attenuation of the peak flows can be recognized, depending on the measures selected. The measures shall include an overflow to safely convey the more intense, less frequent rainfall events. The stormwater treatment measures shall capture sufficient flows so that 100-year peak flood elevations or existing design flows within San Tomas Aquino Creek and the Guadalupe River will not increase as part of the Project. The exact reduction in 100- year peak runoff volumes and flows that the stormwater management measures will need to accommodate will be determined during the design process for the stormwater management measures and will be provided in the detailed Project Stormwater Management Plan. Due to construction phasing, construction of interim treatment measures may be required once the 40-acre concrete pad has been constructed and before the surface of the pad is developed with new structures with their own associated post-construction stormwater treatment features. These interim measures will be reported to the San Francisco Bay Water Board. The stormwater management measures for each parcel shall be modeled during final design for buildings, parking garages, site landscaping, etc. Dynamic hydraulic modeling shall be used. Dynamic hydraulic modeling tracks the quantity and quality of runoff generated within each subcatchment as well as the flow rate, flow depth, and quality of water in each pipe and channel during a simulation period with multiple time steps. The results of the modeling shall be used to compare the proposed "permanent" stormwater peak flows and volumes for the Project with the existing peak flows and show compliance				

Mitigation and Avoidance Measures	Action	Implementing Party	Monitoring Party	Timing[1]
HYDROLOGY AND WATER QUALITY (cont.)				
with the jurisdictional regulations. The dynamic hydraulic modeling shall consider the potential runoff volumes and rates coming from the top of the landfill. The resulting design of stormwater management measures shall be required to be sufficient to protect water quality and habitat resources along receiving waterways. A Stormwater Management Report, including detailed hydrologic and hydraulic calculations, analysis, and conclusions, shall be prepared to document the final design of the stormwater management and storm drain system and obtain the requisite approvals.				
WQ-3.1: Design New Bridge and Outfall Structures to Avoid Increase in 100-year Flow and Channel Erosion. In compliance with the Santa Clara Valley Water District's (SCVWD's) 100-year peak flood requirements, any new bridge and new outfalls in San Tomas Aquino Creek shall be designed to avoid increases in the 100-year flow and to avoid creek bed/channel erosion. The design shall also consider erosive action or redirection of flow during more frequent flood events in compliance with the City of Santa Clara's storm drainage design criteria[10] and consistent with SCVWD's guidance.[11] The outfalls will be set at elevations high enough to ensure the location of outfalls are above sediment levels within the bottom of the creek.[12] The design shall be provided to the City of Santa Clara and the SCVWD for review and approval for the Project. Construction would be done in phases. For example, the new bridge over the San Tomas Creek would not be needed until Phase 2 and outfalls to the eastside drainage ditch would not be needed until later phases. The design review approval of outfalls shall occur prior to the issuance of the building permit for the development that triggers the need for the outfall or associated construction activity, and on a schedule similar to the phases of construction.	Not Applicable Project Developer to provide design for any new bridge or outfalls in San Tomas Aquino Creek or the eastside drainage channel for review and approval by City and submit to City evidence of approval from SCVWD.	Project Developer	Department of Public Works	Prior to the issuance of the building permit for the development that triggers the need for the outfall or associated construction activity

[10] City of Santa Clara. 2015. Design Criteria for Improvements in Public Right-of-Ways and City Easements. Public Works Department. April. Available: http://santaclaraca.gov/home/showdocument?id=14345. Accessed: 12/29/15.
[11] Santa Clara Valley Water District. 2006. *User Manual: Guidelines & Standards for Land Use Near Streams.* A Manual of Tools, Standards, and Procedures to Protect Streams and Streamside Resources in Santa Clara County. Prepared by the Santa Clara Valley Water Resources Protection Collaborative. Originally adopted in August 2005. Revised: July 2006.
[12] Outfalls and work within the SCVWD right-of-way are subject to approval and issuance of permits by the SCVWD.

Mitigation and Avoidance Measures	Action	Implementing Party	Monitoring Party	Timing[1]
HYDROLOGY AND WATER QUALITY (cont.)				
WQ-3.2: Vegetation Removal from the Retention Basin Drainage Swale. In accordance with the Retention Basin Drainage Swale Vegetation Clearing Project, and prior to the placement of new impervious surfaces on Parcels 1 or 2, overgrown tule and cattails shall be removed from the entire length of the drainage swale to restore the swale's flood protection capacity and protect residents and businesses. Vegetation in the drainage swale shall be mowed by hand using rotary mowers, and tule and cattails shall be cut down to 3 to 4 inches above the ground surface. The clippings shall be loaded by hand and hauled from the drainage swale to the Retention Basin where the vegetation will dry out. Once dry, the vegetation shall be transported to the Newby Island Landfill. It is estimated that initial removal of overgrown vegetation will generate approximately 300 cubic yards of debris. Prior to performance of this work, all necessary permits shall be obtained from environmental regulatory agencies for this vegetation removal, including any required compensation for loss of wetland/riparian vegetation.	Not Applicable City and Project Developer to execute an agreement to reimburse City for the one-time costs of removing vegetation from the swale (including compliance with any permit conditions requiring onsite actions to do so) as needed to restore flood protection capacity suitable to support the Project. City to be responsible for obtaining any necessary permits and for any maintenance of the swale thereafter.	Project Developer	Department of Public Works	Agreement executed prior to issuance of grading and building permits on Parcels 1 or 2. Vegetation removal complete prior to issuance of a certificate of occupancy for the first building on Parcels 1 or 2.
HAZARDS AND HAZARDOUS MATERIALS				
HAZ-2.1: Finalize Waste Management Plan for Construction. Prior to Project construction, a final Waste Management Plan shall be prepared and implemented. This plan shall be submitted to the LEA, CalRecycle, Regional Water Board, and BAAQMD for review and approval. Specifically, the final Waste Management Plan shall contain, at a minimum, the following requirements, which are included in the draft Waste Management Plan: • Waste excavation shall be performed in accordance with a Health and Safety Plan (HASP) designed to minimize impacts from dust, odor, and other nuisances, and assure waste is handled in a safe and environmentally responsible manner. • During waste excavation and relocation, the worksite shall be monitored for dust, odor, or other nuisances in accordance with general landfill construction practices and the HASP. • At the end of the working day, any exposed waste shall be covered with soil or an alternative material, such as a geosynthetic blanket, (i.e., interim cover).	Partially Applicable Project Developer to provide to City final, approved Waste Management Plan. City to verify that final Waste Management Plan includes all required components and all necessary approvals.	Project Developer	Department of Public Works	Plan approved by pertinent agencies must be submitted to City prior to issuance of demolition, grading, and building permits

Mitigation and Avoidance Measures	Action	Implementing Party	Monitoring Party	Timing[1]
HAZARDS AND HAZARDOUS MATERIALS (cont.)				
• Odors, should they occur, shall be controlled by application of a deodorant, masking agent, neutralizing agent, or lime, and an interim landfill cover at the end of each working day. • A "Project Contact" shall be designated who will be responsible for responding to any local complaints about dust, odors, or other nuisances associated with the waste excavation and regrading operations. • During excavation activities, excavation areas shall be monitored using a hand-held instrument calibrated to measure combustible gases (including methane), hydrogen sulfide, oxygen, and VOCs. No hot work (e.g., welding) shall be allowed in the vicinity of excavation activities unless methane concentrations are sufficiently below the lower explosive limit of 8 percent. If methane concentrations approach 5 percent, excavation activities shall be stopped until the landfill gas collection system can be modified to reduce the methane concentrations in the excavation area. If methane levels are persistent in areas where earthwork and/or hot work activities are necessary, inert gases (e.g., nitrogen) can be introduced into affected subsurface materials to lower oxygen and methane concentrations. By introducing an inert gas into the affected area, methane and oxygen can be displaced to create insufficient oxygen concentrations to support combustion.				
HAZ-4.1: Landfill Closure, Monitoring, and Maintenance Plans.[13] Prior to issuance of building permits for structures within the area of the Landfill (Parcels 1, 2, 3, and 4), a revised Closure Plan and Post-Closure Maintenance Plan (PCMP) shall be prepared in accordance with the regulatory requirements described in 27 CCR 21790–21840 and submitted to the LEA, CalRecycle, and Regional Water Board (as required) for review and approval. In addition, a PCLUP shall be prepared in accordance with the regulatory requirements described in 27 CCR 21190 and submitted to the LEA and Regional Water Board (as required) for review and approval. Collectively, these plans shall incorporate the requirements of Mitigation Measures HAZ-4.2 through 4.6, below. In addition, the Project Developer shall continue to work with the regulatory agencies (Regional Water Board, LEA, or CalRecycle) and ensure the implementation of all elements and measures necessary to mitigate Project-related health risks to residents and commercial workers to a level below the Regional Water Board's cumulative incremental cancer risk threshold of 1E-06 and hazard index (HI) (i.e., adverse non-cancer risk) of 1.0 established for the Project are implemented.	Partially Applicable Project Developer to provide to City for its review and approval revised Closure Plan, Post-Closure Maintenance Plan and Post Closure Land Use Plan that include evidence that health risks can be mitigated to identified levels and contain all elements of HAZ 4.2 through 4.6. City to submit these	Project Developer/City	Department of Public Works	Prior to issuance of grading or building permits within the area of the Landfill (Parcels 1, 2, 3, and 4)

[13] To the extent the implementation of this mitigation measure at Parcel 3 is made necessary by, or altered by, the City's park development activities, the City shall be responsible for implementation.

Mitigation and Avoidance Measures	Action	Implementing Party	Monitoring Party	Timing[1]
HAZARDS AND HAZARDOUS MATERIALS (cont.)				
HAZ-4.1 (cont.)	Plans to the Regional Water Board, LEA, and CalRecycle for their approval. City and Project Developer/ Master Owner Association to implement the actions required by these Plans in accordance with the allocation of responsibilities set forth in the Landfill O&M Agreement attached to the DDA.			
HAZ-4.2: Landfill Gas Collection and Removal System.[14] During Project construction, the existing landfill gas collection and removal system (i.e., wells and conveyance lines) shall be systematically abandoned and replaced in conjunction with the phased Project site development while complying with applicable regulatory requirements that govern the performance of these systems. The new system shall be designed to effectively draw landfill gases (e.g., methane, hydrogen sulfide, and volatile COPCs) away from building sub-slab areas. The system design shall be submitted to the City for review and approval, taking into account an evaluation of the following criteria: effective vacuum influence (based on pilot testing and pneumatic modeling), vacuum distribution control, oxygen management (for subsurface fire prevention), ease of maintenance, well location, effect of landfill settlement, mitigation of vapor intrusion risk, and the proposed development on the Project site. The system design shall incorporate temperature- and corrosion-resistant materials. The landfill gas collection and removal system shall be designed, operated, and maintained to control excessive gas concentrations as specified in 27 CCR 20939. The monitoring of landfill gases is described under Mitigation Measures HAZ-4.4, below.	Partially Applicable Project Developer to submit to City system design for review and approval. City to submit system design to the Regional Water Board, LEA, and/or CalRecycle for their approval, as required by the relevant regulations and approved plans. City to operate and maintain the system in accordance with the allocation of responsibilities set forth in the Landfill O&M Agreement attached to the DDA.	Project Developer/City	Department of Public Works	Prior to the issuance of grading or building permits within the area of the Landfill (Parcels 1, 2, 3, and 4)

[14] To the extent the implementation of this mitigation measure at Parcel 3 is made necessary by, or altered by, the City's park development activities, the City shall be responsible for implementation.

Mitigation and Avoidance Measures	Action	Implementing Party	Monitoring Party	Timing[1]
HAZARDS AND HAZARDOUS MATERIALS (cont.)				
HAZ-4.3: Landfill Gas Protection Systems.[15] During Project construction, landfill gas protection systems shall be constructed beneath the sub-slabs of structures located on Parcels 1, 2, 3, and 4 to remove landfill gases (e.g., methane, hydrogen sulfide, and volatile COPCs) that could otherwise accumulate and/or migrate through the sub-slab. The systems may include active gas collection or passive ventilation mechanisms and shall meet the minimum design requirements described in 27 CCR 21190. The landfill gas protection systems shall be designed, operated, and maintained to control excessive gas concentrations as specified in 27 CCR 20939. The monitoring of landfill gases is described under Mitigation Measures HAZ-4.4, below.	Partially Applicable Project Developer to provide plans to City for review and approval and "as built" drawings to City once work is complete. System will be operated by Project Developer until a Master Owners Association is formed, after with system will be operated by Master Owners Association.	Project Developer/ Master Owner Association	Department of Public Works	Prior to issuance of building permits for Parcels 1, 2, 3, and 4, with "as built" drawings submitted prior to any certificates of occupancy on such sites
HAZ-4.4: Landfill Gas Monitoring and Control System Maintenance.[16] During Project construction and operation on Parcels 1-4, a landfill gas monitoring and control program shall be implemented in accordance with 27 CCR 20921-20939. The gas monitoring network shall be designed by a registered civil engineer or a certified engineering geologist and shall ensure detection of the presence of landfill gas migrating beyond the disposal site permitted facility boundary and also into on-site structures. The monitoring network design shall include provisions for monitoring all structures on the Project site, including but not limited to, buildings, large subsurface vaults, or any other areas where potential landfill gas buildup may cause adverse impacts on the public health or safety or the environment. Methods for monitoring on-site structures may include, but are not limited to: periodic monitoring, utilizing either permanently installed monitoring probes or gas surveys, and continuous monitoring systems. A methane monitoring system shall be installed inside all buildings on the Project site. If methane gas concentrations exceed a threshold of 1.25 percent by volume in air, as described under 27 CCR 20921, the methane monitoring system shall automatically alert the Santa Clara Fire Department, who shall assess the methane conditions and, if necessary, trigger an audible fire alarm to initiate a building evacuation. In the	Partially Applicable Project Developer to provide landfill gas monitoring network plans and Operations and Maintenance Plan to City for review and approval. City to submit these Plans to the Regional Water Board, LEA, and/or CalRecycle for their approval, as required by relevant regulations and approved plans. City and Project Developer/Master	Project Developer/ Master Owners Association/ City	Department of Public Works	Prior to issuance of grading and building permits for Parcels 1, 2, 3, and 4

[15] To the extent the implementation of this mitigation measure at Parcel 3 is made necessary by, or altered by, the City's park development activities, the City shall be responsible for implementation.
[16] To the extent the implementation of this mitigation measure at Parcel 3 is made necessary by, or altered by, the City's park development activities, the City shall be responsible for implementation.

Mitigation and Avoidance Measures	Action	Implementing Party	Monitoring Party	Timing[1]
HAZARDS AND HAZARDOUS MATERIALS (cont.)				
event of an evacuation, the building shall not be reoccupied until the Santa Clara Fire Department has confirmed and approved by that: (1) concentrations of methane meet the applicable compliance requirements and (2) the landfill gas monitoring and control system is operating in a manner that ensures adequate control of methane/vapor intrusion. The landfill gas control system shall be operated and maintained to control excessive gas concentrations as specified in 27 CCR 20939. This includes operating the landfill gas control system in such a manner as to satisfy the following requirements specified in 27 CCR 20921(a): • The concentration of methane gas must not exceed 1.25 percent by volumein air within any portion of any on-site structures; • The concentration of methane gas migrating from the disposal site must not exceed 5 percent by volume in air at the disposal site permitted facility boundary or an alternative boundary approved in accordance with Section 20925; and • Trace gases shall be controlled to prevent adverse acute and chronic exposure to toxic and/or carcinogenic compounds that could result in a health risk exceedance of the Regional Water Board's cumulative incremental cancer risk threshold of 1E- 06 and HI (i.e., adverse non-cancer risk) of 1.0 established for the Project. In the event of an earthquake or other event that could cause a rupture or leak from overlying stormwater treatment measures (i.e., planters, vegetated areas), the landfill gas venting pipes shall be inspected at access ports within 24 hours of the event for leaks, ruptures, or any other conditions. Access ports shall be installed at select locations, to provide full coverage of the system based on system design and access constraints, within the venting layer to monitor for the presence of, and removal of, water that might flood the system in the event that water leaks from collection systems above the landfill gas mitigation system. This system would help prevent the water from further migrating into the underlying landfill gas mitigation system. The access ports will allow for use of portable moisture sensing devises to periodically monitor for moisture in the event that a leak is suspected. The access ports shall also be designed to allow for pumping of water from the interstitial space in the event that water is detected.	Owners Association to implement the actions required by these Plans in accordance with the allocation of responsibilities set forth in the Landfill O&M Agreement attached to the DDA.			

Mitigation and Avoidance Measures	Action	Implementing Party	Monitoring Party	Timing[1]
HAZARDS AND HAZARDOUS MATERIALS (cont.)				
In addition to the monitoring and control of excessive gas concentrations to protect public health and safety and the environment, as specified in 27 CCR 20939, the landfill gas monitoring and control program shall incorporate the monitoring and control requirements for preventing subsurface fires that are described under Mitigation Measure HAZ-9.1, below.				
HAZ-4.5: Building Restrictions. The Project shall prohibit the construction of enclosed basements located over refuse on Parcels 1, 2, 3, and 4 to minimize the risk of landfill gas accumulation. Over the landfill area, the Project shall also limit residential construction to only Parcel 4 areas located over open-air podium level garages or over at least one level of enclosed commercial space to mitigate vapor intrusion effects by increasing the free flow and exchange of air beneath the residences.	Partially Applicable Project Developer to submit final detailed design plans for review and approval by City.	Project Developer	Department of Public Works	Concurrent with building permit application
HAZ-4.6: Landfill Hazards Disclosure. Information about the existing subsurface hazardous materials conditions and the ongoing mitigation and monitoring requirements described in the PCLUP shall be included in all ground leases and space leases for space located over the Landfill. The text to be inserted shall be subject to review and approval by City.	Partially Applicable Project Developer and City to include language in ground and tenant leases for space located over the landfill.	Project Developer/City	Department of Public Works	Prior to execution of ground or tenant leases
HAZ-5.1: Phase II Site Investigation. Prior to Project construction, a Phase II Site Investigation shall be performed on Parcel 5 and the tennis courts located in the southwest portion of Parcel 4 to (1) delineate the extent of soil, soil gas, and potential groundwater contamination on the site and (2) assess potential health risks posed to construction workers and future site users. The Phase II Site Investigation shall be conducted and evaluated by a licensed professional prior to construction and earthwork activities. The findings of the Phase II Site Investigation shall be submitted to the appropriate regulatory agency to the extent required by applicable law. The Project Developer shall conduct any additional investigation and/or risk assessment and/or implement any remedial or risk mitigation measures required by the regulatory agency.	If additional remedial or risk mitigation measures are needed, Project Developer to submit plans to City for review and approval.	Project Developer	Department of Public Works	Prior to issuance of grading and building permits for Parcel 5 and the portion of Parcel 4 beneath the existing tennis courts.

Mitigation and Avoidance Measures	Action	Implementing Party	Monitoring Party	Timing[1]
HAZARDS AND HAZARDOUS MATERIALS (cont.)				
HAZ-5.2: Soil and Groundwater Management Plan. Construction on Parcel 5 and the tennis courts located in the southwest portion of Parcel 4 shall be conducted under a site-specific Soil and Groundwater Management Plan (SGMP) to protect construction workers, the general public, and the environment from hazardous materials identified in the Phase II Site Investigation (see Mitigation Measure HAZ-5.1) and potential undocumented sources of such materials. The SGMP shall delineate specific soil and groundwater management and disposal procedures, construction worker health and safety requirements, and contingency measures in case unknown contamination is encountered during construction. The SGMP shall incorporate the soil and groundwater analytical data from the Phase II Site Investigation to ensure that soil and groundwater are stored, managed, and disposed of in a manner protective of human health and the environment, and in accordance with applicable laws and regulations. The SGMP shall specifically include the following: • Procedures for evaluating, handling, storing, testing, and disposing of known soil • and groundwater contamination identified during the Phase II Site Investigation during Project excavation and dewatering activities, respectively; • Procedures for identifying, testing, and managing soil and groundwater suspected of containing hazardous materials (if any) that have not previously been identified at the site; • Descriptions of required worker health and safety provisions for all workers potentially exposed to hazardous materials in accordance with State and federal worker safety regulations; and • Identification of personnel responsible for implementation of the SGMP.	City to review and approve a Soil and Groundwater Management Plan pertaining to Parcel 5 and the portion of Parcel 4 beneath the existing tennis courts.	Project Developer	Department of Public Works	Prior to issuance of grading and building permits for Parcel 5 and the portion of Parcel 4 beneath the existing tennis courts

Mitigation and Avoidance Measures	Action	Implementing Party	Monitoring Party	Timing[1]
HAZARDS AND HAZARDOUS MATERIALS (cont.)				
HAZ-5.3: Implement Measures Included in CCR Title 27, Section 21190(g). Consistent with the Project Developer's voluntary commitment, in order to mitigate gas migration into structures located within 1,000 feet of landfill, the City (as owner and operator of the landfill) and the Project Developer shall implement the following measures identified in Title 27, Section 21190(g), with respect to development on Parcel 5 and the southwest portion of Parcel 4: (1) a geomembrane or equivalent system with low permeability to landfill gas shall be installed between the concrete floor slab of the building and subgrade; (2) a permeable layer of open graded material of clean aggregate with a minimum thickness of 12 inches shall be installed between the geomembrane and the subgrade or slab; (3) a geotextile filter shall be utilized to prevent the introduction of fines into the permeable layer; (4) perforated venting pipes shall be installed within the permeable layer, and shall be designed to operate without clogging; (5) the venting pipe shall be constructed with the ability to be connected to an induced draft exhaust system; (6) automatic methane gas sensors shall be installed within the permeable gas layer, and inside the building to trigger an audible alarm when methane gas concentrations are detected; and (7) periodic methane gas monitoring shall be conducted inside all buildings and underground utilities in accordance with Article 6, of Subchapter 4 of this chapter (section 20920 et seq.). At a minimum, quarterly monitoring is required, but more frequent monitoring may be required by LEA (Subchapter 4, section 20933(a)).	City to review and approve detailed construction plans including these measures for Parcel 5 and the areas of Parcel 4 beneath the existing tennis courts. Project Developer shall submit quarterly reports that report methane gas levels for review by City.	Project Developer	Department of Public Works	Prior to issuance of building permits for Parcel 5 and the areas of Parcel 4 beneath the existing tennis courts; quarterly monitoring

Mitigation and Avoidance Measures	Action	Implementing Party	Monitoring Party	Timing[1]
HAZARDS AND HAZARDOUS MATERIALS (cont.)				
HAZ-6.1: Finalize Draft Technical Memorandum: Leachate Collection and Removal System.[17] Prior to Project construction, a final Technical Memorandum: Leachate Collection and Removal System shall be prepared and implemented as part of the PCLUP. The technical memorandum shall be submitted to the LEA for review and approval and to CalRecycle and the Regional Water Board for review and comment. Specifically, the final technical memorandum shall contain, at a minimum, the following requirements: • During the construction phase of Parcel 3, the existing leachate collection and removal system (LCRS) risers LR-1 and LR-4 shall be protected and preserved during construction by flagging the well head locations, extending the risers, and installing a bollard around each riser. • If LR-1 or LR-4 are damaged during construction, repairs and modifications shall be completed promptly. • LR-1 and LR-4 shall be supported and anchored to prevent potential settlement over time and finished to grade at the end of excavation and/or completion of construction. Ongoing operation and maintenance of the leachate recovery system shall continue during and after Project construction. The LCRS monitoring shall continue in accordance with the Regional Water Board's WDR Order No. R2-2002-0008 for the site, which shall be revised to consider the proposed development and modifications to the landfill systems.	Not Applicable Project Developer to submit to City for its review and approval a Leachate Collection and Removal System Technical Memorandum. City to submit to LEA for review and approval and to CalRecycle and the Regional Water Board for review and comment. As part of the PCLUPCity to operate and maintain the leachate recovery system in accordance with the allocation of responsibilities set forth in the Landfill O&M Agreement attached to the DDA.	Project Developer/City	Department of Public Works	Submittal of Memo: Prior to issuance of grading or construction permits for Parcels 1 and 3.

[17] To the extent the implementation of this mitigation measure at Parcel 3 is made necessary by, or altered by, the City's park development activities, the City shall be responsible for implementation.

Mitigation and Avoidance Measures	Action	Implementing Party	Monitoring Party	Timing[1]
HAZARDS AND HAZARDOUS MATERIALS (cont.)				
HAZ-9.1: Subsurface Fire Prevention, Detection, and Response Plan.[18] Prior to construction, a Subsurface Fire Prevention, Detection, and Response Plan shall be prepared that describes how subsurface heating conditions above the landfill will be monitored, prevented, and suppressed. The plan, which may be included as part of a larger planning document, shall identify responsible parties and schedules for implementing the measures described in the plan. The Project Developer shall submit the plan to the LEA, CalRecycle, and the Santa Clara Fire Department (SCFD) for review and comment. Responses to comments shall be incorporated into a final Subsurface Fire Prevention, Detection, and Response Plan from the regulatory agencies. The plan shall also incorporate the prevention, detection, and response actions described under Mitigations HAZ-9.2 and HAZ-9.3, below, unless alternative actions are approved by LEA, CalRecycle, and SCFD. The final plan shall be implemented during Project construction and operation.	Partially Applicable Project Developer to submit to City a Subsurface Fire Prevention, Detection, and Response Plan that has been reviewed and commented on by relevant agencies. The Plan shall be implemented consistent with the Landfill Operations and Maintenance Agreement.	Project Developer	Department of Public Works	Submittal of Plan prior to issuance of grading or construction permits for Parcels 1, 2, 3, and 4. Implementation during Project construction and operation
HAZ-9.2: Subsurface Fire Prevention and Detection Measures.[19] The following measures may be included in whole, or in part, in the Subsurface Fire Prevention, Detection, and Response Plan, as required by the LEA, CalRecycle, and SCFD. In addition, these agencies may require additional measures. The landfill gas collection system shall be monitored and maintained to minimize the intrusion of oxygen (i.e., air) into the landfill and prevent the overheating of waste due to aerobic decomposition. In accordance with BAAQMD monitoring requirements (Regulation 8-34), the gauge pressure, nitrogen or oxygen concentration, and temperature of landfill gas within each extraction wellhead shall be monitored once a month and evaluated to ensure the system is not overdrawing air into the landfill. The nitrogen and oxygen concentrations may be measured using a calibrated portable instrument. The landfill gas measured at each extraction well head must meet the following monitoring threshold requirements: • Nitrogen concentrations less than 20 percent or oxygen levels less than 5 percent; and • Maximum temperature of 140 degrees Fahrenheit.	Partially Applicable Project Developer to integrate these measures into the Subsurface Fire Prevention, Detection, and Response Plan as requested by relevant agencies.	Project Developer	Department of Public Works	Submittal of Plan: Prior to issuance of grading or construction permits for Parcels 1, 2, 3, and 4. Implementation during Project construction and operation

[18] To the extent the implementation of this mitigation measure at Parcel 3 is made necessary by, or altered by, the City's park development activities, the City shall be responsible for implementation.
[19] To the extent the implementation of this mitigation measure at Parcel 3 is made necessary by, or altered by, the City's park development activities, the City shall be responsible for implementation.

Mitigation and Avoidance Measures	Action	Implementing Party	Monitoring Party	Timing[1]
HAZARDS AND HAZARDOUS MATERIALS (cont.)				
The nitrogen and oxygen thresholds shall be used to indicate if the gas collection system is overdrawing and causing excessive ambient air infiltration into the landfill through its surface and sides. An exceedance of the maximum temperature threshold shall indicate that a subsurface fire may exist. Other evidence of a potential subsurface fire shall include the following: • Observations of rapid settlement over a short period of time; • Smoke or smoldering odor emanating from the gas extraction system or landfill; or • Combustion residue in extraction wells and/or headers. The landfill gas collection system shall be adjusted to reduce well extraction rates (if necessary) to ensure the monitoring thresholds for nitrogen/oxygen and temperature are not exceeded, while continuing to ensure the control of other excessive gas concentrations in the landfill (e.g., methane and trace gases) as specified in 27 CCR 20939. In the event that one or both of the monitoring thresholds are exceeded or other evidence of a potential subsurface fire is observed, then gas samples shall be collected from the extraction wells in the affected area and submitted to a certified laboratory for analysis of nitrogen, oxygen, and carbon monoxide. Analytical results for nitrogen and oxygen that exceed the monitoring thresholds shall be used as confirmation that an aerobic environment is present. Analytical results for carbon monoxide that exceed 1,000 parts per million shall be used as confirmation that a subsurface fire exists.				
HAZ-9.3: Subsurface Fire Suppression. If a subsurface fire condition has been confirmed (i.e., carbon monoxide level exceed 1,000 parts per million), the LEA, CalRecycle, and SCFD shall be notified immediately. The extraction wells surrounding the subsurface fire shall be shut down temporarily to reduce oxygen levels. The extraction wells shall then be returned to active use in stages in conjunction with monitoring to determine if the subsurface fire has been suppressed. If shutting down the extraction wells does not suppress the fire and/or results in the excess accumulation of methane and other trace gases beneath structures, then the LEA, CalRecycle, and SCFD shall consider injecting a Class A foam or wetting agent or liquid carbon dioxide (which also has the added benefit of rapidly cooling the refuse/fill) into the affected area. Large amounts of water shall not be used, because water can exacerbate the fire potential, generate contaminated runoff, increase leachate, and cause slope failure.	Partially Applicable City to ensure that SCFD is aware of and trained on protocols. Project Developer and/or City to notify agencies if a subsurface fire condition is confirmed and to implement subsurface fire suppression measures.	Project Developer/City	City Planning & Inspection; SCFD	Prior to operation of Project over landfill areas for SCFD protocols. After confirmation of a subsurface fire condition as to agency notification

Mitigation and Avoidance Measures	Action	Implementing Party	Monitoring Party	Timing[1]
UTILITIES AND SERVICE SYSTEMS				
UT-3.1: Make a Fair-Share Contribution to Upgrading the Rabello and Northside Pump Station System's Capacity. The City will conduct detailed engineering study and analysis to determine the precise size and timing needed for the required pump station capacity upgrades to address overcapacity due to projected cumulative development. The City will implement the required capacity upgrades and the Developer will fund its fair share of such upgrades. The City shall determine the fair- share cost contribution for the Project based on the Project's percent of wastewater flow cumulative capacity needs above the current pump capacity (based on conceptual planning to date, that fair share is estimated as 27 percent of 2035 cumulative overcapacity amount). The City may require the Developer to fund the design and construction of the conveyance capacity upgrades to the Rabello and Northside Sanitary Sewer Pump Stations concurrent with construction of Phase 2 of the Project; the pump station upgrades would be designed to address overcapacity due to projected cumulative development. If the Developer is required to fund pump station upgrade costs, with the exception of costs attributable to the Project's fair share contribution to the upgrade, the City would reimburse the Developer for the design and construction costs through first (a) refunding the Project's Sanitary Sewer Conveyance Fees already paid by Developer or crediting those fees when due and (b) providing to Developer Sanitary Sewer Conveyance Fees collected from developers of projects that would use the Rabello and Northside Sanitary Sewer Pump Stations.	Not Applicable Conduct a detailed engineering study and analysis to determine the precise size and timing needed for the required pump station capacity upgrades to address overcapacity due to projected cumulative development. Project Developer to contribute fair-share, and potentially front costs of full upgrade.	Department of Public Works	City Planning & Inspection	Conduct study prior to construction of Phase 2 of the Project, fund prior to issuance of first building permit for Phase 2 of the Project or later as otherwise determined necessary by City; if Developer to fund full pump station upgrade costs, Developer and City enter funding and reimbursement agreement prior to upgrade

Mitigation and Avoidance Measures	Action	Implementing Party	Monitoring Party	Timing
TRANSPORTATION				
IM-TRA-1: Prepare and Implement a Construction Traffic Control Plan. Prior to issuance of grading permits, the construction contractor will develop the traffic control plan in accordance with the appropriate jurisdiction's policies and submit for approval. The plan will be implemented throughout the course of construction and may include, but will not be limited to, the following elements. • Limit truck access to the intersection during peak commute times (7:00 a.m. to 9:00 a.m. and 4:00 p.m. to 6:00 pm.). • Require that written notification be provided to contractors regarding appropriate • routes to and from the intersection, and the weight and speed limits on local roads used to access the intersection. • Provide access for emergency vehicles at all times. • Provide adequate parking for construction employees, site visitors, and inspectors as feasible. • Maintain bicycle and pedestrian access and circulation during Project construction where safe to do so. If construction encroaches on a bike lane, warning signs willbe posted that indicate bicycles and vehicles are sharing the roadway. Ifconstruction encroaches on a sidewalk, a safe detour will be provided for pedestrians at the nearest crosswalk. • Require traffic controls in the vicinity of the intersection, including flagpersons with bright orange or red vests and using a "Stop/Slow" paddle to control oncoming traffic. • Post standard construction warning signs in advance of the construction area and at any intersection that provides access to the construction area. • Repair or restore the road right-of-way to its original condition or better upon completion of the work.	Project Developer to prepare and submit a Construction Traffic Control Plan for the purpose of managing traffic and reducing traffic congestion during construction. City to review and approve Plan.	Project Developer/ Project Contractor	Department of Public Works	Prior to issuance of grading and building permits

Mitigation and Avoidance Measures	Action	Implementing Party	Monitoring Party	Timing
AIR QUALITY				
IM-AQ-1: Implement Measures to Reduce Construction-Related Dust Emissions. The Project Developer shall require all construction contractors to implement the specific construction mitigation measures below to reduce fugitive dust. Emissions reduction measures shall include, at a minimum, the measures below. Alternative measures may be identified by the Project Developer or its contractor, as appropriate, provided that they are as effective as the measures below. Alternative measures shall be submitted to the City for approval. • All exposed surfaces shall be watered at a frequency adequate to maintain minimum soil moisture of 12 percent. Moisture content can be verified by lab samples or moisture probe. If water infiltration into landfill refuse layers is a concern, non-toxic soil stabilizers may be used instead. • All excavation, grading, and/or demolition activities shall be suspended when average wind speeds exceed 20 mph for a period of 2 hours or more. • Windbreaks (e.g., fences) shall be installed on the windward side(s) of actively disturbed areas of construction. Windbreaks shall have at maximum 50 percent air porosity. • Exposed ground areas that are to be reworked more than 1 month after initial grading should be sown with fast-germinating native grass seed and watered appropriately until vegetation is established. If grass seeding is not feasible, then non-toxic soil stabilizers may be used. • All construction trucks and equipment, including tires, involved in ground disturbance or transit through loose soil areas shall be washed off prior to leaving the site. • Site accesses to a distance of 25 feet from the paved road shall be treated with a 6- to 12-inch compacted layer of wood chips, mulch, or gravel. Alternatively, a rumble plate may be used in place of chips, mulch, or gravel. • Sandbags or other erosion control measures shall be installed to prevent silt runoff to public roadways from sites with a slope greater than 1 percent.	Project Developer to provide to City applicable provisions of construction contracts specifying construction mitigation measures to reduce construction- related dust emissions.	Project Developer/ Project Contractor	City Planning & Inspection Division	Prior to issuance of grading and building permits
IM-AQ-2: Implement Measures to Reduce Construction-Related Exhaust Emissions. The Project Developer shall require all construction contractors to implement the specific construction mitigation measures below to reduce equipment exhaust emissions. Emission reduction measures shall include, at a minimum, the measures below. Alternative measures may be identified by the Project Developer or its contractor, as appropriate, provided that they are as effective as the measures below. Alternative measures shall be submitted to the City for approval.	Project Developer to provide to City applicable provisions of construction contracts construction mitigation measures to reduce construction-related exhaust emissions.	Project Developer/ Project Contractor	City Planning & Inspection Division	Prior to issuance of grading and building permits

Mitigation and Avoidance Measures	Action	Implementing Party	Monitoring Party	Timing
AIR QUALITY (cont.)				
• Idling time of diesel powered construction equipment shall be limited to 2 minutes. • Ensure that all off-road diesel-powered equipment used during construction between 2017 and 2022 is equipped with U.S. Environmental Protection Agency (EPA) Tier 3 or cleaner engines, except for specialized construction equipment for which an EPA Tier 3 engine is not available. Consistent with advancements of the statewide fleet average, the Project Developer shall ensure that all off-road diesel- • powered equipment used during construction between 2023 and 2030 is equipped with EPA Tier 4 engines. This requirement will ensure construction equipment remains cleaner than the fleet-wide average. • Ensure that all on-road heavy-duty diesel trucks with a gross vehicle weight rating (GVWR) of 19,500 pounds or greater used at the Project site comply with EPA 2007 on-road emissions standards for particulate matter of 10 micrometers or less (PM10) and nitrogen oxides (NO_x) (0.01 grams per brake horsepower-hour [g/bhp- hr] and 0.20 g/bhp-hr, respectively). • Notwithstanding the above requirements, all construction equipment, diesel trucks, and generators shall meet the California Air Resources Board's most recent certification standard for off-road heavy-duty diesel engines and shall employ Best Available Control Technology for reductions in NO_x and particulate matter (PM) emissions if more stringent than the requirements above.				
GREENHOUSE GAS EMISSIONS				
IM-GHG-1: Utilize Alternative Fuels during Construction. Require construction contractors to use alternative fuels in at least 30 percent of the construction equipment that uses diesel fuel. Alternative fuels may include electricity, compressed natural gas (CNG), biodiesel (B-20), or renewable diesel, such as diesel high- performance renewable (HPR).	Project Developer to provide to City applicable provisions of construction contracts requiring adequate use of alternative fuels.	Project Developer/ Project Contractor	City Planning & Inspection Division	Prior to issuance of grading and building permits

Mitigation and Avoidance Measures	Action	Implementing Party	Monitoring Party	Timing
CULTURAL RESOURCES				
IM-CR-1: Conduct Cultural Resource Investigations and Protect and Recover Significant Resources. The Lead Agency shall conduct a cultural resource investigation that includes a background records search (including a search of records from Sonoma State and historical societies, contact with Native American representatives identified by the Native American Heritage Commission (NAHC), and site pedestrian surveys) for the areas of ground disturbance from each roadway improvement. If significant known or suspected sites are discovered within the Project footprint and would be disturbed by the Project, then a cultural resource treatment plan shall be prepared, defining Project monitoring and resource recovery and curation requirements concerning any encountered cultural resources.	Lead Agency to conduct a cultural resource investigation that includes a background records search during ground disturbance. If necessary, Lead Agency to prepare and execute cultural resource treatment plan.	City Planning & Inspection Division	City Planning & Inspection Division	Prior to issuance of grading and building permits
IM-CR-2: Stop Work if Cultural Resources Are Encountered during Ground-Disturbing Activities. In the event that cultural resources are encountered during ground-disturbing activities, all work within proximity of the find shall temporarily halt so that the archaeological monitor can examine the find and document its provenience and nature (e.g., with drawings, photographs, written descriptions). The archaeological monitor shall then direct that the work proceed if the find is deemed to be insignificant, continue elsewhere, or cease until adequate mitigation measures are adopted. If the find is determined to be potentially significant, the archaeologist, in consultation with the appropriate jurisdiction, shall develop a treatment plan, which could include site avoidance, capping, or data recovery. If data recovery is determined to be appropriate, excavation shall target recovery of an appropriate amount of information from archaeological deposits to determine the potential of the resource to address specific research questions. If it occurs, data recovery shall emphasize the understanding of the archaeological deposit's structure, including features and stratification, horizontal and vertical extent, and content, including the nature and quantity of artifacts.	Archaeological monitor (retained by the Project Developer), as necessary, and in consultation with the City, develop a Treatment Plan.	Project Developer/ Qualified Archaeologist	City Planning & Inspection Division	During construction if cultural resources are encountered
IM-CR-3: Stop Work if Human Remains Are Encountered during Ground-Disturbing Activities. If human remains are discovered (in either an archaeological or construction context), all work within proximity of the remains shall stop so that the archaeological monitor can examine the remains. The County Coroner shall be notified to make a determination as to whether the remains are of Native American origin. If the remains are determined to be Native American, the coroner shall notify the NAHC immediately. The NAHC shall notify those persons it believes are most likely descended from the deceased Native American. Once the NAHC identifies the most likely descendants, the descendants will make recommendations regarding proper burial, which will be implemented in accordance with Section 15064.5(e) of the State CEQA Guidelines.	Project Developer to submit to City applicable provisions of construction contracts including applicable requirements.	Project Developer/ Project Contractor	County Coroner/ NAHC	Prior to issuance of grading and building permits.

Mitigation and Avoidance Measures	Action	Implementing Party	Monitoring Party	Timing
BIOLOGICAL RESOURCES				
IM-BIO-1: Replace Removed Trees. The Project Developer shall replace all trees removed as part of the intersection improvements in accordance with the tree preservation policies or ordinances of the jurisdiction in which the improvements are constructed.	Project Developer to provide to City report documenting plans to replace all trees removed as part of the intersection improvements.	Project Developer	City Planning & Inspection Division	Prior to issuance of grading and building permits
IM-BIO-2: Preconstruction Surveys. For all intersections that have trees within the intersection footprint or that will remove trees, the Project Developer and its contractors shall avoid conducting vegetation removal during the migratory bird nesting season (February 1–August 31), if feasible. If construction activities must commence during the migratory bird nesting season, the Project Developer shall retain a qualified wildlife biologist to conduct a survey for nests of migratory birds. Surveys for nesting migratory birds shall occur within 3 days prior to the commencement of ground disturbance and vegetation removal. If an active nest is discovered, a no-disturbance buffer zone around the nest tree or shrub (or, for ground-nesting species, the nest itself) shall be established. The no-disturbance zone shall be marked with flagging or fencing that is easily identified by the construction crew and shall not affect the nesting bird or attract predators to the nest location. In general, the minimum buffer zone widths shall be as follows: 50 feet (radius) for non-raptor ground-nesting species, 50 feet (radius) for non-raptor shrub- and tree-nesting species, and 300 feet (radius) for raptor species. Buffer widths may be modified based on discussion with the California Department of Fish and Wildlife (CDFW). Buffers shall remain in place as long as the nest is active or young remain in the area and are dependent on the nest. If a burrowing owl nest is identified during preconstruction surveys, no-activity buffers will adhere to the recommendations in the 2012 California Department of Fish and Game Staff Report on Burrowing Owl Mitigation.	Project Developer to provide to City provisions of construction contracts including pertinent requirements. If construction occurs in the nesting season, Project Developer to submit to City agreement with qualified wildlife biologist requiring surveys and protective measures.	Project Developer/ Project Contractor/ Qualified wildlife biologist	City Planning & Inspection Division	Prior to issuance of grading and building permits for biologist and construction contracts; prior to commence-ment of grading for biologist agreements; and prior to ground disturbance for surveys

Mitigation and Avoidance Measures	Action	Implementing Party	Monitoring Party	Timing
BIOLOGICAL RESOURCES (cont.)				
IM-BIO-3: Site-Specific Surveys and Species/Habitat Avoidance, Minimization, and Compensation Measures. For intersections with the potential to have sensitive habitats, the Project Developer, in consultation with a qualified biologist, shall conduct site-specific surveys for special-status species, sensitive habitats, wetlands and waters of the United States, and nesting birds. If found, the Project Developer and its contractor shall implement avoidance and minimization measures, where feasible. Where avoidance is not possible, the Project Developer shall compensate for lost habitat at a minimum 1:1 basis. Compensation for lost habitat will be determined in consultation with CDFW/U.S. Fish and Wildlife Service (USFWS), as appropriate. The Project Developer shall obtain all required permits from the U.S. Army Corps of Engineers (USACE), the Regional Water Quality Control Board, and CDFW, and USFWS, as appropriate. The Project Developer shall provide buffer fencing and species relocation, as necessary, if permitted by CDFW/USFWS. Additionally, if special-status species or habitats are identified during the site-specific surveys, a Worker Environmental Awareness Training Program for construction personnel will be conducted by a qualified biologist retained by the Project Developer. The program will provide workers with information on their responsibilities with regard to the special-status species. The training will provide a physical description of the special- status species that have potential to occur and be affected by construction activities to each construction crew prior to the initiation of the crew's construction activities. The worker awareness training will also detail each species' habitat and legal protections, a photo of relevant species, and contact information for the primary biologist.	Project Developer to conduct site-specific surveys for special-status species, sensitive habitats, wetlands and waters of the United States, and nesting birds and provide to City for review and approval. If special status species are found, Project Developer to submit documentation to City detailing protective measures for review and approval.	Project Developer/ Qualified biologist	City Planning & Inspection Division	Prior to issuance of grading and building permits
GEOLOGY AND SOILS				
IM-GEO-1: Prepare a Geotechnical Investigation. Prior to construction of any intersection improvement that requires retaining walls (or disturbance of existing retaining wall), disturbance or placement of fill, substantial excavation below grade, establishment of new slopes, and/or placement of new structures above or below grade, the Project Developer shall prepare a geotechnical investigation to evaluate the potential for geologic, seismic, and soil risks. The geotechnical investigation shall include recommendations to abate any potential risks. If risks are identified, the Project Developer shall implement the recommendations included in the geotechnical investigation.	Project Developer to provide to City geotechnical investigation for review and approval. City and Developer to submit such report to regulatory agencies and secure approval as required. Project Developer to incorporate resulting measures into project plans.	Project Developer/City	City Planning and Inspection Division	Prior to issuance of grading and building permits

Mitigation and Avoidance Measures	Action	Implementing Party	Monitoring Party	Timing
HYDROLOGY AND WATER QUALITY				
IM-WQ-1: Prepare a Hydrology and Water Quality Technical Report. Prior to construction of any intersection improvement, the Project Developer shall prepare a hydrology and water quality technical report to evaluate the existing drainage and stormwater conditions at the subject intersections. The technical report shall include recommendations for drainage and stormwater controls to minimize impacts related to changes in drainage patterns that would result from the intersection improvements. The Project Developer shall be required to implement the report's recommendations.	Project Developer to provide to City a hydrology and water quality technical report to evaluate the existing drainage and stormwater conditions at the subject intersections for review and approval.	Project Developer	City Planning & Inspection Division	Prior to issuance of grading and building permits
HAZARDS AND HAZARDOUS MATERIALS				
IM-HAZ-1: Prepare a Phase I Environmental Site Assessment. Prior to construction of any intersection improvement involving ground disturbance of acquired property, the Project Developer shall conduct a Phase I Environmental Site Assessment. Where the potential to encounter hazardous materials or waste is identified, the Project Developer shall prepare and implement a soil/groundwater handing plan that identifies measures to properly dispose of contaminated materials. Measures could include worker education and training, as appropriate, and site- specific controls to avoid risks to workers and adjacent residents or others.	Project Developer to submit Phase I Environmental Site Assessment to City for review and approval. Project Developer to implement soil/ groundwater handling plan to City for review and approval.	Project Developer	Department of Public Works	Prior to issuance of grading and building permits

Mitigation and Avoidance Measures	Action	Implementing Party	Monitoring Party	Timing
TRANSPORTATION				
SW-TRA-1: Prepare and Implement a Construction Traffic Control Plan. Prior to issuance of grading permits, the construction contractor will develop the traffic control plan in accordance with the City's policies and submit for approval. The plan will be implemented throughout the course of construction and may include, but will not be limited to, the following elements: • Limit truck access to the soundwall site during peak commute times (7:00 a.m. to 9:00 a.m. and 4:00 p.m. to 6:00 p.m.). • Require that written notification be provided to contractors regarding appropriate routes to and from the soundwall and the weight and speed limits on local roads that would be used to access the soundwall site. • Provide access for emergency vehicles at all times. • Provide adequate parking for construction workers, site visitors, and inspectors as feasible. • Maintain bicycle and pedestrian access and circulation during Project construction where safe to do so. If construction encroaches on a bike lane, warning signs will be posted that indicate that bicycles and vehicles are sharing the roadway. If construction encroaches on a sidewalk, a safe detour will be provided for pedestrians at the nearest crosswalk. • Require traffic controls in the vicinity of the soundwall, including flagpersons with bright orange or red vests and using a "Stop/Slow" paddle to control oncoming traffic. • Post standard construction warning signs in advance of the construction area and at any soundwall that provides access to the construction area. • Repair or restore the road right-of-way to its original condition or better upon completion of the work.	Not Applicable Project Developer to prepare and submit a Construction Traffic Control Plan for the purpose of managing traffic and reducing traffic congestion during construction. City to review and approve Plan.	Project Developer/ Project Contractor	Department of Public Works	Prior to grading and building permit issuance.

Mitigation and Avoidance Measures	Action	Implementing Party	Monitoring Party	Timing
AIR QUALITY				
SW-AQ-1: Implement Measures to Reduce Construction-Related Dust Emissions. The Project Developer shall require all construction contractors to implement the specific construction mitigation measures below to reduce fugitive dust. Emission reduction measures shall include, at a minimum, the measures below. Alternative measures may be identified by the Project Developer or its contractor, as appropriate, provided that they are as effective as the measures below. Alternative measures shall be submitted to the City for approval. • All exposed surfaces shall be watered at a frequency adequate to maintain minimum soil moisture of 12 percent. Moisture content can be verified by lab samples or moisture probe. If water infiltration into landfill refuse layers is a concern, non-toxic soil stabilizers may be used instead. • All excavation, grading, and/or demolition activities shall be suspended when average wind speeds exceed 20 mph for a period of 2 hours or more. • Windbreaks (e.g., fences) shall be installed on the windward side(s) of actively disturbed areas of construction. Windbreaks shall have at maximum 50 percent air porosity. • Exposed ground areas that are to be reworked more than 1 month after initial grading should be sown with fast-germinating native grass seed and watered appropriately until vegetation is established. If grass seeding is not feasible, then non-toxic soil stabilizers may be used. • All construction trucks and equipment, including tires, involved in ground disturbance or transit through loose soil areas shall be washed off prior to leaving the site. • Site accesses to a distance of 25 feet from the paved road shall be treated with a 6- to 12-inch compacted layer of wood chips, mulch, or gravel. Alternatively, a rumble plate may be used in place of chips, mulch, or gravel. • Sandbags or other erosion control measures shall be installed to prevent silt runoff to public roadways from sites with a slope greater than 1 percent.	Not Applicable Project Developer to City applicable provisions of construction contracts specifying construction mitigation measures to reduce construction-related dust emissions.	Project Developer/ Project Contractor	City Planning & Inspection Division	Prior to issuance of grading and building permits

Mitigation and Avoidance Measures	Action	Implementing Party	Monitoring Party	Timing
AIR QUALITY (cont.)				
SW-AQ-2: Implement Measures to Reduce Construction-Related Exhaust Emissions. The Project Developer shall require all construction contractors to implement the specific construction mitigation measures below to reduce equipment exhaust emissions. Emission reduction measures shall include, at a minimum, the measures below. Alternative measures may be identified by the Project Developer or its contractor, as appropriate, provided that they are as effective as the measures below. Alternative measures shall be submitted to the City for approval. • Idling time of diesel powered construction equipment shall be limited to 2 minutes. • The Project Developer shall ensure that all off-road diesel-powered equipment used during construction between 2017 and 2022 is equipped with U.S. Environmental Protection Agency (EPA) Tier 3 or cleaner engines, except for specialized construction equipment for which an EPA Tier 3 engine is not available. Consistent with advancements of the statewide fleet average, the Project Developer shall ensure that all off-road diesel-powered equipment used during construction between 2023 and 2030 is equipped with EPA Tier 4 engines. This requirement will ensure that construction equipment remains cleaner than the fleet-wide average. • The Project Developer shall ensure that all on-road heavy-duty diesel trucks with a gross vehicle weight rating (GVWR) of 19,500 pounds or greater used at the Project site comply with EPA 2007 on-road emissions standards for particulate matter of 10 micrometers or less (PM10) and nitrogen oxides (NO_x) (0.01 grams per brake horsepower-hour [g/bhp-hr] and 0.20 g/bhp-hr, respectively). • Notwithstanding the above requirements, all construction equipment, diesel trucks, and generators shall meet the California Air Resources Board's most recent certification standard for off-road heavy-duty diesel engines and shall employ Best Available Control Technology for emission reductions of NO_x and particulate matter (PM) if more stringent than the requirements above.	Not Applicable Project Developer to provide to City applicant provisions of construction contracts specifying construction mitigation measures to reduce construction-relate exhaust emissions.	Project Developer/ Project Contractor	City Planning & Inspection Division	Prior to issuance of grading and building permits

Mitigation and Avoidance Measures	Action	Implementing Party	Monitoring Party	Timing
CULTURAL RESOURCES				
SW-CR-1: Conduct Cultural Resource Investigations and Protect and Recover Significant Resources. The improvement Lead Agency shall conduct a cultural resource investigation of the areas of ground disturbance associated with the soundwall that includes a background records search (including a search of records from Sonoma State and historical societies, contact with Native American representatives identified by the Native American Heritage Commission [NAHC], and site pedestrian surveys) for the areas of ground disturbance from each roadway improvement. If significant known or suspected sites are discovered within the Project footprint and would be disturbed by the Project, then a cultural resource treatment plan shall be prepared, defining Project monitoring and resource recovery and curation requirements concerning any encountered cultural resources.	Not Applicable City to conduct a cultural resource investigation that includes a background records search during ground disturbance. If necessary, City to prepare and execute cultural resource treatment plan.	City Planning & Inspection Division	City Planning & Inspection Division	Prior to issuance of grading and building permits
SW-CR-2: Stop Work if Cultural Resources Are Encountered during Ground-Disturbing Activities. In the event that cultural resources are encountered during ground-disturbing activities, all work within proximity of the find shall temporarily halt so that the archaeological monitor can examine the find and document its provenience and nature (e.g., withdrawings, photographs, written descriptions). The archaeological monitor shall then direct that the work proceed if the find is deemed to be insignificant, continue elsewhere, or cease until adequate mitigation measures are adopted. If the find is determined to be potentially significant, the archaeologist, in consultation with the appropriate jurisdiction, shall develop a treatment plan, which could include site avoidance, capping, or data recovery. If data recovery is determined to be appropriate, excavation shall target recovery of an appropriate amount of information from archaeological deposits to determine the potential of the resource to address specific research questions. If it occurs, data recovery shall emphasize the understanding of the archaeological deposit's structure, including features and stratification, horizontal and vertical extent, and content, including the nature and quantity of artifacts.	Not Applicable Archaeological monitor (retained by the Project Developer), as necessary, and in consultation with the City, develop a Treatment Plan.	Project Developer/ Qualified Archaeologist	City Planning & Inspection Division	During construction if cultural resources are encountered
SW-CR-3: Stop Work if Human Remains Are Encountered during Ground-Disturbing Activities. If human remains are discovered (in either an archaeological or construction context), all work within proximity of the remains shall stop so that the archaeological monitor can examine the remains. The County Coroner shall be notified to make a determination as to whether the remains are of Native American origin. If the remains are determined to be Native American, the coroner shall notify the NAHC immediately. The NAHC shall notify those persons it believes are most likely descended from the deceased Native American. Once the NAHC identifies the most likely descendants, the descendants will make recommendations regarding proper burial, which will be implemented in accordance with Section 15064.5(e) of the State CEQA Guidelines.	Not Applicable Project Developer to submit to City applicable provisions of construction contracts including applicable requirements.	Project Developer/ Project Contractor	County Coroner/ NAHC	Prior to issuance of grading and building permits

Mitigation and Avoidance Measures	Action	Implementing Party	Monitoring Party	Timing
BIOLOGICAL RESOURCES				
SW-BIO-1: Replace Removed Trees on a 2:1 Basis. The Project Developer shall replace all trees removed as part of soundwall construction at a minimum of 2:1, or more, as required by the local tree ordinance.	Not Applicable Project Developer to provide to City report documenting plans to replace all trees removed at a 2:1 ratio for review and approval.	Project Developer	City Planning & Inspection Division	Prior to issuance of grading and building permits
SW-BIO-2: Preconstruction Surveys. The Project Developer and its contractors shall avoid conducting vegetation removal during the migratory bird nesting season (February 1–August 31) if feasible. If construction activities must commence during the migratory bird nesting season, the Project Developer shall retain a qualified wildlife biologist to conduct a survey for nests of migratory birds. Surveys for nesting migratory birds shall occur within 3 days prior to the commencement of ground disturbance and vegetation removal. If an active nest is discovered, a no-disturbance buffer zone around the nest tree or shrub (or, for ground-nesting species, the nest itself) shall be established. The no-disturbance zone shall be marked with flagging or fencing that is easily identified by the construction crew and shall not affect the nesting bird or attract predators to the nest location. In general, the minimum buffer zone widths shall be as follows: 50 feet (radius) for non-raptor ground-nesting species, 50 feet (radius) for non-raptor shrub- and tree-nesting species, and 300 feet (radius) for raptor species. Buffer widths may be modified based on discussion with the California Department of Fish and Wildlife (CDFW). Buffers shall remain in place as long as the nest is active or young remain in the area and are dependent on the nest. If a burrowing owl nest is identified during pre-construction surveys, no-activity buffers will adhere to the recommendations in the 2012 California Department of Fish and Game Staff Report on Burrowing Owl Mitigation.	Not Applicable Project Developer to provide to City provisions of construction contracts including pertinent requirements. If construction occurs in the nesting season, Project Developer to submit to City agreement with qualified wildlife biologist requiring surveys and protective measures.	Project Developer/ Project Contractor/ Qualified wildlife biologist	City Planning & Inspection Division	Prior to issuance of grading and building permits for biologist and construction contracts; prior to commence-ment of grading for biologist agreements; and prior to ground disturbance for surveys

Mitigation and Avoidance Measures	Action	Implementing Party	Monitoring Party	Timing
BIOLOGICAL RESOURCES (cont.)				
SW-BIO-3: Site-Specific Surveys and Species/Habitat Avoidance, Minimization, and Compensation Measures. The Project Developer, in consultation with a qualified biologist, shall conduct a site-specific surveys for special-status species, sensitive habitats, wetlands and waters of the United States, and nesting birds. If found, the Project Developer and its contractor shall implement avoidance and minimization measures, where feasible. Where avoidance is not possible, the Project Developer shall compensate for lost habitat on a minimum 1:1 basis. Compensation for lost habitat will be determined in consultation with CDFW/U.S. Fish and Wildlife Service (USFWS), as appropriate. The Project Developer shall obtain all required permits from the U.S. Army Corps of Engineers (USACE), the Regional Water Quality Control Board, and CDFW and USFWS as appropriate. The Project Developer shall provide buffer fencing and species relocation, as necessary, if permitted by CDFW/USFWS. Additionally, if special-status species or habitats are identified during the site-specific surveys, a Worker Environmental Awareness Training Program for construction personnel will be conducted by a qualified biologist retained by the Project Developer. The program will provide workers with information on their responsibilities with regard to the special-status species. The training will provide a physical description of the special-status species that have potential to occur and be affected by construction activities to each construction crew prior to the initiation of the crew's construction activities. The worker awareness training will also provide details regarding each species' habitat and legal protections, a photo of relevant species, and contact information for the primary biologist.	Not Applicable Project Developer to conduct site-specific surveys for special-status species, sensitive habitats, wetlands and waters of the United States, and nesting birds and provide to City for review and approval. If special status species are found, Project Developer to submit documentation to City detailing protective measures for review and approval.	Project Developer/ Qualified biologist	City Planning & Inspection Division	Prior to issuance of grading and building permits
GEOLOGY AND SOILS				
SW-GEO-1: Prepare a Geotechnical Investigation. Prior to construction of the soundwall, the Project Developer shall prepare a geotechnical investigation to evaluate the potential for geologic, seismic, and soil risks. The geotechnical investigation shall include recommendations to abate any potential risks. If risks are identified, the Project Developer shall implement the recommendations included in the geotechnical investigation.	Not Applicable Project Developer to provide to City geotechnical investigation for review and approval. City and Developer to submit such report to regulatory agencies and secure approval as required. Project Developer to incorporate resulting measures into project plans.	Project Developer/City	City Planning and Inspection Division	Prior to issuance of grading and building permits

Mitigation and Avoidance Measures	Action	Implementing Party	Monitoring Party	Timing
HYDROLOGY AND WATER QUALITY				
SW-WQ-1: Prepare a Hydrology and Water Quality Technical Report. Prior to construction of the soundwall, the Project Developer shall prepare a hydrology and water quality technical report to evaluate the existing drainage and stormwater conditions at the soundwall site. The technical report shall include recommendations for drainage and stormwater controls to minimize impacts related to changes in drainage patterns that would result from the soundwall. The Project Developer shall be required to implement the report's recommendations.	Not Applicable Project Developer to provide to City a hydrology and water quality technical report to evaluate the existing drainage and stormwater conditions at the soundwall site for review and approval.	Project Developer	City Planning & Inspection Division	Prior to issuance of grading and building permits
HAZARDS AND HAZARDOUS MATERIALS				
SW-HAZ-1: Prepare a Phase I Environmental Site Assessment. Prior to construction of the soundwall, the Project Developer shall conduct a Phase I Environmental Site Assessment. Where the potential to encounter hazardous materials or waste is identified, the Project Developer shall prepare and implement a soil/groundwater handing plan that identifies measures to properly dispose of contaminated materials. Measures could include worker education and training, as appropriate, and site-specific controls to avoid risks to workers and adjacent residents or others.	Not Applicable Project Developer to submit Phase I Environmental Site Assessment to City. Project Developer to implement soil/ groundwater handling plan to City for review and approval.	Project Developer	Department of Public Works	Prior to issuance of grading and building permits
UTILITIES AND SERVICE SYSTEMS				
SW-UT-1: Identify Underground and Overhead Utilities and Provide Coordination with Utility Providers. Prior to construction of the soundwall, the Project Developer shall identify all underground and overhead utilities within the footprint of the soundwall. If utilities are present, the Project Developer shall coordinate with the appropriate utility owners regarding utility shutoff during construction and relocation, as necessary.	Not Applicable Project Developer to identify all underground and overhead utilities within the footprint of the soundwall and provide documentation to City of coordination with the appropriate utility owners regarding utility shutoff during construction and relocation for review and approval.	City Planning & Inspection	City Planning & Inspection	Prior to issuance of grading and building permits

EXHIBIT MMRP-1
Related Santa Clara DAP 1, Phase 1 Project – Intersection Mitigation Implementation Planning/CEQA File # PLN2019-14186 (PLN2014-10554/CEQ2014-01180) State Clearinghouse # 2014072078

With Each Development Area Plan

Each DAP application must include: (1) a calculation of the number of vehicle trips projected to result from development proposed in the DAP using the methods and trip generation rates in the Final EIR (adjusted as appropriate for the success of TDM measures), that accounts for the site design, density and diversity of proposed land uses of the current DAP application and previous DAP applications, (2) the vehicle trips allocated by building and summarized by land use, and (3) a site access analysis (including a simulation, if needed, as determined by the Director of Community Development or at the applicant's discretion) to determine which site access improvements should be constructed to serve the development proposed in the DAP.

The City (with assistance of consultants as desired) will peer review the data in the application and will determine at DAP approval for the development proposed in the DAP (1) the number of trips projected to result and the allocation of such trips by building and/or uses, and (2) the site access improvements required and the trip thresholds or development stages at which those improvements must be constructed.

As Development Occurs

The Project Trip thresholds set forth in the table below, *Intersection Mitigation Sensitivity Analysis Results: Full Funding Responsibility*, establish the number of Project Trips at which each of the required intersection mitigation measures that are wholly the Project's responsibility to implement must be in place. The Project Phase column of the table is informational and not controlling.

Prior to the issuance of each building permit for a new building, using the calculated number of vehicle trips from the DAP application, Developer will calculate and submit to City the cumulative number of Project trips that will result from all prior development within the Project for which building permits have been issued plus the proposed new building. If the cumulative number of Project Trips meet or exceed any of the intersection Project Trip thresholds, the mitigation measures identified for each of those intersections shall be completed prior to issuance of the certificate of occupancy for the building for which the new permit is being sought, except that, for Intersections 48, 55, 57, 82, 84, 109 and 123, Developer will instead fund the mitigation measures at the costs specified in the table below, *Costs for Certain Full Funding Responsibility Improvements*, prior to the issuance of the pertinent building permit. Any building permits for renovations, remodeling or changes in use to previously permitted and occupied buildings prior to the completion of all Full Funding Responsibility intersection mitigations that result in net new vehicle trips will be subject to the same process.

Prior to the issuance of a building permit for each new building, the Developer shall pay to City a transportation fair share fee of $2,474.18 per PM peak hour trip based on the calculated number of vehicle trips for each new building. The per trip fair share fee was determined by summing the Project's fair share of the estimated costs of mitigation measures for impacts to intersections located in the Cities of Santa Clara, San Jose, Sunnyvale, and those under the jurisdiction of the County of Santa Clara, totaling $14,292,901 plus the Project's voluntary contribution to the Santa Clara Valley Transportation Authority (VTA) for impacts to freeway segments in Santa Clara and San Mateo Counties in the amount of $16,164,220, divided by the 12,310 PM peak hour trips projected to be generated by the Project. The fee will be allocated among pertinent jurisdictions as follows: VTA 53.07%; County of Santa Clara 32.97%; City of San Jose 13.25%; City of Sunnyvale 0.11%; and City of Santa Clara 0.60%. Any building permits for renovations, remodeling or changes in use to previously permitted and occupied buildings that result in net new vehicle trips will be subject to the fee on the basis of net new PM peak hour vehicle trips until the full amount of the combined fair share fee and voluntary contribution of $30,457,121 has been paid, after which no additional fee shall be paid. Site access improvements will be built as required by DAP conditions of approval.

EXHIBIT MMRP-1
Related Santa Clara DAP 1, Phase 1 Project – Intersection Mitigation Sensitivity Analysis Results: Full Funding Responsibility
Planning/CEQA File # PLN2019-14186 (PLN2014-10554/CEQ2014-01180)
State Clearinghouse # 2014072078

ID	Intersection	Jurisdiction/CMP[20]	Mitigation Measure[21]	Impact Peak Hour	Project Trips	Project Phase
22	Agnew Road-De La Cruz Boulevard/Montague Expressway	Santa Clara County (CMP)	Partial Mitigation: Add a second northbound left-turn lane.	AM	450	Phase 1
54	Lawrence Expressway/ Benton Street	Santa Clara County	Partial Mitigation: Add a second southbound left-turn lane and a second eastbound left-turn lane.	AM	2,240	Phase 2
55	Lawrence Expressway/ Homestead Road	Santa Clara County (CMP)	Add a third eastbound through lane and a third westbound through lane (Yahoo! Santa Clara Campus TIA, August 2009; City of Sunnyvale Citywide Deficiency Plan, September 2005; and City of Santa Clara Traffic Mitigation Program, June 2011).	AM	2,240	Phase 2
76	San Tomas Expressway/ Walsh Avenue	Santa Clara County	Partial Mitigation: Add a second eastbound left-turn lane.	AM	2,240	Phase 2
82	San Tomas Expressway/ Pruneridge Avenue	Santa Clara County	Partial Mitigation: Add a second northbound left-turn lane.	AM	2,240	Phase 2
8	Great America Parkway/ Tasman Drive*	Santa Clara (CMP)	Partial Mitigation: Add a southbound right-turn lane and add a third westbound left-turn lane.	PM	2,610	Phase 2
48	Lawrence Expressway/ US 101 SB Ramps	Santa Clara County	Convert eastbound left-turn lane to a shared left-/right-turn lane.	PM	2,610	Phase 2
59	Great America Parkway/ Yerba Buena (Great America) Way	Santa Clara	Partial Mitigation: Add a second westbound right-turn lane with an overlap phase and a second southbound left-turn lane.	PM	3,650	Phase 2
60	Great America Parkway/ Old Mountain View-Alviso Road	Santa Clara	Partial Mitigation: Add a second eastbound left-turn lane.	PM	3,650	Phase 2
71	Bowers Avenue/Central Expressway	Santa Clara County (CMP)	Partial Mitigation: Add third southbound left-turn lane and third eastbound left- turn lane.**	PM	3,650	Phase 2

[20] CMP = Congestion Management Program intersection (VTA).
[21] Partial Mitigation: The proposed mitigation measure mitigates the impact at one but not the other peak hour or reduces the delay but not enough to mitigate the impact.

ID	Intersection	Jurisdiction/CMP[20]	Mitigation Measure[21]	Impact Peak Hour	Project Trips	Project Phase
57	Great America Parkway/ SR 237 WB Ramps	San José (CMP)[22]	Add third westbound left-turn lane and associated receiving lane under underpass. Add a second westbound right-turn lane. Include safe and convenient bicycle and pedestrian facilities along Great America Parkway. Intersections #58 and #123 would also need to be modified to accommodate these intersection improvements.[23]	AM	2,690	Phase 3
58	Great America Parkway/ SR 237 EB Ramps	Santa Clara (CMP)	Add third southbound through lane and a second eastbound right-turn lane.[24]	AM	2,690	Phase 3
123	Great America Parkway/ Gold Street Connector	San José	Add a second northbound right-turn lane.[25]	AM	2,690	Phase 3
79	San Tomas Expressway/ Benton Street*	Santa Clara County	Add a second eastbound left-turn lane.	AM	3,140	Phase 3
120	De La Cruz Boulevard/ Laurelwood Road	Santa Clara	Reconfigure the northbound and southbound approaches to include one left-turn lane, one through, and one shared through/right-turn lane; change the phasing from split to protected in the northbound and southbound directions; and increase cycle length.	AM	3,140	Phase 3
14	Lick Mill Boulevard/ Tasman Drive	Santa Clara	Partial Mitigation: Reconfigure northbound and southbound approach to two left- turn lanes, one through lane, and one right-turn lane. Change the northbound/southbound signal phasing from split to protective. Add a second westbound left-turn lane.	PM	4,690	Phase 3
23	Lick Mill Boulevard/ Montague Expressway	Santa Clara County	Add a third southbound left-turn lane.	PM	5,730	Phase 4
96	Lafayette Street/ Montague Expressway WB Ramps	Santa Clara	Add second westbound right-turn lane with an overlap phase and a second southbound left-turn lane.	AM	6,730	Phase 7

[22] An LOS D threshold is used for study intersections within San José, including CMP designated intersections. Santa Clara County intersections in San José use an LOS E threshold.
[23] Intersection #58 (Great America Parkway/SR 237 EB Ramps) and #123 (Great America Parkway/Gold Street Connector) are not impacted intersections, but would need to be modified to accommodate the improvements at Intersection #57 (Great America Parkway/SR 237 WB Ramps).
[24] Intersection #58 (Great America Parkway/SR 237 EB Ramps) and #123 (Great America Parkway/Gold Street Connector) are not impacted intersections, but would need to be modified to accommodate the improvements at Intersection #57 (Great America Parkway/SR 237 WB Ramps).
[25] Intersection #58 (Great America Parkway/SR 237 EB Ramps) and #123 (Great America Parkway/Gold Street Connector) are not impacted intersections, but would need to be modified to accommodate the improvements at Intersection #57 (Great America Parkway/SR 237 WB Ramps).

ID	Intersection	Jurisdiction/CMP[20]	Mitigation Measure[21]	Impact Peak Hour	Project Trips	Project Phase
84	Gold Street/Gold Street Connector	San José[26]	Convert northbound through lane to a shared left-turn/ through lane, add a second northbound left-turn lane and second eastbound right-turn lane. (move pedestrian crossing to north leg of intersection).	AM	7,180	Phase 7
114	Calle Del Sol/Calle Del Luna	Santa Clara	Signalize.	PM	8,340	Phase 7
90	Lafayette Street/Calle De Luna	Santa Clara	Reconstruct the westbound approach to include two left-turn lanes and one right- turn lane.	AM	8,970	Phase 8
13	Calle Del Sol/Tasman Drive*	Santa Clara	Add a westbound right-turn lane. Reconfigure southbound approaches to include two left-turn lanes and one right-turn lane with overlap phase.	PM	9,380	Phase 8
73	Bowers Avenue/Monroe Street	Santa Clara	Add a northbound and a southbound left-run lane. Change the northbound and southbound from split to protected left-turn phasing.	PM	10.420	Phase 8
94	Lafayette Street/Agnew Road	Santa Clara	Add a second eastbound left-turn lane and a second southbound left-turn lane.	PM	10,420	Phase 8
109	Liberty Street/Taylor Street	San José[27]	Signalize. Off-setting Mitigation: Construct traffic control devices to divert traffic from entering the Alviso neighborhood.**	PM	10,420	Phase 8

Notes:

Based on information concerning funding sources and status of planning for and construction of transportation improvements identified in the EIR as being 100% the responsibility of the Project Developer, the City Engineer has made relatively minor changes to the responsibilities for implementing such measures; those adjustments are reflected in this table.

* Intersection improvement identified at this intersection under existing or background no-project conditions. See Appendix 3.3-D of the City Place Santa Clara Project Draft Environmental Impact Report (October 2015).

** City-preferred mitigation option.

Source: Fehr & Peers, 2016.

[26] An LOS D threshold is used for study intersections within San José, including CMP designated intersections. Santa Clara County intersections in San José use an LOS E threshold.

[27] An LOS D threshold is used for study intersections within San José, including CMP designated intersections. Santa Clara County intersections in San José use an LOS E threshold.

EXHIBIT MMRP-1
Related Santa Clara DAP 1, Phase 1 Project – Costs for Certain Full Funding Responsibility
Planning/CEQA File # PLN2019-14186 (PLN2014-10554/CEQ2014-01180)
State Clearinghouse # 2014072078

ID	Intersection	Mitigation	Total Cost	Basis of Cost
48	Lawrence Expressway/ US 101 SB Ramps	Convert eastbound left turn lane to a shared left/right turn lane.	**$13,500**	The cost estimate was prepared by BKF Engineers and accepted by the City. The cost estimate assumes that the work is limited to striping.
55	Lawrence Expwy/ Homestead Rd	Add a third eastbound through lane and a third westbound through lane (Yahoo! Santa Clara Campus TIA, August 2009; City of Sunnyvale Citywide Deficiency Plan, September 2005; and City of Santa Clara Traffic Mitigation Program, June 2011).	**$2,841,800**	The cost estimate was prepared by BKF Engineers and accepted by the City. The cost estimate assumes that 10' turn lanes and 11' through lanes will be implemented. While the Project has 100% responsibility for this mitigation, the project's responsibility for the cost is reduced by previous contributions made by Yahoo ($96,060) and the County of Santa Clara ($400,000). Right of way for this mitigation has been previously dedicated by Kaiser negating the need for the Project to acquire any right of way for mitigation. The Project will make a monetary contribution equal to its cost responsibility in lieu of constructing the mitigation.
57	Great America Pkwy/ SR 237 WB Ramps	Add third westbound left-turn lane and associated receiving lane under underpass. Add a second westbound right-turn lane.	**$2,351,652**	The Total Cost includes both local road work and freeway ramp work. The cost estimate was prepared by BKF Engineers and accepted by the City. The cost of the local road work is estimated at $963,508 and the freeway ramp work at $1,388,144. Since the freeway ramp work will be performed concurrently with the intersection mitigation, the estimated cost of the freeway ramp work is deducted from the Freeway Fair Share voluntary contribution amount.
82	San Tomas Expwy/ Pruneridge Ave	Partial Mitigation: Add a second northbound left-turn lane.	**$271,900**	The cost estimate was prepared by BKF Engineers and accepted by the City after concurrence with the cost by the County. The estimate assumes that the second northbound left turn lane will be implemented by the County as part of the San Tomas widening project.

ID	Intersection	Mitigation	Total Cost	Basis of Cost
84	Gold Street/Gold Street connector	Convert northbound through lane to a shared left-turn/through lane, add second northbound left-turn lane and a second eastbound right-turn lane (move pedestrian crossing to north leg of intersection).	**$735,100**	In order to avoid modifications to existing electrical transmission line towers, the City waived the mitigation requirement to add a second northbound left turn lane. The City also agreed to include a surveillance camera at the intersection as requested by the City of San Jose. The cost estimate was prepared by BKF Engineers and accepted by the City. The estimated cost includes $685,100 for the intersection mitigation and an additional $50,000 for the surveillance camera requested by the City of San Jose. The estimated cost assumes that 11' lanes will be implemented and the work associated with the addition of the surveillance camera does not require a new signal controller or installation of equipment to the control station.
109	Liberty St/Lewis St	Signalize.	**$300,000**	The City of San Jose requested that the intersection not be signalized per the mitigation. The City of Santa Clara will provide the City of San Jose with the monetary equivalent of the cost of installing a signal. BKF Engineers estimated and the City of Santa Clara concurred with a cost for signalization of $300,000.
123	Great America Pkwy/ Gold Street connector	Add a second northbound right-turn lane (from Int. 57 dual westbound right-turn lanes).	$ --	The cost of this work is included in the cost estimate for intersection #57.

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Attachment B

Related Santa Clara DAP1, Phase 1 Traffic Report

Related Santa Clara

City Place Santa Clara

Phase 1 DAP Traffic Report

01-17-2020 Phase 1 DAP Traffic Report

Draft 4 | January 17, 2020

This report takes into account the particular instructions and requirements of our client.

It is not intended for and should not be relied upon by any third party and no responsibility is undertaken to any third party.

Job number 239661-00

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Contents

Appendices

Executive Summary

Project Description

Phase 1 of City Place Santa Clara would provide a mix of uses, including residential / serviced apartment, hotel, retail, and office uses within the southern portion of the overall Project site. Phase 1 program will be confined to the area referred to in the EIR as "Parcel 5", bounded by Stars and Stripes Drive, Tasman Drive, Avenue A and Avenue C. **Table ES.1** summarizes the development program for Phase 1.

Table ES.1: Phase 1 Land Use Program

Parcel	Land Use	Program	Notes
5	Office	440 ksf	
	Hotel	480 rooms	
	Residential / Serviced Apartments	200 units	
	Retail	21.4 ksf	
	Restaurants	29.6 ksf	6.2 ksf Fast Casual 23.4 ksf Quality Dining

Trip Generation and Trip Reductions

The trip generation for Phase 1 has been estimated using the trip rates as described below, including a mixed-use reduction based on the MXD tool developed by Fehr & Peers, and a public transit reduction. This trip generation methodology adopted for this DAP Phase 1 is fully consistent with the EIR.

Table ES.2 compares the EIR and Phase 1 trips. The Phase 1 program is expected to generate between 190 and 310 fewer vehicle trips during the peak hours, compared to those evaluated in the EIR.

Table ES.2: EIR and Phase 1 Program Peak Hour Trip Comparison

Trip Generation	Daily	AM In	AM Out	AM Total	PM In	PM Out	PM Total
EIR – Enhanced Open Space Program	16,660	660	270	930	560	740	1,300
Phase 1	13,000	570	170	740	390	600	990
Difference	-3,660	-90	-100	-190	-170	-140	-310

Phase 1 Internal Streets Summary and Findings

The Phase 1 traffic assessment analyzes the internal City Center intersections that will be constructed and operational during Phase 1, and existing intersections located along Great America Parkway (between SR 237 and Tasman Drive) and Tasman Drive (between Great America Parkway and Calle del Sol). All study area intersections are expected to operate acceptably during the morning and evening peak hours with the Phase 1 DAP development.

Queuing analysis for the left-turn movements was completed for each existing signalized intersection within the study. The average and 95th percentile queue lengths were evaluated.

For the average queue length, three intersections have queues in the AM or PM peak hour that exceed the current storage length. At these intersections there are four left-turn movements that exceed the storage capacity. However, of these movements only one movement has Phase 1 project related trips assigned to the movement. The westbound left-turn movement at Great America Parkway and Tasman Drive exceeds storage length by 35ft.

For the 95th percentile queue length, four intersections have queues in the AM or PM peak hour that exceed the current storage length. At these intersections there are seven left-turn movements that exceed the storage capacity. However, of these movements only one movement has Phase 1 project related trips assigned to the movement. The westbound left-turn movement at Great America Parkway and Tasman Drive exceeds storage length by 152ft.

For the one movement where Phase 1 project trips contribute to the increase in storage length of the left-turn movements, the following mitigation is identified. **It is noted that additional development phases may require further mitigation and should be considered as part of those applications.**

- Intersection #8 – Provide a total of 655ft of storage capacity for the westbound left-turn movement to meet the 95th percentile queue length.

Travel Demand Management (TDM) Plan

The *Mitigation Monitoring & Reporting Program* identifies mitigation TRA-1.1: Vehicle Trip Reduction with TDM that requires the project to implement a TDM plan that supports the reduction of project office traffic by 4 percent daily and 10 percent in the peak hours. For residential trips, the TDM plan will need to identify measures to reduce daily traffic by 2 percent and peak hour traffic by a minimum of 4 percent.

Overall, the planned Phase 1 program will generate fewer peak hour trips than the estimated EIR vehicle trip threshold. This is due in part to the reduction in the commercial (retail and restaurant) program that was planned for Parcel 5. **Table ES.3** provides a summary of the total vehicle trip thresholds for Phase 1.

Table ES.3: Phase 1 Vehicle Trip Thresholds

	Daily	AM In	AM Out
Phase 1 Vehicle Trip Estimates	13,000	740	990
Phase 1 TDM Reduction Target	-220	-50	-50
Phase 1 Vehicle Trip Threshold	12,780	690	940

1 Introduction

This report has been prepared to provide the results and findings of the traffic analysis of the internal street network for the City Center Phase 1 for City Place, Santa Clara, and performance of signalized intersections along Great America Parkway (between Old Mountain View-Alviso Road and Tasman Drive) and Tasman Drive (between Great America Parkway and Calle del Sol).

1.1 Project Description

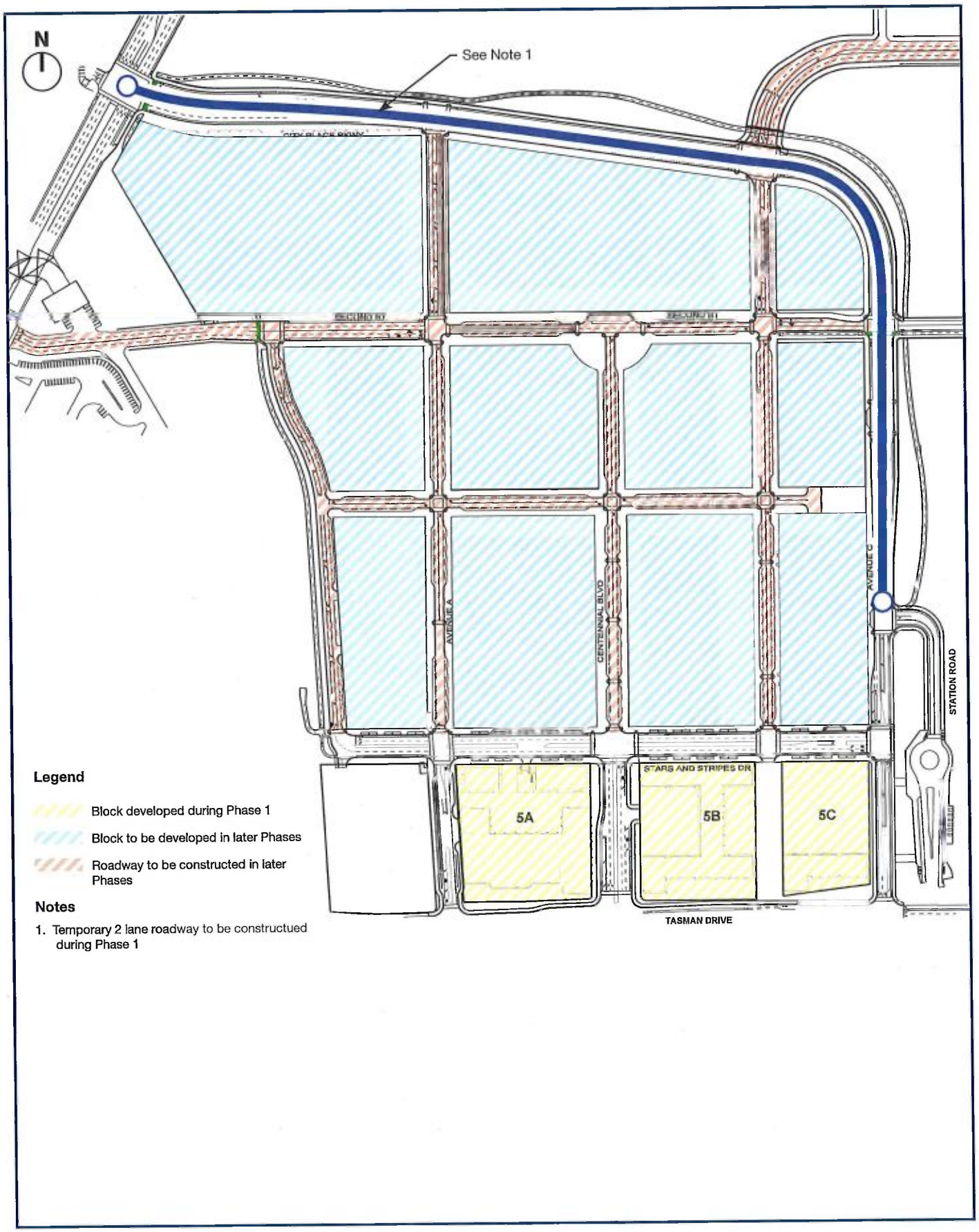
Phase 1 of City Place Santa Clara would provide a mix of uses, including residential / serviced apartment, hotel, retail, and office uses within the southern portion of the overall Project site. Table 1.1 summarizes the program by land use for Phase 1.

Phase 1 program will be confined to the area referred to in the EIR as "Parcel 5", bounded by Stars and Stripes Drive, Tasman Drive, Avenue A and Avenue C.

Phase 1 will include modification / construction of new roadways to support the development and include:

- Realignment of the existing Stars and Stripes Drive (moved north)
- Avenue A – north-south connection between Tasman Drive and Stars and Stripes Drive
- Centennial Boulevard – realigned and extended between Tasman Drive and Stars and Stripes Drive
- Avenue C – north-south connection between Tasman Drive and Stars and Stripes Drive and continuing to the connection of Station Road. A temporary two-lane roadway will also be constructed from Station Road that will connect to Great America Parkway (along the same alignment as the future City Place Parkway)
- Tasman Eastbound Slip Ramp - new one-way roadway to provide connection from eastbound Tasman Drive to Stars and Stripes Drive, providing connection to the Great America Station and Phase 1 below grade parking / service access.

Figure 1.1 provides a summary of the site plan, development blocks and roadways to be constructed during Phase 1.



ARUP

Figure 1.1
Phase 1 Block Development and Constructed Roadways
City Place, Santa Clara

The proposed development program for Phase 1 is outlined in **Table 1.1**.

Table 1.1: Phase 1 Land Use Program

Parcel	Land Use	Program	Notes
5	Office	440 ksf	
	Hotel	480 rooms	
	Residential / Serviced Apartments	200 units	
	Retail	21.4 ksf	
	Restaurants	29.6 ksf	6.2 ksf Fast Casual 23.4 ksf Quality Dining

1.2 Study Area

Phase 1 will include construction of the following new roadways to provide access and circulation to the project:

- Avenue A: New roadway connecting from Tasman Drive (existing) to Stars and Stripes Drive
- Centennial Boulevard: Reconfiguration between Tasman Drive and Stars and Stripes Drive
- Avenue C: New roadway connecting from Tasman Drive (existing) to City Place Parkway (Temp Road)
- Stars and Stripes Drive: realignment of existing Stars and Stripes Drive north between Avenue A and Avenue C
- City Place Parkway (Temp Road): New roadway connecting from Great America Parkway (existing) to Avenue C

The traffic analysis notes the following key assumptions with regards to the traffic circulation:

- New bridges crossing UP railroad over Lafayette Street are not constructed during this phase, therefore access from Lafayette will be via Calle del Luna and Calle del Sol to Tasman Drive.

Figure 1.2a and **Figure 1.2b** illustrate the external and internal intersections studied.

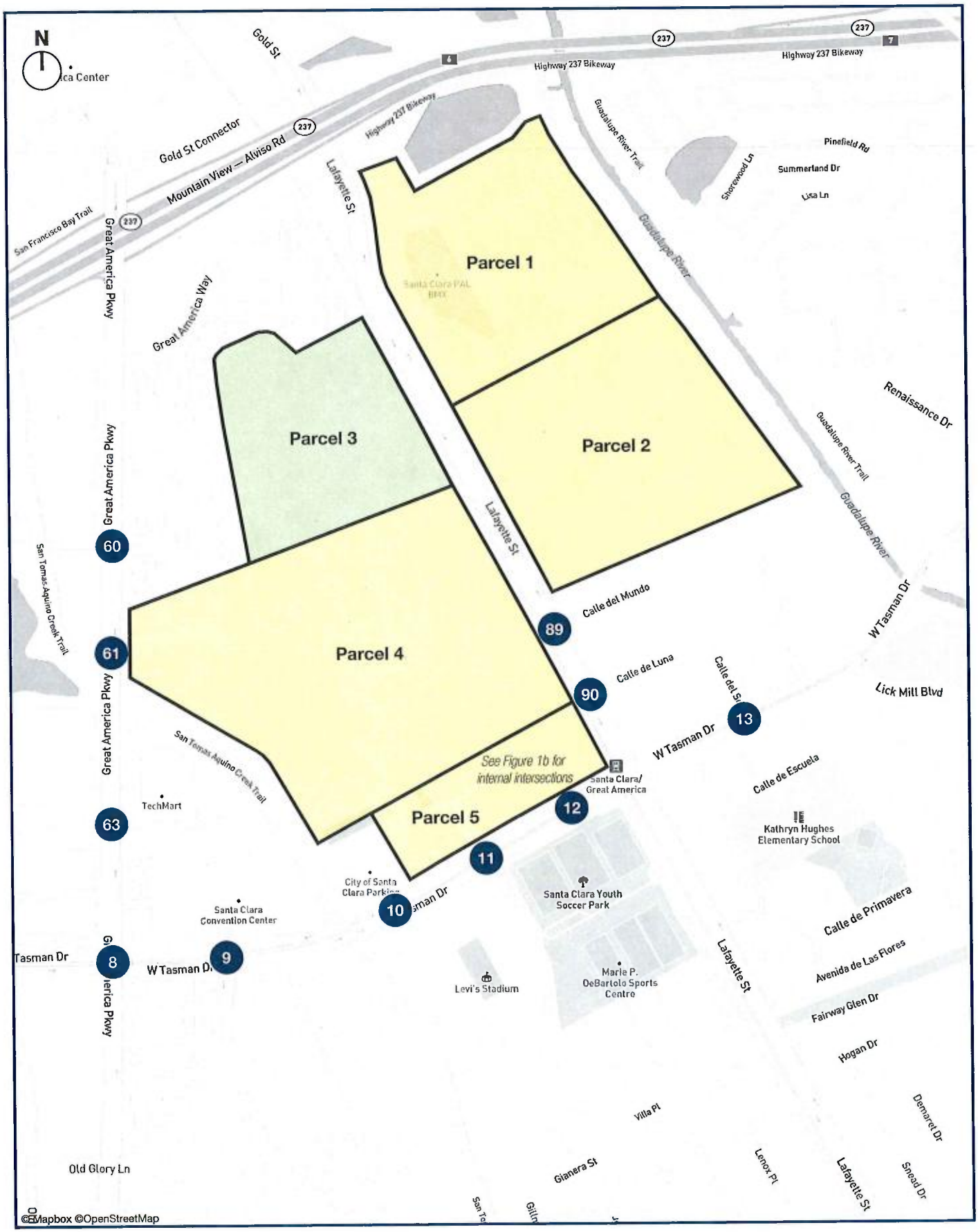


Figure 1.2a
Phase 1 External Study Intersections
City Place, Santa Clara

ARUP

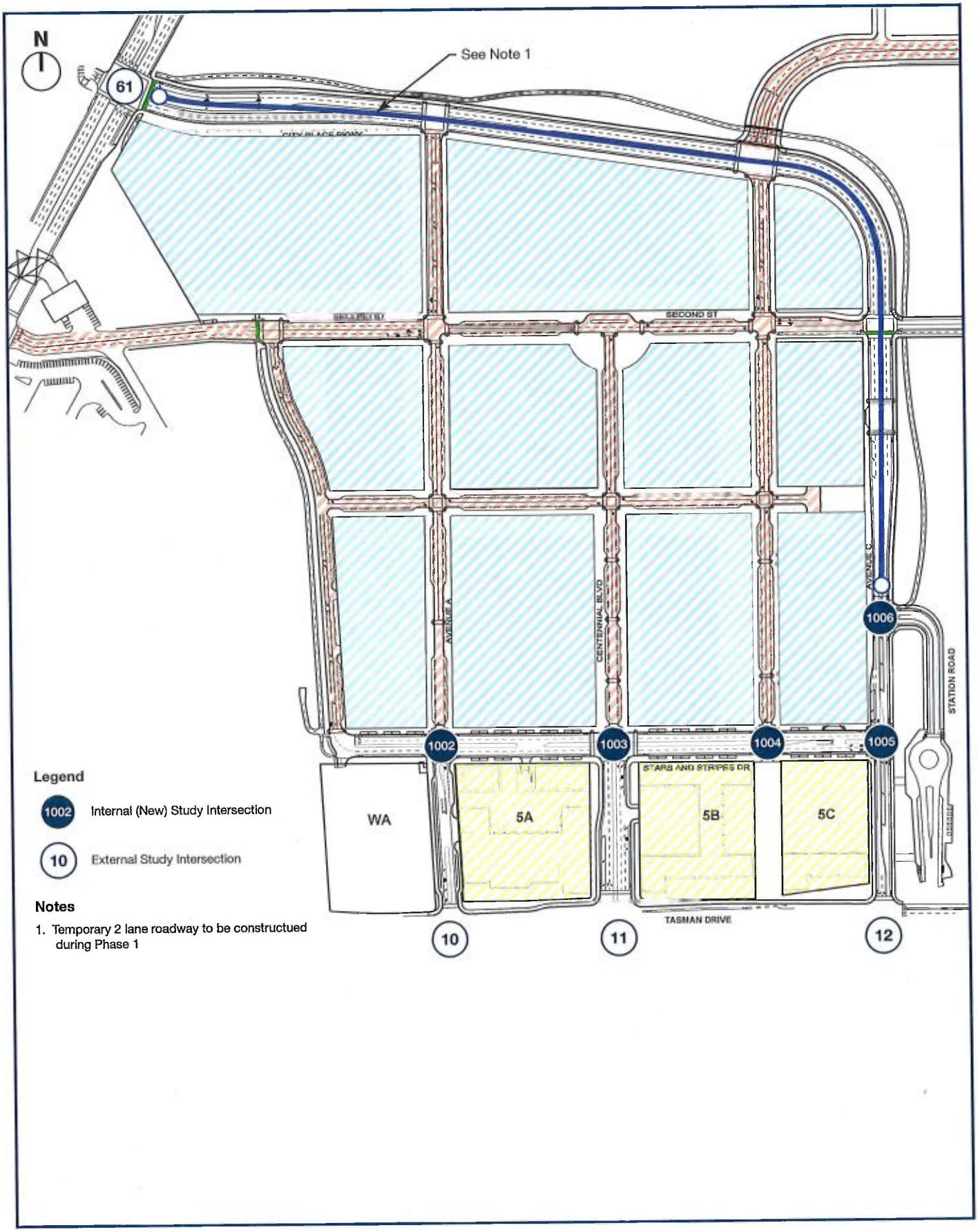


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Figure 1.2b
Phase 1 Internal Study Intersections
City Place, Santa Clara

2 Methodology and Performance Criteria

To assess Phase 1 of development, trip generation estimates are developed consistent with the methodology used in the City Place Santa Clara Project Final EIR, April 2016 (EIR). Further information on the trip generation is provided in Section 3.

The traffic assessment analyzes the internal City Center intersections that will be constructed and operational during Phase 1, and existing intersections located along Great America Parkway (between Old Mountain View-Alviso Road and Tasman Drive) and Tasman Drive (between Great America Parkway and Calle del Sol). This will ensure that traffic patterns without the Lafayette Street / UP Railroad bridge crossings are fully assessed.

Regional traffic distribution patterns and project trip assignment utilizes similar assumptions as the EIR, with changes to account for the changes to the street network for Phase 1. To account for future traffic volumes associated with other projects in the area, the baseline traffic is based upon the Background Conditions as presented in the EIR.

The traffic analysis has been completed using Traffix software to assess the performance of intersections using the Highway Capacity Manual 2000 (HCM 2000) methodology and is consistent with VTA Traffic Level of Service Analysis Guidelines and City Place EIR.

The traffic assessment evaluates the performance of intersections based on Level of Service (LOS). LOS is a qualitative measure of the operational performance of the intersection on a grade from LOS A (best) to LOS F (worst). The LOS relates to the average delay per vehicle with LOS A representing little to no delay and LOS F with unacceptable delay to most drivers.

For non-CMP signalized intersections, LOS D or better operations is the performance metric used for the evaluation, with average vehicle delay less than 55.0 seconds. For CMP signalized intersections (#8), LOS E or better operations is the performance metric used for evaluation, with average vehicle delay less than 80.0 seconds. **Table 2.1** provides a summary of the LOS standards and average vehicle delay for signalized intersections.

Table 2.1: Signalized Intersection LOS Standards

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

Source: Traffic and Level of Service Guidelines, VTA CMP June 2003.

For un-signalized all-way stop sign intersections, the performance evaluation is based upon the average control delay per vehicle (in seconds), for two-way or side-street stop-controlled intersection, the worst-case approach delay is reported. **Table 2.2** provides a summary of the LOS Standards for un-signalized intersections.

Table 2.2: Un-signalized Intersection LOS Standards

LOS	Definition	Average Control Delay per Vehicle (seconds)
A	Little or no delay.	<10.0
B	Short traffic delay.	10.1 to 15.0
C	Average traffic delays.	15.1 to 25.0
D	Long traffic delays.	25.1 to 35.0
E	Very long traffic delays.	35.1 to 50.0
F	Extreme traffic delays with intersection capacity exceeded.	> 50.0

Source: Traffic and Level of Service Guidelines, VTA CMP June 2003.

3 Project Trip Generation, Distribution and Assignment

To evaluate the future performance of the roadways, the building program is used to estimate future project trips and assigns the vehicle trips to the local network based upon the regional distribution patterns used in the EIR. Sections 3.1 to 3.3 summarize the project trip generation, distribution and assignment used in the analysis.

3.1 Project Trip Generation

The trip generation for Phase 1 has been estimated using the trip rates as described below, including a mixed-use reduction based on the MXD tool developed by Fehr & Peers, and a public transit reduction. This trip generation methodology adopted for this DAP Phase 1 is fully consistent with the EIR.

Office – The EIR uses a local Silicon Valley Rate per employee for the office land use and is based on an employee density of 270sq.ft per person.

Hotel – The hotel trip rate in the EIR is based upon ITE Trip Generation Manual (9th Edition) LU Code 310 trip rates. The average rate is used for the AM and PM peak hours.

Restaurants – In the EIR, the food & beverage used a mix of different restaurant types for estimating restaurant trips. The land use types included High-turnover (ITE 932), Quality / Fine Dining (ITE 931) and Fast-food (ITE 934). With the refinement of the program, fast-food locations are not being proposed as part of the project, therefore this land use and trip rate is replaced with Fast-casual dining (ITE 930) trip rates, which more accurately reflects the proposed use. The average rate is used for Daily, AM, and PM peak hour calculations.

Residential / Serviced Apartments – The residential trip rate used in the EIR is based upon ITE Trip Generation Manual (9th Edition) LU Code 220 trip rates. The fitted curve rate is used for the Daily, AM and PM peak hour calculations.

Retail – The EIR used Shopping Center (ITE 820) trip rates for estimation of the retail trips at City Place. The EIR used fitted curve equation for daily and peak hours. It is noted that the EIR assessed all retail (for Parcels 4 and 5) as a single land use using the fitted curve equations. Phase 1 is assessed using the fitted curve equation, therefore as additional phases are constructed, the trip rates per ksf will adjust to reflect the adjustments to the fitted curve.

Table 3.1: Phase 1 Trip Generation Rates

Land Use	Units	Daily Trip Rate	AM Peak Hour Trip Rate	PM Peak Hour Trip Rate
Office	per employee	2.95	0.31	0.30
Hotel	per room	8.17	0.53	0.60
Residential / Serviced Apartments	per unit	6.70	0.50	0.65
Retail	per ksf	116.36	2.80	9.81
Restaurants	per ksf	137.16	1.10	9.12

Source:

Office – Silicon Valley Local Office Rate, per EIR. Office density of 270sf per employee.

Hotel – ITE 9th Edition LU 310. Fitted curve for daily, average rate for AM and PM peak hours

Residential / Serviced Apartments – ITE 9th Edition LU 220. Fitted curve for daily, AM and PM peak hours

Retail – ITE 9th Edition LU 820. Fitted curve for daily, AM and PM peak hours

Restaurants – ITE 9th and 10th Edition. LU 930 and 931. Average for daily, AM and PM peak hours. Blended rate, see Appendix A1 for breakdown.

Table 3.2 provides a summary of the Phase 1 Program and peak hour vehicle trips assessed in this traffic assessment.

Table 3.2: Phase 1 Land Use Program and Trip Generation (excludes mixed-use reductions)

Parcel	Land Use	Program	Daily	AM Peak Hour	PM Peak Hour
5	Office	440 ksf	4,800	500	490
	Hotel	480 rooms	3,920	250	290
	Residential / Serviced Apartments	200 units	1,340	100	130
	Retail	21.4 ksf	2,490	60	210
	Restaurants	29.6 ksf	4,060	30	270
		Total	**16,610**	**940**	**1,390**

As in the EIR, the mixed-use reductions were estimated using Fehr & Peers MXD tool, a proprietary tool that estimates reductions based on program use. Fehr & Peers MXD reductions are provided in Appendix A2. **Table 3.3** provides a summary table of the reductions applied for Phase 1 program, including the public transit reduction. The office program was not included in the mixed-use reduction since Silicon Valley office rates are being used and already include a TDM reduction.

Table 3.3: Phase 1 Reductions

Land Use		Daily	AM In	AM Out	AM Total	PM In	PM Out	PM Total
Office	Gross	4,800	450	50	500	100	390	490
	5% Public Transit Reduction	-240	-25	0	-25	-5	-20	-25
	Sub-total	4,560	425	50	475	95	370	465
Retail	Gross	2,490	40	20	60	100	110	210
	Mixed-use Reduction	-620	-15	-5	-20	-40	-45	-85
	5% Public Transit Reduction	-90	0	0	0	-5	-5	-10
	Sub-total	1,780	25	15	40	55	60	115
Restaurants	Gross	4,060	20	10	30	170	100	270
	Mixed-use Reduction	-1,010	-10	-5	-15	-65	-40	-105
	5% Public Transit Reduction	-155	0	0	0	-5	0	-5
	Sub-total	2,895	10	5	15	100	60	160
Hotel	Gross	3,920	150	100	250	150	140	290
	Mixed-use Reduction	-970	-50	-40	-90	-55	-55	-110
	5% Public Transit Reduction	-145	-5	-5	-10	-5	-5	-10
	Sub-total	2,805	95	55	150	90	80	170
Residential / Serviced Apartments	Gross	1,340	20	80	100	80	50	130
	Mixed-use Reduction	-330	-5	-30	-35	-30	-20	-50
	5% Public Transit Reduction	-50	0	-5	-5	0	0	0
	Sub-total	960	15	45	60	50	30	80
	Total	13,000	570	170	740	390	600	990

Table 3.4 provides a comparison of the Phase 1 trips against the Parcel 5 trips as assessed in the EIR. Appendix A3 provides a breakdown of the Full Build project trips as evaluated in the EIR. As shown, the Phase 1 program is expected to generate between 190 to 310 fewer vehicle trips during the peak hours, compared to those evaluated in the EIR.

Table 3.4: EIR and Phase 1 Program Peak Hour Trip Comparison

Trip Generation	Daily	AM In	AM Out	AM Total	PM In	PM Out	PM Total
EIR – Enhanced Open Space Program	16,660	660	270	930	560	740	1,300
Phase 1	13,000	570	170	740	390	600	990
Difference	-3,660	-90	-100	-190	-170	-140	-310

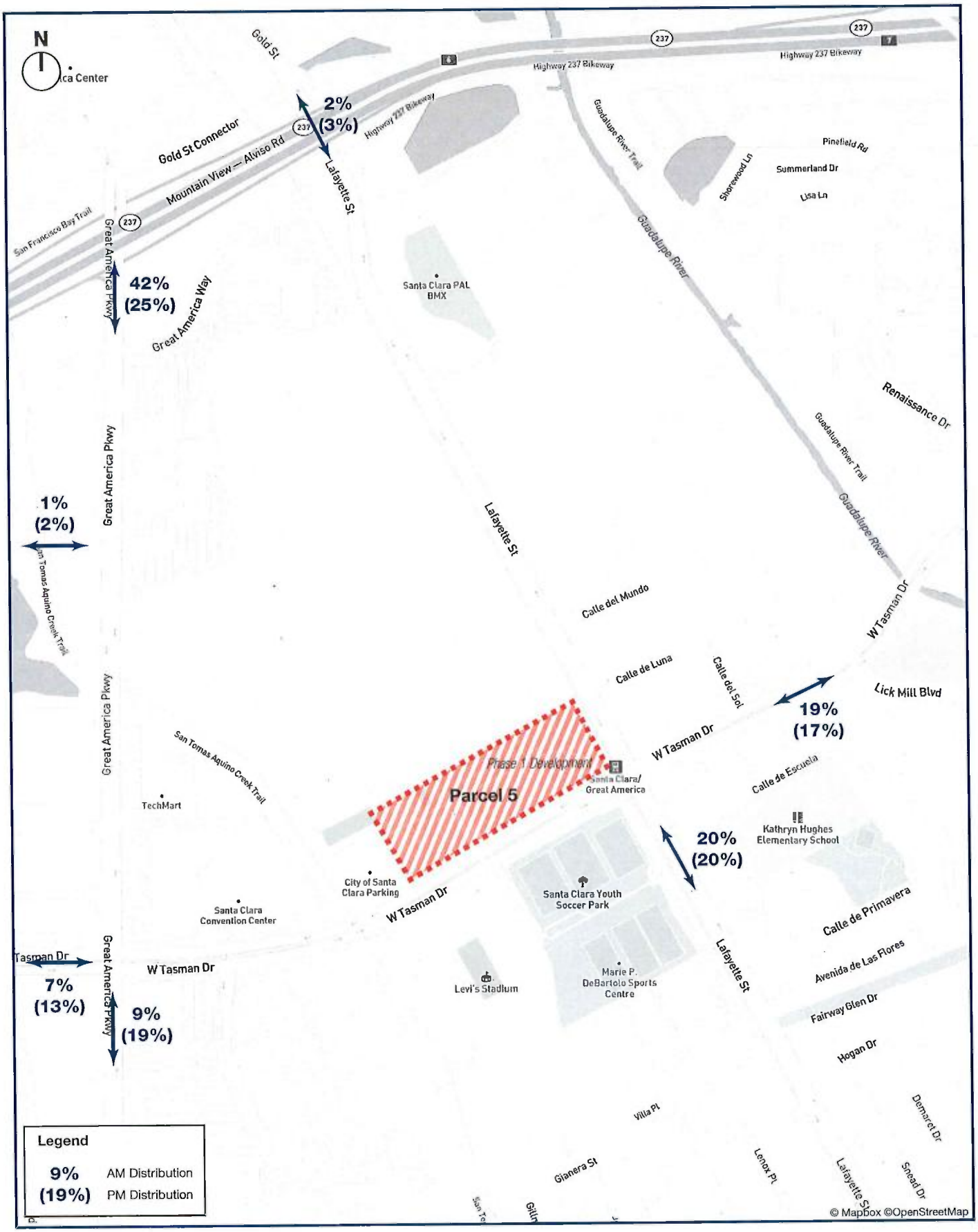
3.2 Project Trip Distribution and Assignment

The regional trip distribution patterns used in the City Place EIR have been used to estimate trips to the regional network. **Figure 3.1a** and **Figure 3.1b** presents the regional gateway distribution patterns used in the assessment. Assignment of the vehicle trips to the local and external network are based upon the most appropriate route choice between the trip origin and destination. Where alternative competing routes are available, trips have been assigned between the choices based upon suitability of the route and engineering judgement. **Table 3.5** summarizes the inbound and outbound vehicle trips for each of the key Phase 1 access locations.

Table 3.5: Phase 1 Inbound and Outbound Trip by Site Access Location

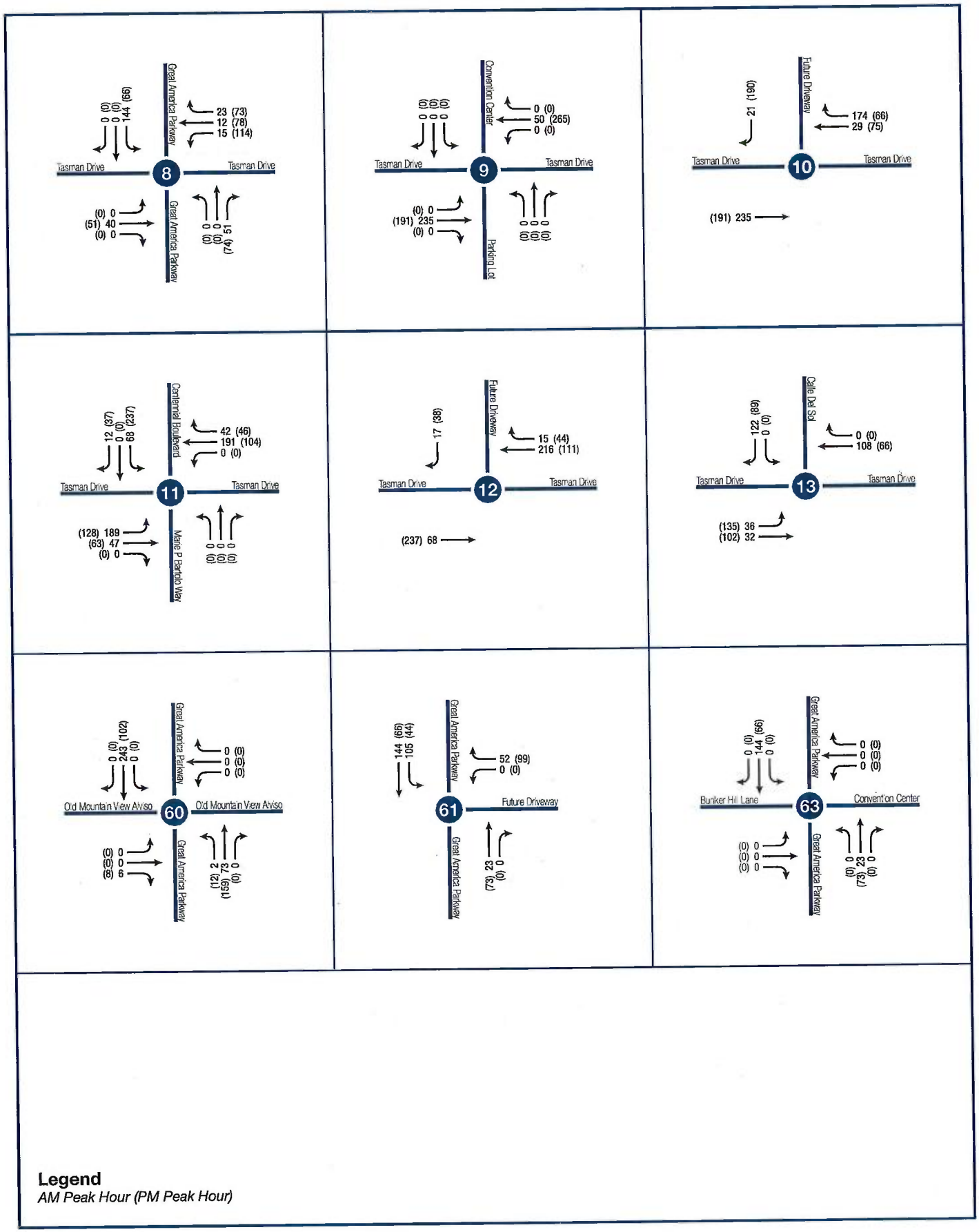
Phase 1 Site Access Location	AM In	AM Out	AM Total	PM In	PM Out	PM Total
Great America Parkway and City Place Parkway (Temp Road)	105	52	157	44	99	143
Tasman Drive and Avenue A	173	21	194	66	190	256
Tasman Drive and Centennial Boulevard	230	80	310	173	273	446
Tasman Drive and Avenue C	15	17	32	44	38	82
Tasman Drive Eastbound Slip Ramp (entry only)	47	0	47	63	0	63
Total	**570**	**170**	**740**	**390**	**600**	**990**

Figure 3.2 presents the project turning movement volumes at the study intersections.



ARUP

Figure 3.1
Phase 1 AM and PM Peak Hour Regional Distribution
City Place, Santa Clara



Legend
AM Peak Hour (PM Peak Hour)

Figure 3.2a
Phase 1 DAP Project Volumes
City Place, Santa Clara

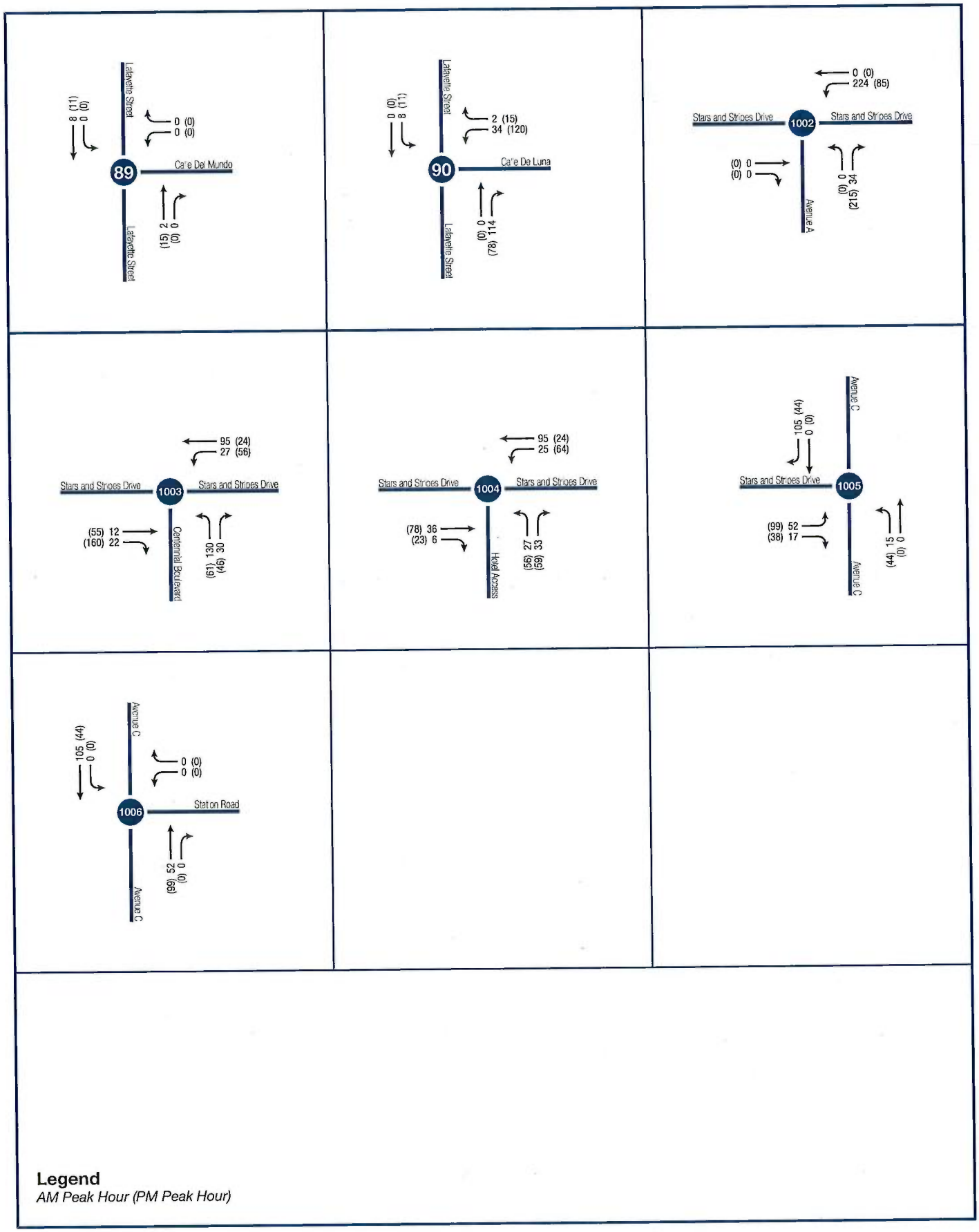


Figure 3.2b
Phase 1 DAP Project Volumes
City Place, Santa Clara

4 Phase 1 Traffic Assessment

4.1 Intersection Level of Service

The Phase 1 traffic assessment analyzes the internal City Center intersections that will be constructed and operational during Phase 1, and existing intersections located along Great America Parkway (between SR 237 and Tasman Drive) and Tasman Drive (between Great America Parkway and Lick Mill Boulevard).

Regional traffic distribution patterns and project trip assignment utilizes similar assumptions as the EIR, with changes to account for the changes to the street network for Phase 1. The baseline traffic is based upon the Background (No Project) Conditions as presented in the EIR. The expected new development trips were added to the baseline traffic to determine the total traffic volumes. **Figure 4.1a** and **Figure 4.1b** shows the total traffic volumes (background volumes plus Phase 1 DAP project trips) for the study area intersections.

The traffic analysis was completed using Traffix software to assess the performance of intersections using the Highway Capacity Manual 2000 (HCM 2000) methodology and is consistent with VTA Traffic Level of Service Analysis Guidelines and City Place EIR. **Table 4.1** shows the LOS results for the study area intersections.

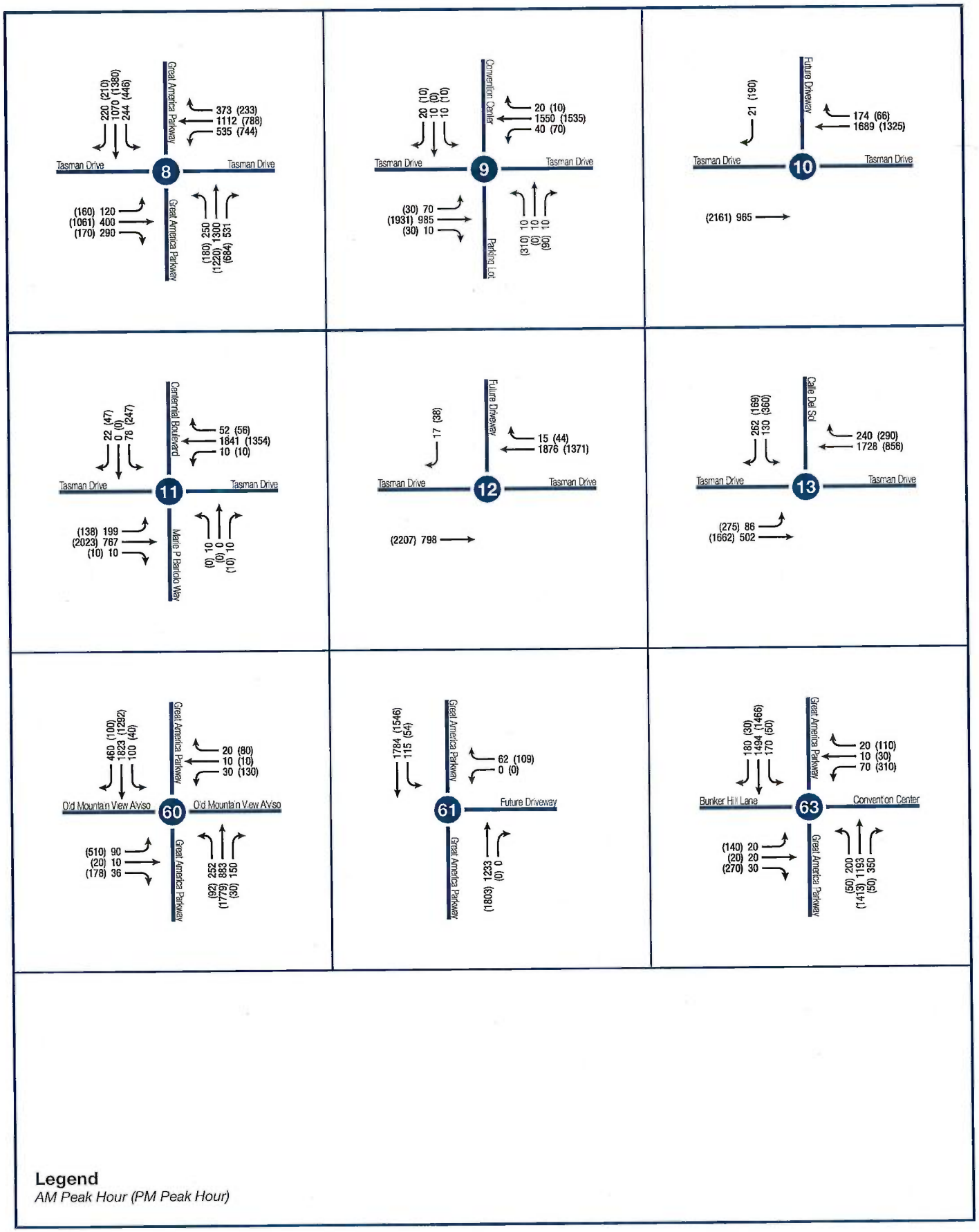


Figure 4.1a
Phase 1 DAP Background Plus Project Volumes
City Place, Santa Clara

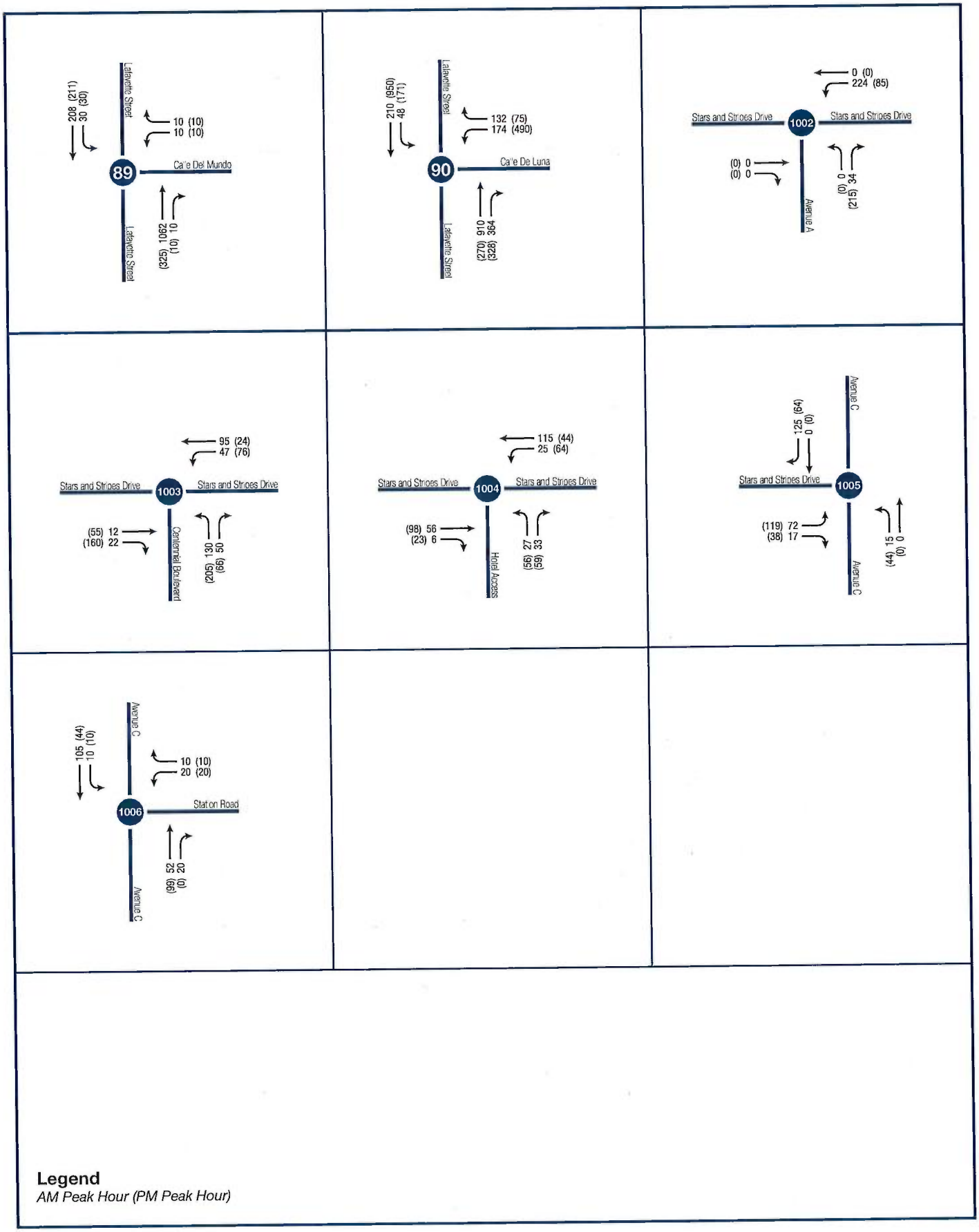


Figure 4.1b
Phase 1 DAP Background Plus Project Volumes
City Place, Santa Clara

Table 4.1: Phase 1 DAP Intersection LOS and Average Delay Results

Int. #	Intersection Name	Control Type	AM Peak Hour		PM Peak Hour	
			LOS	Avg. Delay (sec)[1]	LOS	Avg. Delay (sec)[1]
8	Great America Parkway / Tasman Drive (CMP)	Signalized	D	36.6	E*	69.0
9	Convention Center / Tasman Drive	Signalized	B	17.4	C	25.5
10	Future Driveway (west of Centennial Boulevard) / Tasman Drive	SSSC[1]	C	19.3	C	22.8
11	Centennial Boulevard / Tasman Drive	Signalized	C	23.3	C	28.1
12	Future Driveway (east of Centennial Boulevard) / Tasman Drive	SSSC[1]	C	19.4	C	15.5
13	Calle Del Sol / Tasman Drive	Signalized	B	17.0	C	21.6
60	Great America Parkway / Old Mountain View-Alviso	Signalized	C	21.1	D	43.5
61	Great America Parkway / Future Driveway (south of Old Mountain View-Alviso)	Signalized	B	12.1	B	11.3
63	Great America Parkway / Bunker Hill Lane	Signalized	B	13.1	B	15.7
89	Lafayette Street / Calle Del Mundo	Unsignalized	C	24.9	B	11.8
90	Lafayette Street / Calle Del Luna	Signalized	B	17.1	C	22.9
1002	Stars and Stripes Drive / Avenue A	AWSC	A	9.7	A	7.9
1003	Stars and Stripes Drive / Centennial Boulevard	Signalized	B	12.2	B	14.2
1004	Stars and Stripes Drive / Avenue B	AWSC	A	7.7	A	8.0
1005	Stars and Stripes Drive / Avenue C	AWSC	A	7.8	A	8.2
1006	Avenue C / Station Road	Signalized	B	10.5	B	11.0

[1] Average delay for SSSC is delay on the worst approach, all others are average intersection delay.

As shown in **Table 4.1**, all study area intersections are expected to operate acceptably during the morning and evening peak hours with the Phase 1 DAP development.

The Great America Parkway & Tasmin Drive intersection is expected to operate at LOS E with 69.0 seconds of delay during the evening peak hour. This intersection of Great America Parkway & Tasmin Drive is on the Congestion Management Program (CMP) network, with a threshold of LOS E (80 seconds of delay or less) applies to all CMP intersections. Therefore, the intersection of Great America Parkway & Tasmin Drive is expected to operate acceptably during the morning and evening peak hours.

4.2 Intersection Queuing

The overall volume of traffic for Phase 1 is significantly less than the volume of traffic that was evaluated in the EIR (~10%) and all intersections are operating within the defined performance thresholds, indicating that traffic conditions with Phase 1 should be better than what was studied in the EIR. Nevertheless, the DAP traffic study has assessed left-turn queuing on Great America Parkway and Tasman Drive (within the study area) using the Poisson approximation for queue lengths and the findings of the Phase 1 DAP queue analysis queue lengths indicate that Phase 1 left-turns with project traffic have lower queue lengths than assessed in the EIR.

At this stage, micro-simulation is not recommended due to the overall low volume of traffic and the uncertainty of the later development stages beyond Phase 2 and considering that the Poisson method will provide a reasonable indication of where queues might exceed the available storage length.

For identification of possible queueing deficiencies and responses, the combined Phase 1 and Phase 2 traffic should be considered for determining recommended lengthening where possible, as it is currently anticipated that development of Phases 1 and 2 may occur within a similar timeframe. It is not recommended to complete micro-simulation analysis for combined Phases 1, 2, and 3 at this time, considering the uncertainty in the timing, program and detailed design of Phase 3.

Queuing analysis for the left-turn movements has been completed for each signalized intersection within the study. The queuing analysis uses the Poisson method to estimate the average vehicle queue (50th percentile) and the 95th percentile queue length. It should be noted that the 95th percentile queue is generally a worst-case condition. **Table 4.2** and **Table 4.3** present the 50th and 95th percentile queue lengths for each intersection left-turn movement during the AM and PM peak hours. **Table 4.4** provides a summary of the impacted movements, and improvements to mitigate impacts due to project related traffic.

For the average queue length, three intersections have queues in the AM or PM peak hour that exceed the current storage capacity. At these intersections there are four left-turn movements that exceed the storage capacity. However, of these movements only one movement has Phase 1 project related trips assigned to the movement. The westbound left-turn movement at Great America Parkway and Tasman Drive exceeds storage capacity by 35ft.

For the 95th percentile queue length, four intersections have queues in the AM or PM peak hour that exceed the current storage capacity. At these intersections there are seven left-turn movements that exceed the storage capacity. However, of these movements only one movement has Phase 1 project related trips assigned to the movement. The westbound left-turn movement at Great America Parkway and Tasman Drive exceeds storage capacity by 152ft.

Table 4.2: 50th Percentile Queue Storage Length (Poisson)

Int. #	Intersection	Direction	AM Vehicles Per Hour	PM Vehicles Per Hour	50th Percentile Queue			
					AM Calculated Storage Length	PM Calculated Storage Length	Storage Length Provided (ft)	Sufficient Storage Length?
8	Great America Parkway & Tasman Drive	NBL	250	180	191	166	340	Yes
		SBL	244	446	191	316	445	Yes
		EBL	120	160	104	129	540	Yes
		WBL	535	744	385	**535**	**500**	**No**
9	Convention Center & Tasman Drive	NBL	10	310	0	**200**	**180**	**No**
		SBL	10	10	0	0	50	Yes
		EBL	70	30	74	49	360	Yes
		WBL	40	70	42	67	160	Yes
11	Centennial Boulevard & Tasman Drive	NBL	10	0	0	0	100	Yes
		SBL	78	247	74	174	350	Yes
		EBL	199	138	162	112	380	Yes
		WBL	10	10	0	0	190	Yes
13	Calle del Sol & Tasman Drive	NBL	0	0	0	0	0	Yes
		SBL	130	360	104	254	375	Yes
		EBL	86	275	74	199	660	Yes
		WBL	0	0	0	0	0	Yes
60	Great America Parkway & Old Mountain View-Aviso Road	NBL	252	92	162	87	220	Yes
		SBL	100	40	74	49	110	Yes
		EBL	90	510	74	**274**	**100**	**No**
		WBL	30	130	42	**92**	**75**	**No**
61	Great America Parkway & City Place Parkway (Temp Road / Future Driveway)	NBL	0	0	0	0	200	Yes
		SBL	115	54	104	54	200	Yes
		EBL	10	10	0	0	200	Yes
		WBL	0	0	0	0	200	Yes
63	Great America Parkway & Bunker Hill Lane	NBL	200	50	104	54	150	Yes
		SBL	170	50	104	54	150	Yes
		EBL	20	140	0	50	110	Yes
		WBL	70	310	42	142	200	Yes
90	Lafayette Street & Calle De Luna	NBL	10	0	0	0	630	Yes
		SBL	48	171	42	142	630	Yes
		EBL	0	0	0	0	630	Yes
		WBL	174	490	162	387	630	Yes
1003	Stars and Stripes & Centennial Boulevard	NBL	130	205	74	99	380	Yes
		SBL	0	0	0	0	0	Yes
		EBL	0	0	0	0	0	Yes
		WBL	47	76	42	42	300	Yes

Table 4.3: 95th Percentile Queue Storage Length (Poisson)

Int. #	Intersection	Direction	AM Vehicles Per Hour	PM Vehicles Per Hour	95th Percentile Queue			
					AM Calculated Storage Length	PM Calculated Storage Length	Storage Length Provided (ft)	Sufficient Storage Length?
8	Great America Parkway & Tasman Drive	NBL	250	180	270	245	340	Yes
		SBL	244	446	270	395	445	Yes
		EBL	120	160	160	185	540	Yes
		WBL	535	744	**502**	**652**	**500**	**No**
9	Convention Center & Tasman Drive	NBL	10	310	0	**200**	**180**	**No**
		SBL	10	10	0	0	50	Yes
		EBL	70	30	119	94	360	Yes
		WBL	40	70	74	99	160	Yes
11	Centennial Boulevard & Tasman Drive	NBL	10	0	0	0	100	Yes
		SBL	78	247	119	219	350	Yes
		EBL	199	138	235	185	380	Yes
		WBL	10	10	0	0	190	Yes
13	Calle del Sol & Tasman Drive	NBL	0	0	0	0	0	Yes
		SBL	130	360	160	310	375	Yes
		EBL	86	275	119	244	660	Yes
		WBL	0	0	0	0	0	Yes
60	Great America Parkway & Old Mountain View-Aviso Road	NBL	252	92	235	160	235	Yes
		SBL	100	40	**119**	94	**110**	**No**
		EBL	90	510	**119**	**319**	**100**	**No**
		WBL	30	130	74	**124**	**75**	**No**
61	Great America Parkway & City Place Parkway (Temp Road / Future Driveway)	NBL	0	0	0	0	175	Yes
		SBL	115	54	160	110	175	Yes
		EBL	10	10	0	0	175	Yes
		WBL	0	0	0	0	175	Yes
63	Great America Parkway & Bunker Hill Lane	NBL	200	50	**160**	110	**150**	**No**
		SBL	170	50	**160**	110	**150**	**No**
		EBL	20	140	0	50	110	Yes
		WBL	70	310	74	174	200	Yes
90	Lafayette Street & Calle De Luna	NBL	10	0	0	0	630	Yes
		SBL	48	171	74	174	630	Yes
		EBL	0	0	0	0	630	Yes
		WBL	174	490	235	460	630	Yes
1003	Stars and Stripes & Centennial Boulevard	NBL	130	205	119	144	380	Yes
		SBL	0	0	0	0	0	Yes
		EBL	0	0	0	0	0	Yes
		WBL	47	76	74	74	300	Yes

Table 4.3: 95th Percentile Queue Storage Length (Poisson)

Int. #	Intersection	Impacted Movement	50th Percentile Queue Length (ft)*	95th Percentile Queue Length (ft)*	Storage Length Provided (ft)	Comment
8	Great America Parkway & Tasman Drive	WBL	535	652	500	Project adds 114 vehicle trips during the PM, approximately 15% of the overall left turn volume. Average queue exceeds storage capacity by 35ft, 95th percentile queue exceeds storage capacity by 152ft.
9	Convention Center & Tasman Drive	NBL	200	200	180	No Phase 1 project trips on this movement. Queue exceeds storage capacity by 20ft.
60	Great America Parkway & Old Mountain View-Aviso Road	SBL	Less than storage length	119	110	No Phase 1 project trips on this movement. Queue exceeds storage capacity by 9ft.
		EBL	274	319	100	No Phase 1 project trips on this movement. Queue exceeds storage capacity by 219ft.
		WBL	92	124	75	No Phase 1 project trips on this movement. Queue exceeds storage capacity by 49ft.
63	Great America Parkway & Bunker Hill Lane	NBL	Less than storage length	160	150	No Phase 1 project trips on this movement. Queue exceeds storage capacity by 10ft.
		SBL	Less than storage length	160	150	No Phase 1 project trips on this movement. Queue exceeds storage capacity by 10ft.

For the one movement where Phase 1 project trips contribute to the increase in storage length of the left-turn movements, the following mitigation is identified. **It is noted that additional development phases may require further mitigation and should be considered as part of those applications.**

- Intersection #8 – Provide a total of 655ft of storage capacity for the westbound left-turn movement to meet the 95th percentile queue length.

4.3 EIR Off-site Intersection Mitigation Improvements

The *Mitigation Monitoring & Reporting Program* identifies the mitigation measures that are the full funding responsibility of the project and identifies that project phase and number of project trips that trigger the improvement.

Table 4.3 summarizes the intersection mitigation that will be required as part of Phase 1. The mitigation at intersection 22 is triggered when the project generates 450 or more AM peak hour vehicle trips. Phase 1 is estimated to generate 870 peak hour vehicle trips; therefore, this improvement will be required to be implemented as part of Phase 1.

The other mitigations will not be triggered until later phases, when the project exceeds 2,240 project trips or more.

Table 4.3: Intersection Mitigations for Phase 1

Trip Generation	Jurisdiction	Mitigation	Impact Hour	Project Trips Trigger
22 – Agnew Road-De La Cruz Boulevard / Montague Expressway	Santa Clara County (CMP)	Partial Mitigation – Add a second northbound left-turn lane	AM	450

5 Travel Demand Management (TDM) Plan

The *Mitigation Monitoring & Reporting Program* identifies mitigation TRA-1.1: Vehicle Trip Reduction with TDM that requires the project to implement a TDM plan that supports the reduction of project office traffic by 4 percent daily and 10 percent in the peak hours. For residential trips, the TDM plan will need to identify measures to reduce daily traffic by 2 percent and peak hour traffic by a minimum of 4 percent.

Overall, the planned Phase 1 program will generate fewer peak hour trips than the estimated EIR vehicle trip threshold. This is due in part to the reduction in the commercial (retail and restaurant) program that was planned for Parcel 5. **Table 5.1** summarizes the vehicle trip thresholds for the office and residential program and **Table 5.2** provides a summary of the total vehicle trip thresholds for Phase 1.

Table 5.1: Phase 1 TDM Reductions for Office and Residential Program

Office	**Daily**	**AM Peak Hour**	**PM Peak Hour**
Office			
Vehicle Trips (Phase 1 Estimate)	4,560	475	465
TDM Reduction Target	-185	-45	-45
Vehicle Trip Threshold	4,375	430	420
Residential			
Vehicle Trips (Phase 1 Estimate)	960	60	80
TDM Reduction Target	-35	-5	-5
Vehicle Trip Threshold	925	55	75
Note: Trip reductions rounded to nearest 5 vehicle trips.			

Table 5.2: Phase 1 Vehicle Trip Thresholds

	Daily	**AM In**	**AM Out**
Phase 1 Vehicle Trip Estimates	13,000	740	990
Phase 1 TDM Reduction Target	-220	-50	-50
Phase 1 Vehicle Trip Threshold	12,780	690	940

TDM Program Components

Phase 1 of the project includes infrastructure, measures and strategies as part of the overall design program with the aim of reducing single occupancy vehicle trips. These measures and strategies are summarized in Table 8 and form the basis of the overall TDM plan.

Table 8: TDM Program Components

	Program Item	Description
Office TDM Program		
Transportation Management Association (TMA)	TDM Monitoring and Implementation	Organization that will coordinate and provide oversight of the implementation of TDM measures for City Place. The TMA will offer a baseline of TDM services (coordinated for overall benefit of reducing auto trips) and provide guidance / recommendations for individual employee / tenant programs. Maintain and update website and marketing program to disseminate information of TDM program
On-site Support Facilities	Pedestrian Infrastructure	Walking is encouraged within City Center through the incorporation of ample sidewalks and pedestrian cross-walks at intersections. Pedestrian connections are provided between the office program and the nearby Great America LRT Station and Great America Amtrak Station.
	Bicycle Infrastructure	The proposed roadways for City Center include on-street bike lanes with connections into the existing local bicycle network (Along Tasman Drive). Short-term and long-term bike parking will be provided and will be located at convenient locations near the office program (exact parking locations to be determined)
	Transit Infrastructure	Shuttle stop(s) will be provided within convenient walking access of the office program on Block 5A (location to be determined). Off-site transit infrastructure includes the nearby Great America LRT station and Great America Amtrak station, with convenient pedestrian access routes.
	Carpool	Preferential parking spaces located close to building entrances to encourage carpooling
	Car Share Services	Provision of car sharing vehicles for use by office employees. Car sharing services provide office employees access to a car when needed (for off-site meetings, occasional lunch-time errands etc.), without the need for office employees driving their own vehicle to commute.
In-building Support Facilities	Pedestrian and Bicycle Services	The office building will include the provision of changing facilities, showers and short-term locker facilities to encourage commuting through active travel modes.
Residential TDM Program		
Transportation Management Association (TMA)	TDM Coordinator	TDM Coordinator for residents to help provide information related to commuting (to off-site locations), sign-up support for transit pass programs, car-share programs and 511 rideshare programs.
On-site Support Facilities	Pedestrian Infrastructure	Walking is encouraged for residents with ample sidewalks and pedestrian cross-walks at intersections, providing connections to nearby public transit facilities.
	Bicycle Infrastructure	The proposed roadways for City Center include on-street bike lanes with connections into the existing local

	Program Item	Description
		bicycle network (Along Tasman Drive). Bike lanes will also connect to nearby recreational bike paths and trails.
	Transit Infrastructure	Provide in-building information for nearby public transit services, including schedules, maps to nearby transit-stops and stations
	Car Share Services	Provision of car sharing vehicles and car share membership information that provides residents access to vehicles, without the need to own a vehicle.

TDM Plan Monitoring

Monitoring of the TDM plan will be conducted in accordance with the Section F Monitoring and Reporting. This will include the following:

- Annual monitoring and reporting that includes
    - Description of TDM programs in operation over the previous year, results of driveway counts and survey findings
- Traffic counts to collect daily and peak hour traffic volumes at City Place Driveways and parking entrances. Counts will be conducted during school time and collected over a 72-hour period (Tuesday, Wednesday and Thursdays)
- Provide total sum of entering and exiting traffic for the peak hours, adjusted to isolate office and residential parking. Traffic volumes will then be compared to TDM plan trip thresholds to determine TDM plan performance and if the vehicle trip thresholds are being met
- Undertake an employee mode-share survey to determine mode-splits for employees, one year after building occupancy. Subsequent surveys will be conducted if the previous year monitoring results indicated that the vehicle trip thresholds had not been met.

Appendix A

City Place Trip Generation

A1 Restaurant Trip Generation Breakdown

Table A1 provides a breakdown of the restaurant trip rate used for Phase 1 restaurant program.

Table A1: Restaurant Trip Generation Rates for Phase

Land Use	Units	Daily Trip Rate	AM Peak Hour Trip Rate (In / Out)	PM Peak Hour Trip Rate (In / Out)
Fast-Casual	per ksf	315.17	2.07 (67% / 33%)	14.13 (55% / 45%)
Fine / Quality Dining	per ksf	89.95	0.81 (50%/50%)	7.49 (67% / 33%)
Blended Rate	per ksf	137.16	1.10	9.12

A2 Fehr & Peers MXD Reduction

TABLE 3.1
PHASE 1 TRIP GENERATION COMPARISON

Land Use (Units)	ITE Code	Size	Daily	AM Peak Hour			PM Peak Hour		
			Total	In	Out	Total	In	Out	Total
Retail, Residential, Hotel, and Restaurant Uses Trip Generation									
Shopping Center (1,000 square feet)	820	21.4	2,490	40	20	60	100	110	210
Apartment (Dwelling Units)	220	200	1,340	20	80	100	80	50	130
Hotel (Rooms)	310	480	3,920	150	100	250	150	140	290
Quality Restaurant (1,000 square feet)	931	23.4	2,110	10	10	20	120	60	180
Fast Casual Restaurant (1,000 square feet)	930	6.2	1,950	10	0	10	50	40	90
Subtotal			*11,810*	*230*	*210*	*440*	*500*	*400*	*900*
Mixed-Use Reductions			*-2,930*	*-80*	*-80*	*-160*	*-190*	*-160*	*-350*
Subtotal Net New Trips [A]			*8,880*	*150*	*130*	*280*	*310*	*240*	*550*
Office Use Trip Generation									
Office (1,000 square feet)	Local Rates	440	4,800	50	50	500	100	390	490
Subtotal Office Trips [B]			*4,800*	*50*	*50*	*500*	*100*	*390*	*490*
Total Project Trip Generation									
Project Trip Subtotal [A + B = C]			13,680	600	180	780	410	630	1,040
Public Transit Reduction [5%*C = D]			-680	-30	-10	-40	-20	-30	-50
Total Project Trips [C + D = E]			13,000	570	170	740	390	600	990
Comparison									
FEIR Trip Generation [F]			16,660	660	270	930	560	740	1,300
Difference (Results Less than FEIR Estimates) [E - F = G]			-3,660	-90	-100	-190	-170	-140	-310

Notes:

Trip Generation Estimates using the same mixed-use equations in the City of Santa Clara, *City Place Santa Clara Project Environmental Impact Report*, 2016, and updated built environment inputs.

Trip generation estimates do not account for transportation network company (TNCs) (e.g., Uber and Lyft) activity or other emerging trends like autonomous vehicles.

A3 City Place FEIR Trip Generation Summary

Table A1 provides a summary of the trip generation by parcel from the City Place EIR, April 2016. Note this program relates to the *Enhanced Open Space* program, that reallocated office program from Parcel 3 to Parcels 1, 2 and 5, with Parcel 3 becoming public open space.

Table A1: FEIR EOS Land Use Program and Trips

Parcel	Land Use	EOS Program	Daily	AM Peak Hour	PM Peak Hour
1	Office	1,440 ksf	15,720	1,660	1,590
2	Office	2,392 ksf	25,060	2,630	2,560
	Commercial[(a)]	200 ksf	10,130	230	900
3	Park	-	-	-	-
4	Office	2,546.4 ksf	24,840	2,610	2,380
	Commercial[(a)]	1,415 ksf	45,720	1,800	3,420
	Hotel	298 ksf	2,600	160	160
	Residential	-	-	-	-
5	Office	306 ksf	2,830	310	260
	Commercial[(a)]	87 ksf	10,290	370	800
	Hotel	280 ksf	2,450	160	150
	Residential	200 ksf (200 units)	1,090	90	90
	Total	9,164.4 ksf	140,730	10,020	12,310

Notes:
(a) Commercial land use includes retail, entertainment, and food/beverage

Appendix B

Traffix Outputs

Santa Clara City Place
Phase 1 DAP Traffic Analysis January 2020
Background Conditions

Summary Scenario Comparison Report (With Average Critical Delay)
Future Volume Alternative

Intersection		Background No Project AM				Background Plus Project AM				???						???			
		LOS	Avg Del (sec)	Crit V/C	Avg Crit Del (sec)	LOS	Avg Del (sec)	Crit V/C	Avg Crit Del (sec)	LOS	Avg Del (sec)	Crit V/C	Crit V/C Change	Avg Crit Del (sec)	Avg Crit Del Change	LOS	Avg Del (sec)	Crit V/C	Avg Crit Del (sec)
#8	Great America Parkway / Tasman Drive (CMP)	C	34.7	0.854	37.2	D	36.6	0.865	38.2	?	xx.x	x.xxx	x.xxx	xx.x	xx.x	?	xx.x	x.xxx	xx.x
#9	Convention Center / Tasman Drive	B	17.3	0.533	17.2	B	17.4	0.549	17.7	?	xx.x	x.xxx	x.xxx	xx.x	xx.x	?	xx.x	x.xxx	xx.x
#10	Avenue A (Future Driveway) / Tasman Drive					C	19.3	0.077	0.1	?	xx.x	x.xxx	x.xxx	xx.x	xx.x	?	xx.x	x.xxx	xx.x
#11	Centennial Boulevard / Tasman Drive	B	17.8	0.524	18.1	C	23.3	0.660	25.6	?	xx.x	x.xxx	x.xxx	xx.x	xx.x	?	xx.x	x.xxx	xx.x
#12	Avenue C / Tasman Drive					C	19.4	0.064	0.1	?	xx.x	x.xxx	x.xxx	xx.x	xx.x	?	xx.x	x.xxx	xx.x
#13	Calle Del Sol / Tasman Drive	B	13.2	0.703	16.0	B	17.0	0.787	20.9	?	xx.x	x.xxx	x.xxx	xx.x	xx.x	?	xx.x	x.xxx	xx.x
#60	Great America Parkway / Old Mountain View-Alviso Road	C	20.6	0.589	21.9	C	21.1	0.642	23.1	?	xx.x	x.xxx	x.xxx	xx.x	xx.x	?	xx.x	x.xxx	xx.x
#61	Great America Parkway / City Place Parkway (Future	A	8.4	0.265	10.1	B	12.1	0.415	8.6	?	xx.x	x.xxx	x.xxx	xx.x	xx.x	?	xx.x	x.xxx	xx.x
#63	Great America Parkway/Bunker Hill Lane	B	13.2	0.460	13.3	B	13.1	0.490	13.2	?	xx.x	x.xxx	x.xxx	xx.x	xx.x	?	xx.x	x.xxx	xx.x
#90	Laffeyette Street / Calle De Luna	B	16.4	0.495	16.3	B	17.1	0.546	17.1	?	xx.x	x.xxx	x.xxx	xx.x	xx.x	?	xx.x	x.xxx	xx.x
#1002	Stars and Stripes Drive / Avenue A					A	9.7	0.317	9.7	?	xx.x	x.xxx	x.xxx	xx.x	xx.x	?	xx.x	x.xxx	xx.x
#1003	Centennial Boulevard / Stars and Stripes Drive					B	12.2	0.058	13.9	?	xx.x	x.xxx	x.xxx	xx.x	xx.x	?	xx.x	x.xxx	xx.x
#1004	Stars and Stripes Drive / Avenue B					A	7.7	0.095	7.7	?	xx.x	x.xxx	x.xxx	xx.x	xx.x	?	xx.x	x.xxx	xx.x
#1005	Stars and Stripes Drive / Avenue C					A	7.8	0.143	7.8	?	xx.x	x.xxx	x.xxx	xx.x	xx.x	?	xx.x	x.xxx	xx.x
#1006	Avenue C / Station Road					B	10.5	0.087	8.9	?	xx.x	x.xxx	x.xxx	xx.x	xx.x	?	xx.x	x.xxx	xx.x

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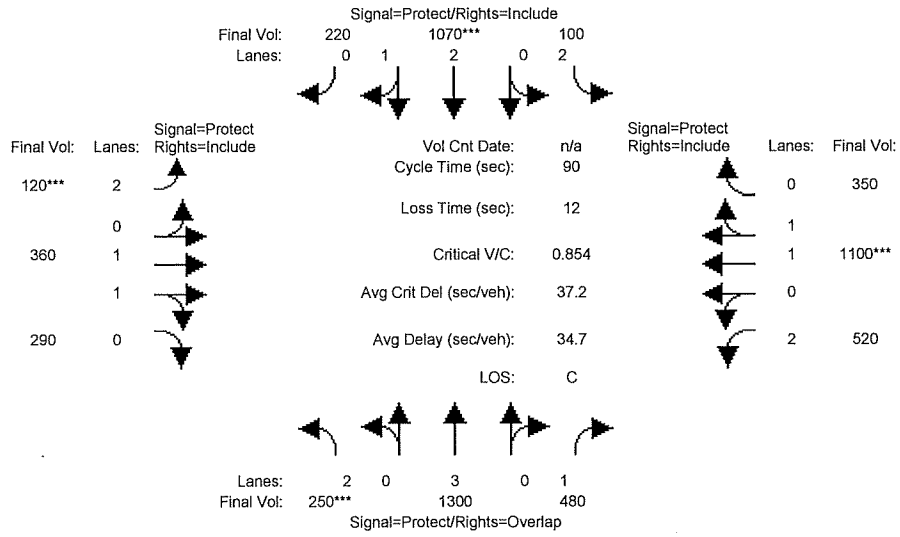
Santa Clara City Place
Phase 1 DAP Traffic Analysis January 2020
Background Conditions

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background No Project AM

Intersection #8: Great America Parkway / Tasman Drive (CMP)



Street Name:	Great America Parkway						Tasman Drive					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	250	1300	480	100	1070	220	120	360	290	520	1100	350
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	250	1300	480	100	1070	220	120	360	290	520	1100	350
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	250	1300	480	100	1070	220	120	360	290	520	1100	350
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	250	1300	480	100	1070	220	120	360	290	520	1100	350
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	250	1300	480	100	1070	220	120	360	290	520	1100	350
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	250	1300	480	100	1070	220	120	360	290	520	1100	350
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	1.00	0.92	0.83	0.99	0.95	0.83	0.99	0.95	0.83	0.98	0.95
Lanes:	2.00	3.00	1.00	2.00	2.47	0.53	2.00	1.08	0.92	2.00	1.50	0.50
Final Sat.:	3150	5700	1750	3150	4644	955	3150	2048	1650	3150	2806	893
Capacity Analysis Module:												
Vol/Sat:	0.08	0.23	0.27	0.03	0.23	0.23	0.04	0.18	0.18	0.17	0.39	0.39
Crit Moves:	****				****		****				****	
Green Time:	8.0	23.4	46.0	8.0	23.3	23.3	7.0	24.1	24.1	22.6	39.7	39.7
Volume/Cap:	0.89	0.88	0.54	0.36	0.89	0.89	0.49	0.66	0.66	0.66	0.89	0.89
Delay/Veh:	67.9	38.3	15.5	39.4	39.3	39.3	41.3	30.9	30.9	32.3	29.6	29.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	67.9	38.3	15.5	39.4	39.3	39.3	41.3	30.9	30.9	32.3	29.6	29.6
LOS by Move:	E	D	B	D	D	D	D	C	C	C	C	C
HCM2k95thQ:	13	26	18	3	23	23	5	17	17	14	33	33

Note: Queue reported is the number of cars per lane.

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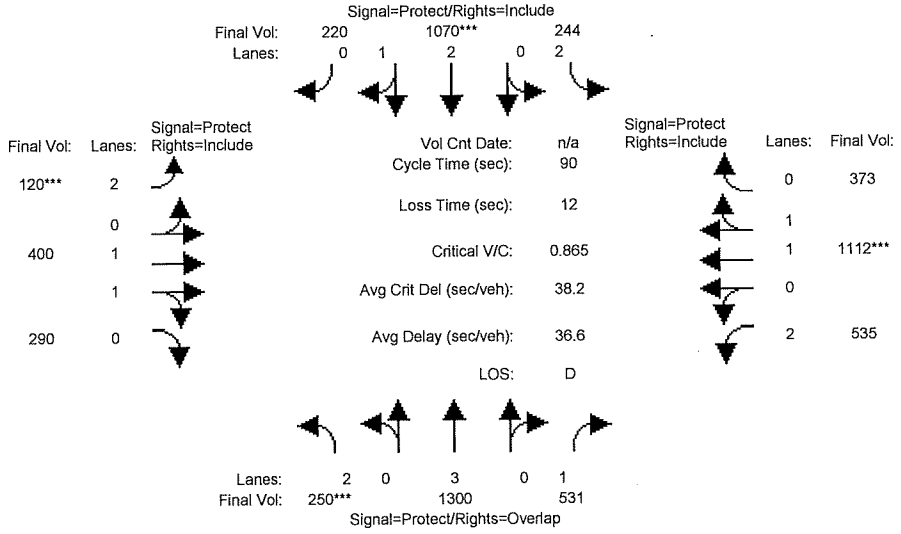
Santa Clara City Place
Phase 1 DAP Traffic Analysis January 2020
Background Conditions

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background Plus Project AM

Intersection #8: Great America Parkway / Tasman Drive (CMP)



Street Name:	Great America Parkway						Tasman Drive					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	250	1300	480	100	1070	220	120	360	290	520	1100	350
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	250	1300	480	100	1070	220	120	360	290	520	1100	350
Added Vol:	0	0	51	144	0	0	0	40	0	15	12	23
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	250	1300	531	244	1070	220	120	400	290	535	1112	373
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	250	1300	531	244	1070	220	120	400	290	535	1112	373
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	250	1300	531	244	1070	220	120	400	290	535	1112	373
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	250	1300	531	244	1070	220	120	400	290	535	1112	373
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	1.00	0.92	0.83	0.99	0.95	0.83	0.99	0.95	0.83	0.98	0.95
Lanes:	2.00	3.00	1.00	2.00	2.47	0.53	2.00	1.14	0.86	2.00	1.48	0.52
Final Sat.:	3150	5700	1750	3150	4644	955	3150	2144	1554	3150	2770	929
Capacity Analysis Module:												
Vol/Sat:	0.08	0.23	0.30	0.08	0.23	0.23	0.04	0.19	0.19	0.17	0.40	0.40
Crit Moves:	****				****		****				****	
Green Time:	7.9	23.1	45.5	7.9	23.0	23.0	7.0	24.6	24.6	22.4	40.1	40.1
Volume/Cap:	0.90	0.89	0.60	0.89	0.90	0.90	0.49	0.68	0.68	0.68	0.90	0.90
Delay/Veh:	70.6	39.4	17.0	67.9	40.6	40.6	41.3	31.1	31.1	33.0	30.4	30.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	70.6	39.4	17.0	67.9	40.6	40.6	41.3	31.1	31.1	33.0	30.4	30.4
LOS by Move:	E	D	B	E	D	D	D	C	C	C	C	C
HCM2k95thQ:	14	27	21	9	23	23	5	18	18	15	34	34

Note: Queue reported is the number of cars per lane.

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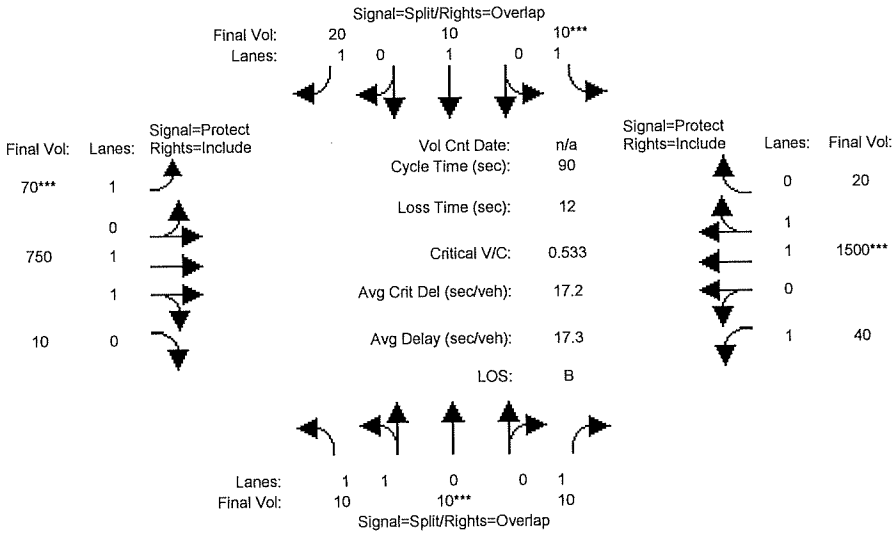
Santa Clara City Place
Phase 1 DAP Traffic Analysis January 2020
Background Conditions

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background No Project AM

Intersection #9: Convention Center / Tasman Drive



Street Name:	Convention Center						Tasman Drive					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	10	10	10	10	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	10	10	10	10	10	20	70	750	10	40	1500	20
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	10	10	10	10	10	20	70	750	10	40	1500	20
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	10	10	10	10	10	20	70	750	10	40	1500	20
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	10	10	10	10	10	20	70	750	10	40	1500	20
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	10	10	10	10	10	20	70	750	10	40	1500	20
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	10	10	10	10	10	20	70	750	10	40	1500	20
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.95	0.92	0.92	1.00	0.92	0.92	0.97	0.95	0.92	0.97	0.95
Lanes:	1.01	0.99	1.00	1.00	1.00	1.00	1.00	1.97	0.03	1.00	1.97	0.03
Final Sat.:	1775	1775	1750	1750	1900	1750	1750	3651	49	1750	3651	49
Capacity Analysis Module:												
Vol/Sat:	0.01	0.01	0.01	0.01	0.01	0.01	0.04	0.21	0.21	0.02	0.41	0.41
Crit Moves:		****		****			****				****	
Green Time:	10.0	10.0	25.9	10.0	10.0	17.0	7.0	42.1	42.1	15.9	51.0	51.0
Volume/Cap:	0.05	0.05	0.02	0.05	0.05	0.06	0.51	0.44	0.44	0.13	0.72	0.72
Delay/Veh:	35.8	35.8	23.0	35.9	35.8	30.0	43.2	16.2	16.2	31.4	15.6	15.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	35.8	35.8	23.0	35.9	35.8	30.0	43.2	16.2	16.2	31.4	15.6	15.6
LOS by Move:	D	D	C	D	D	C	D	B	B	C	B	B
HCM2k95thQ:	1	1	0	1	1	1	4	13	13	2	27	27

Note: Queue reported is the number of cars per lane.

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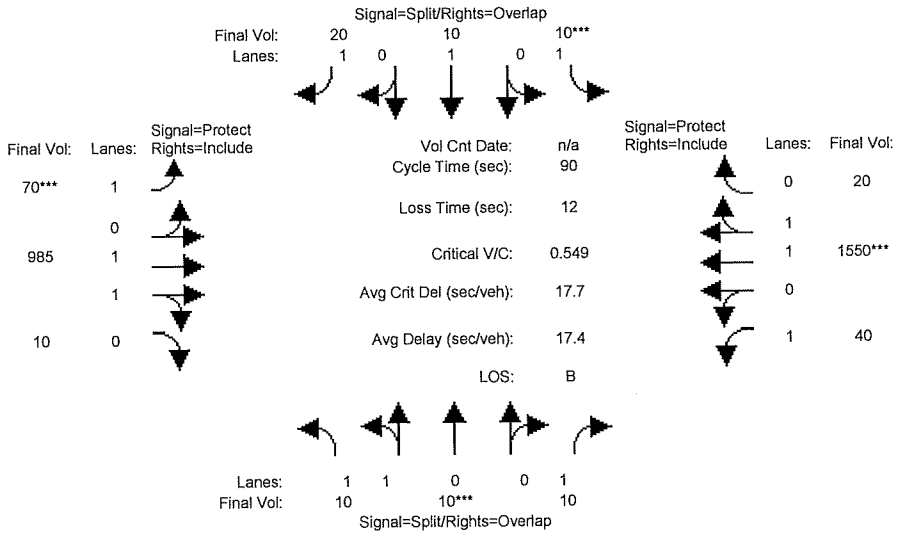
Santa Clara City Place
Phase 1 DAP Traffic Analysis January 2020
Background Conditions

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background Plus Project AM

Intersection #9: Convention Center / Tasman Drive



Street Name:	Convention Center						Tasman Drive					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	10	10	10	10	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	10	10	10	10	10	20	70	750	10	40	1500	20
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	10	10	10	10	10	20	70	750	10	40	1500	20
Added Vol:	0	0	0	0	0	0	0	235	0	0	50	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	10	10	10	10	10	20	70	985	10	40	1550	20
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	10	10	10	10	10	20	70	985	10	40	1550	20
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	10	10	10	10	10	20	70	985	10	40	1550	20
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	10	10	10	10	10	20	70	985	10	40	1550	20
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.95	0.92	0.92	1.00	0.92	0.92	0.97	0.95	0.92	0.97	0.95
Lanes:	1.01	0.99	1.00	1.00	1.00	1.00	1.00	1.98	0.02	1.00	1.97	0.03
Final Sat.:	1775	1775	1750	1750	1900	1750	1750	3663	37	1750	3653	47
Capacity Analysis Module:												
Vol/Sat:	0.01	0.01	0.01	0.01	0.01	0.01	0.04	0.27	0.27	0.02	0.42	0.42
Crit Moves:		****		****			****				****	
Green Time:	10.0	10.0	23.0	10.0	10.0	17.0	7.0	45.0	45.0	13.0	51.0	51.0
Volume/Cap:	0.05	0.05	0.02	0.05	0.05	0.06	0.51	0.54	0.54	0.16	0.75	0.75
Delay/Veh:	35.8	35.8	25.1	35.9	35.8	30.0	43.2	15.7	15.7	34.0	16.2	16.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	35.8	35.8	25.1	35.9	35.8	30.0	43.2	15.7	15.7	34.0	16.2	16.2
LOS by Move:	D	D	C	D	D	C	D	B	B	C	B	B
HCM2k95thQ:	1	1	0	1	1	1	4	17	17	2	28	28

Note: Queue reported is the number of cars per lane.

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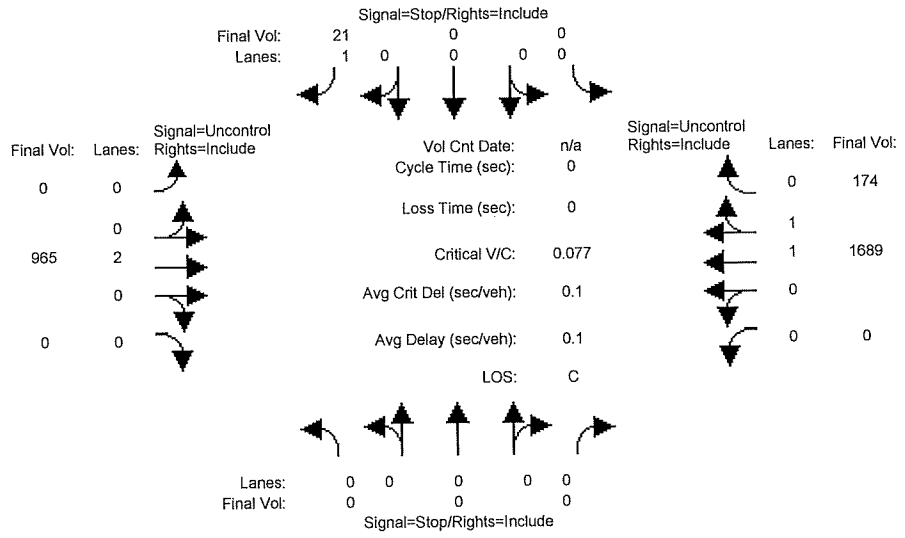
Santa Clara City Place
Phase 1 DAP Traffic Analysis January 2020
Background Conditions

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Background Plus Project AM

Intersection #10: Avenue A (Future Driveway) / Tasman Drive




```
Street Name:     Avenue A (Future Driveway)                Tasman Drive
Approach:       North Bound      South Bound        East Bound        West Bound
Movement:      L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0     0     0     0     0     0     0   730     0     0  1660     0
Growth Adj:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Initial Bse:    0     0     0     0     0     0     0   730     0     0  1660     0
Added Vol:      0     0     0     0     0    21     0   235     0     0    29   174
PasserByVol:    0     0     0     0     0     0     0     0     0     0     0     0
Initial Fut:    0     0     0     0     0    21     0   965     0     0  1689   174
User Adj:    1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Volume:     0     0     0     0     0    21     0   965     0     0  1689   174
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
FinalVolume:    0     0     0     0     0    21     0   965     0     0  1689   174
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx xxxxx xxxx   6.9 xxxxx xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx xxxxx xxxx   3.3 xxxxx xxxx xxxxx xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx  xxxx xxxx   932  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx  xxxx xxxx   272  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx xxxxx  xxxx xxxx   272  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  xxxx  xxxx xxxx  0.08  xxxx xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx   0.2  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx  19.3 xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *    *     *     *    *     C     *    *     *     *    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    *     *     *    *     *     *    *     *
ApproachDel:    xxxxxx            19.3          xxxxxx            xxxxxx
ApproachLOS:         *               C               *                 *
Note: Queue reported is the number of cars per lane.
```

Peak Hour Delay Signal Warrant Report

```
*******************************************************************************
Intersection #10 Avenue A (Future Driveway) / Tasman Drive
*******************************************************************************
Future Volume Alternative: Peak Hour Warrant NOT Met
```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```
------------|---------------||---------------||---------------||---------------|
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Lanes:        0  0  0  0  0    0  0  0  0  1    0  0  2  0  0    0  0  1  1  0
Initial Vol:    0     0     0     0     0    21     0  965     0     0 1689   174
ApproachDel:    xxxxxx              19.3            xxxxxx           xxxxxx
------------|---------------||---------------||---------------||---------------|
Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.1]
   FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=21]
   FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=2849]
   SUCCEED - Total volume greater than or equal to 650 for intersection
             with less than four approaches.
--------------------------------------------------------------------------------
SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an
"indicator" of the likelihood of an unsignalized intersection warranting
a traffic signal in the future.  Intersections that exceed this warrant
are probably more likely to meet one or more of the other volume based
signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace
a rigorous and complete traffic signal warrant analysis by the responsible
jurisdiction.  Consideration of the other signal warrants, which is beyond
the scope of this software, may yield different results.
                 Peak Hour Volume Signal Warrant Report [Urban]
********************************************************************************
Intersection #10 Avenue A (Future Driveway) / Tasman Drive
********************************************************************************
Future Volume Alternative: Peak Hour Warrant NOT Met
------------|---------------||---------------||---------------||---------------|
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Lanes:        0  0  0  0  0    0  0  0  0  1    0  0  2  0  0    0  0  1  1  0
Initial Vol:    0     0     0     0     0    21     0  965     0     0 1689   174
------------|---------------||---------------||---------------||---------------|
Major Street Volume:              2828
Minor Approach Volume:            21
Minor Approach Volume Threshold: -73 [less than minimum of 100]
--------------------------------------------------------------------------------
SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an
"indicator" of the likelihood of an unsignalized intersection warranting
a traffic signal in the future.  Intersections that exceed this warrant
are probably more likely to meet one or more of the other volume based
signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace
a rigorous and complete traffic signal warrant analysis by the responsible
jurisdiction.  Consideration of the other signal warrants, which is beyond
the scope of this software, may yield different results.
```


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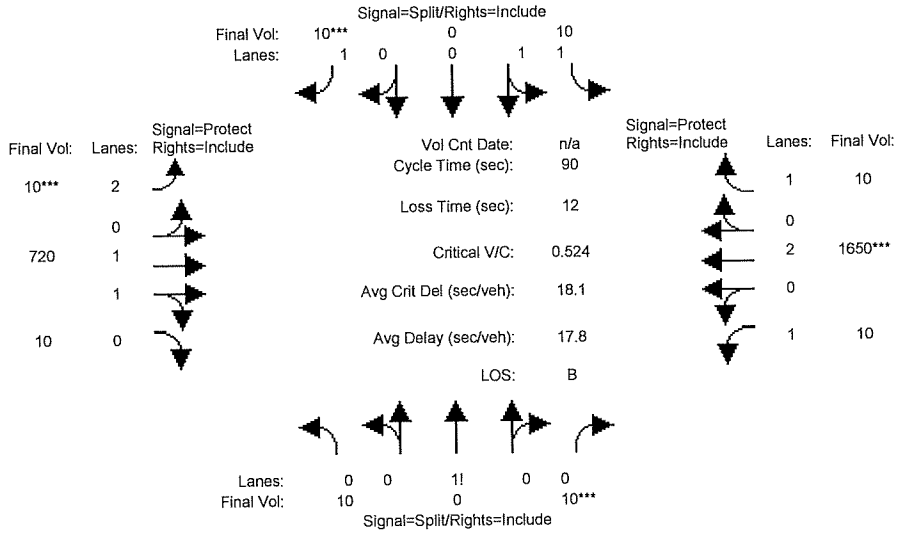
Santa Clara City Place
Phase 1 DAP Traffic Analysis January 2020
Background Conditions

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background No Project AM

Intersection #11: Centennial Boulevard / Tasman Drive



Street Name:	Centennial Boulevard						Tasman Drive					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	10	0	10	10	0	10	10	720	10	10	1650	10
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	10	0	10	10	0	10	10	720	10	10	1650	10
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	10	0	10	10	0	10	10	720	10	10	1650	10
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	10	0	10	10	0	10	10	720	10	10	1650	10
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	10	0	10	10	0	10	10	720	10	10	1650	10
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	10	0	10	10	0	10	10	720	10	10	1650	10
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.92	0.92	0.93	1.00	0.92	0.83	0.97	0.95	0.92	1.00	0.92
Lanes:	0.50	0.00	0.50	2.00	0.00	1.00	2.00	1.97	0.03	1.00	2.00	1.00
Final Sat.:	875	0	875	3550	0	1750	3150	3649	51	1750	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.01	0.00	0.01	0.00	0.00	0.01	0.00	0.20	0.20	0.01	0.43	0.01
Crit Moves:			****			****	****				****	
Green Time:	10.0	0.0	10.0	10.0	0.0	10.0	7.0	41.6	41.6	16.4	51.0	51.0
Volume/Cap:	0.10	0.00	0.10	0.03	0.00	0.05	0.04	0.43	0.43	0.03	0.77	0.01
Delay/Veh:	37.0	0.0	37.0	35.8	0.0	36.3	38.7	17.0	17.0	30.5	17.6	8.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	37.0	0.0	37.0	35.8	0.0	36.3	38.7	17.0	17.0	30.5	17.6	8.5
LOS by Move:	D	A	D	D	A	D	D	B	B	C	B	A
HCM2k95thQ:	1	0	1	0	0	1	0	13	13	1	29	0

Note: Queue reported is the number of cars per lane.

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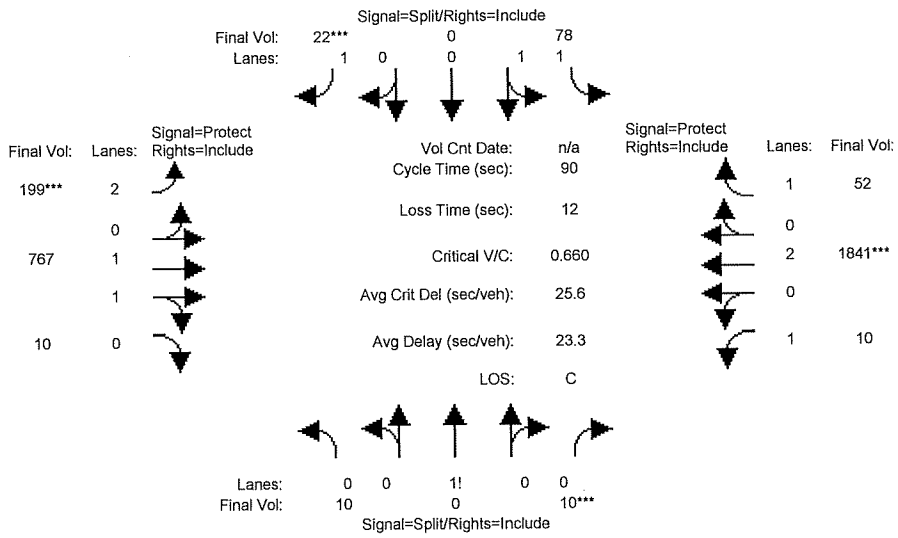
Santa Clara City Place
Phase 1 DAP Traffic Analysis January 2020
Background Conditions

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background Plus Project AM

Intersection #11: Centennial Boulevard / Tasman Drive



Street Name:	Centennial Boulevard						Tasman Drive					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	10	0	10	10	0	10	10	720	10	10	1650	10
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	10	0	10	10	0	10	10	720	10	10	1650	10
Added Vol:	0	0	0	68	0	12	189	47	0	0	191	42
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	10	0	10	78	0	22	199	767	10	10	1841	52
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	10	0	10	78	0	22	199	767	10	10	1841	52
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	10	0	10	78	0	22	199	767	10	10	1841	52
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	10	0	10	78	0	22	199	767	10	10	1841	52
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.92	0.92	0.93	1.00	0.92	0.83	0.97	0.95	0.92	1.00	0.92
Lanes:	0.50	0.00	0.50	2.00	0.00	1.00	2.00	1.97	0.03	1.00	2.00	1.00
Final Sat.:	875	0	875	3550	0	1750	3150	3652	48	1750	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.01	0.00	0.01	0.02	0.00	0.01	0.06	0.21	0.21	0.01	0.48	0.03
Crit Moves:			****			****	****				****	
Green Time:	10.0	0.0	10.0	10.0	0.0	10.0	7.0	42.3	42.3	15.7	51.0	51.0
Volume/Cap:	0.10	0.00	0.10	0.20	0.00	0.11	0.81	0.45	0.45	0.03	0.85	0.05
Delay/Veh:	37.0	0.0	37.0	37.5	0.0	37.2	65.5	16.8	16.8	31.1	21.0	8.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	37.0	0.0	37.0	37.5	0.0	37.2	65.5	16.8	16.8	31.1	21.0	8.8
LOS by Move:	D	A	D	D	A	D	E	B	B	C	C	A
HCM2k95thQ:	1	0	1	3	0	1	8	14	14	1	36	2

Note: Queue reported is the number of cars per lane.

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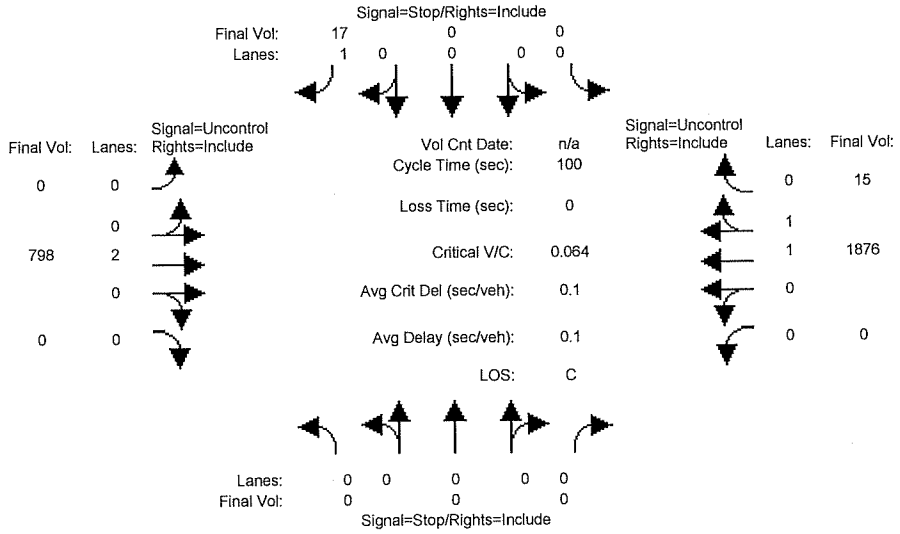
Santa Clara City Place
Phase 1 DAP Traffic Analysis January 2020
Background Conditions

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Background Plus Project AM

Intersection #12: Avenue C / Tasman Drive




```
Street Name:              Avenue C                          Tasman Drive
Approach:       North Bound       South Bound       East Bound       West Bound
Movement:     L  -  T  -  R     L  -  T  -  R     L  -  T  -  R     L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0     0     0     0     0     0     0   730     0     0  1660     0
Growth Adj:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Initial Bse:    0     0     0     0     0     0     0   730     0     0  1660     0
Added Vol:      0     0     0     0     0    17     0    68     0     0   216    15
PasserByVol:    0     0     0     0     0     0     0     0     0     0     0     0
Initial Fut:    0     0     0     0     0    17     0   798     0     0  1876    15
User Adj:    1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Volume:     0     0     0     0     0    17     0   798     0     0  1876    15
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
FinalVolume:    0     0     0     0     0    17     0   798     0     0  1876    15
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx xxxxx xxxx   6.9 xxxxx xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx xxxxx xxxx   3.3 xxxxx xxxx xxxxx xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx  xxxx xxxx   946  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx  xxxx xxxx   266  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx xxxxx  xxxx xxxx   266  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  xxxx  xxxx xxxx  0.06  xxxx xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx   0.2  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx  19.4 xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *    *     *     *    *     C     *    *     *     *    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    *     *     *    *     *     *    *     *
ApproachDel:    xxxxxx            19.4          xxxxxx          xxxxxx
ApproachLOS:         *              C                *               *
Note: Queue reported is the number of cars per lane.
```

Peak Hour Delay Signal Warrant Report

```
*******************************************************************************
Intersection #12 Avenue C / Tasman Drive
*******************************************************************************
Future Volume Alternative: Peak Hour Warrant NOT Met
```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```
------------|---------------||---------------||---------------||---------------|
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Lanes:        0  0  0  0  0    0  0  0  0  1    0  0  2  0  0    0  0  1  1  0
Initial Vol:    0     0     0     0     0    17     0  798     0     0 1876    15
ApproachDel:    xxxxxx              19.4           xxxxxx           xxxxxx
------------|---------------||---------------||---------------||---------------|
Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.1]
   FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=17]
   FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=2706]
   SUCCEED - Total volume greater than or equal to 650 for intersection
             with less than four approaches.
--------------------------------------------------------------------------------
SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an
"indicator" of the likelihood of an unsignalized intersection warranting
a traffic signal in the future.  Intersections that exceed this warrant
are probably more likely to meet one or more of the other volume based
signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace
a rigorous and complete traffic signal warrant analysis by the responsible
jurisdiction.  Consideration of the other signal warrants, which is beyond
the scope of this software, may yield different results.
                 Peak Hour Volume Signal Warrant Report [Urban]
********************************************************************************
Intersection #12 Avenue C / Tasman Drive
********************************************************************************
Future Volume Alternative: Peak Hour Warrant NOT Met
------------|---------------||---------------||---------------||---------------|
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Lanes:        0  0  0  0  0    0  0  0  0  1    0  0  2  0  0    0  0  1  1  0
Initial Vol:    0     0     0     0     0    17     0  798     0     0 1876    15
------------|---------------||---------------||---------------||---------------|
Major Street Volume:              2689
Minor Approach Volume:            17
Minor Approach Volume Threshold: -56 [less than minimum of 100]
--------------------------------------------------------------------------------
SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an
"indicator" of the likelihood of an unsignalized intersection warranting
a traffic signal in the future.  Intersections that exceed this warrant
are probably more likely to meet one or more of the other volume based
signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace
a rigorous and complete traffic signal warrant analysis by the responsible
jurisdiction.  Consideration of the other signal warrants, which is beyond
the scope of this software, may yield different results.
```


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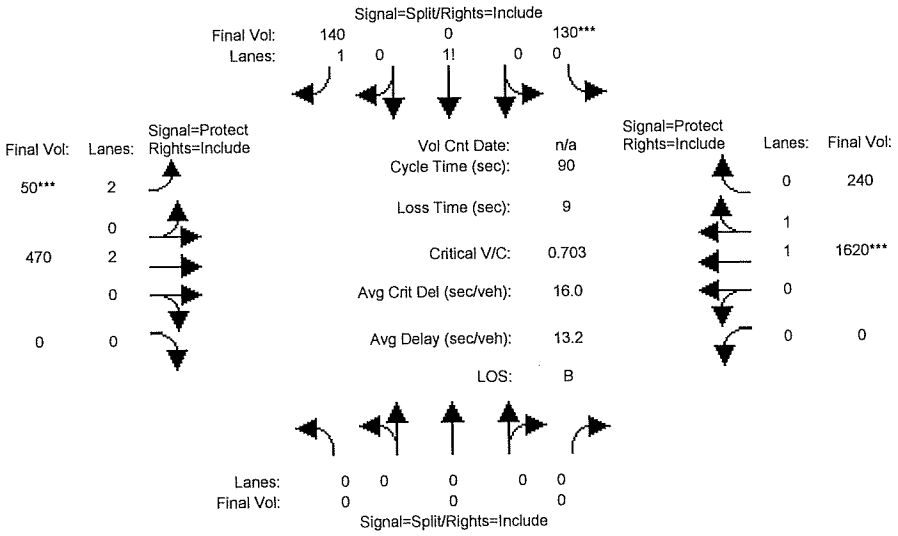
Santa Clara City Place
Phase 1 DAP Traffic Analysis January 2020
Background Conditions

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background No Project AM

Intersection #13: Calle Del Sol / Tasman Drive



Street Name:	Calle Del Sol						Tasman Drive					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	10	0	10	7	10	0	0	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	0	0	0	130	0	140	50	470	0	0	1620	240
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	130	0	140	50	470	0	0	1620	240
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	130	0	140	50	470	0	0	1620	240
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	130	0	140	50	470	0	0	1620	240
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	130	0	140	50	470	0	0	1620	240
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	130	0	140	50	470	0	0	1620	240
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.83	1.00	0.92	0.92	0.98	0.95
Lanes:	0.00	0.00	0.00	0.65	0.00	1.35	2.00	2.00	0.00	0.00	1.73	0.27
Final Sat.:	0	0	0	1138	0	2363	3150	3800	0	0	3222	477
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.11	0.00	0.06	0.02	0.12	0.00	0.00	0.50	0.50
Crit Moves:				****			****				****	
Green Time:	0.0	0.0	0.0	13.7	0.0	13.7	7.0	67.3	0.0	0.0	60.3	60.3
Volume/Cap:	0.00	0.00	0.00	0.75	0.00	0.39	0.20	0.17	0.00	0.00	0.75	0.75
Delay/Veh:	0.0	0.0	0.0	45.0	0.0	34.7	39.3	3.3	0.0	0.0	11.2	11.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	45.0	0.0	34.7	39.3	3.3	0.0	0.0	11.2	11.2
LOS by Move:	A	A	A	D	A	C	D	A	A	A	B	B
HCM2k95thQ:	0	0	0	14	0	6	2	4	0	0	29	29

Note: Queue reported is the number of cars per lane.

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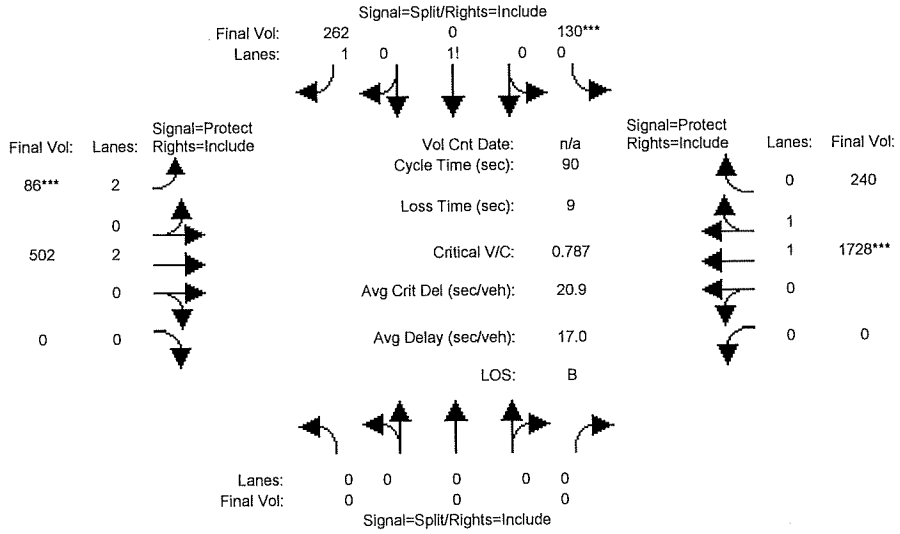
Santa Clara City Place
Phase 1 DAP Traffic Analysis January 2020
Background Conditions

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background Plus Project AM

Intersection #13: Calle Del Sol / Tasman Drive



Street Name:	Calle Del Sol						Tasman Drive					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	10	0	10	7	10	0	0	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	0	0	0	130	0	140	50	470	0	0	1620	240
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	130	0	140	50	470	0	0	1620	240
Added Vol:	0	0	0	0	0	122	36	32	0	0	108	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	130	0	262	86	502	0	0	1728	240
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	130	0	262	86	502	0	0	1728	240
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	130	0	262	86	502	0	0	1728	240
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	130	0	262	86	502	0	0	1728	240
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.83	1.00	0.92	0.92	0.98	0.95
Lanes:	0.00	0.00	0.00	0.50	0.00	1.50	2.00	2.00	0.00	0.00	1.75	0.25
Final Sat.:	0	0	0	872	0	2628	3150	3800	0	0	3248	451
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.15	0.00	0.10	0.03	0.13	0.00	0.00	0.53	0.53
Crit Moves:				****			****				****	
Green Time:	0.0	0.0	0.0	16.2	0.0	16.2	7.0	64.8	0.0	0.0	57.8	57.8
Volume/Cap:	0.00	0.00	0.00	0.83	0.00	0.55	0.35	0.18	0.00	0.00	0.83	0.83
Delay/Veh:	0.0	0.0	0.0	47.1	0.0	34.6	40.2	4.1	0.0	0.0	14.9	14.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	47.1	0.0	34.6	40.2	4.1	0.0	0.0	14.9	14.9
LOS by Move:	A	A	A	D	A	C	D	A	A	A	B	B
HCM2k95thQ:	0	0	0	19	0	11	3	4	0	0	35	35

Note: Queue reported is the number of cars per lane.

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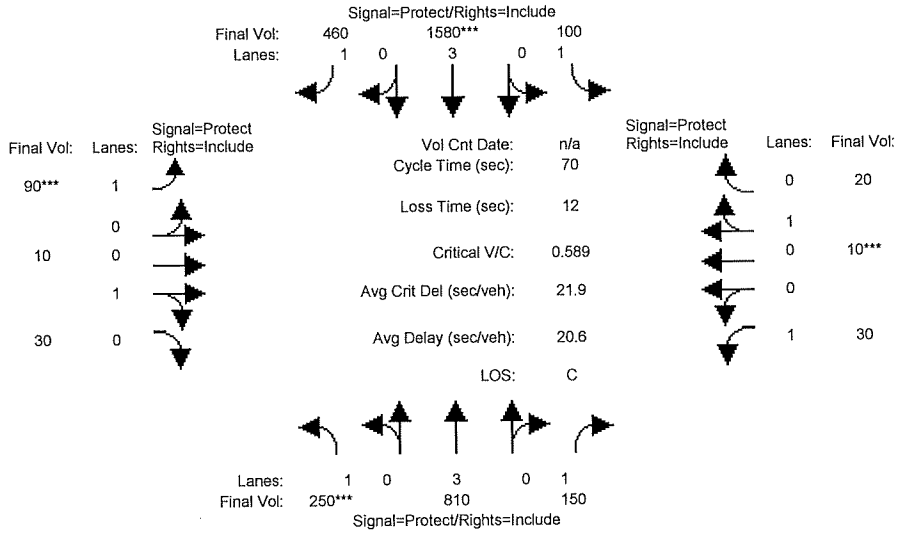
Santa Clara City Place
Phase 1 DAP Traffic Analysis January 2020
Background Conditions

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background No Project AM

Intersection #60: Great America Parkway / Old Mountain View-Alviso Road



Street Name:	Great America Parkway						Old Mountain View-Alviso Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	250	810	150	100	1580	460	90	10	30	30	10	20
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	250	810	150	100	1580	460	90	10	30	30	10	20
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	250	810	150	100	1580	460	90	10	30	30	10	20
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	250	810	150	100	1580	460	90	10	30	30	10	20
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	250	810	150	100	1580	460	90	10	30	30	10	20
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	250	810	150	100	1580	460	90	10	30	30	10	20
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.92	0.95	0.95	0.92	0.95	0.95
Lanes:	1.00	3.00	1.00	1.00	3.00	1.00	1.00	0.25	0.75	1.00	0.33	0.67
Final Sat.:	1750	5700	1750	1750	5700	1750	1750	450	1350	1750	600	1200
Capacity Analysis Module:												
Vol/Sat:	0.14	0.14	0.09	0.06	0.28	0.26	0.05	0.02	0.02	0.02	0.02	0.02
Crit Moves:	****				****		****				****	
Green Time:	13.9	24.1	24.1	16.9	27.1	27.1	7.0	10.0	10.0	7.0	10.0	10.0
Volume/Cap:	0.72	0.41	0.25	0.24	0.72	0.68	0.51	0.16	0.16	0.17	0.12	0.12
Delay/Veh:	33.2	17.7	16.7	21.7	19.4	20.7	32.5	26.6	26.6	29.3	26.4	26.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	33.2	17.7	16.7	21.7	19.4	20.7	32.5	26.6	26.6	29.3	26.4	26.4
LOS by Move:	C	B	B	C	B	C	C	C	C	C	C	C
HCM2k95thQ:	11	9	5	4	17	16	6	2	2	2	1	1

Note: Queue reported is the number of cars per lane.

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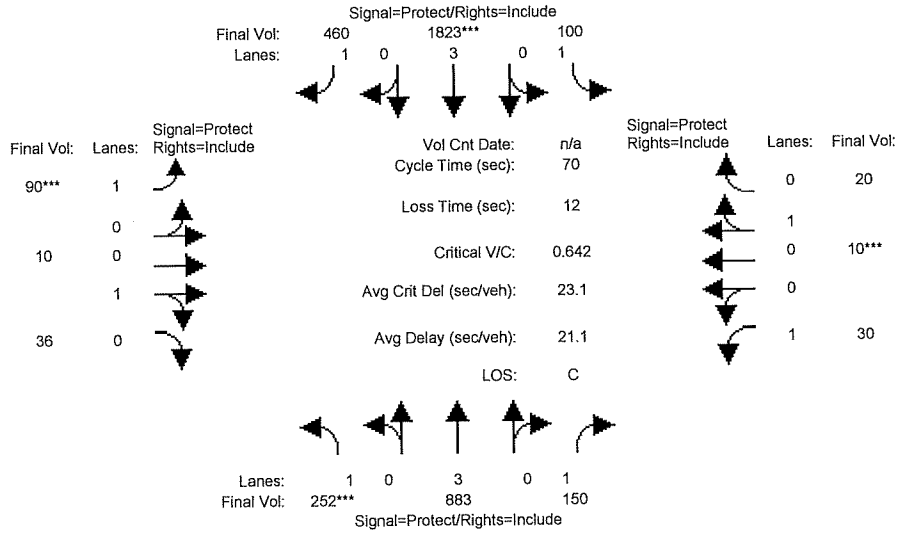
Santa Clara City Place
Phase 1 DAP Traffic Analysis January 2020
Background Conditions

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background Plus Project AM

Intersection #60: Great America Parkway / Old Mountain View-Alviso Road



Street Name:	Great America Parkway						Old Mountain View-Alviso Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	250	810	150	100	1580	460	90	10	30	30	10	20
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	250	810	150	100	1580	460	90	10	30	30	10	20
Added Vol:	2	73	0	0	243	0	0	0	6	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	252	883	150	100	1823	460	90	10	36	30	10	20
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	252	883	150	100	1823	460	90	10	36	30	10	20
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	252	883	150	100	1823	460	90	10	36	30	10	20
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	252	883	150	100	1823	460	90	10	36	30	10	20
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.92	0.95	0.95	0.92	0.95	0.95
Lanes:	1.00	3.00	1.00	1.00	3.00	1.00	1.00	0.22	0.78	1.00	0.33	0.67
Final Sat.:	1750	5700	1750	1750	5700	1750	1750	391	1409	1750	600	1200
Capacity Analysis Module:												
Vol/Sat:	0.14	0.15	0.09	0.06	0.32	0.26	0.05	0.03	0.03	0.02	0.02	0.02
Crit Moves:	****				****		****				****	
Green Time:	12.7	24.9	24.9	16.1	28.3	28.3	7.0	10.0	10.0	7.0	10.0	10.0
Volume/Cap:	0.79	0.44	0.24	0.25	0.79	0.65	0.51	0.18	0.18	0.17	0.12	0.12
Delay/Veh:	40.0	17.3	16.1	22.3	20.2	19.0	32.5	26.7	26.7	29.3	26.4	26.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	40.0	17.3	16.1	22.3	20.2	19.0	32.5	26.7	26.7	29.3	26.4	26.4
LOS by Move:	D	B	B	C	C	B	C	C	C	C	C	C
HCM2k95thQ:	12	9	5	4	20	16	6	2	2	2	1	1

Note: Queue reported is the number of cars per lane.

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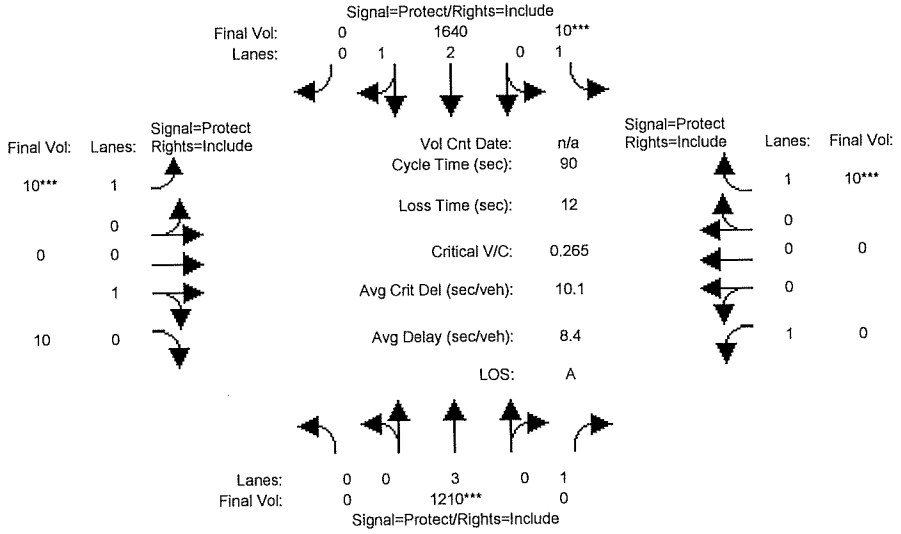
Santa Clara City Place
Phase 1 DAP Traffic Analysis January 2020
Background Conditions

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background No Project AM

Intersection #61: Great America Parkway / City Place Parkway (Future Driveway)



Street Name:	Greate America Parkway						City Place Parkway (Future Drivew					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	10	10	7	10	0	7	0	10	7	0	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	0	1210	0	10	1640	0	10	0	10	0	0	10
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	1210	0	10	1640	0	10	0	10	0	0	10
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	1210	0	10	1640	0	10	0	10	0	0	10
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	1210	0	10	1640	0	10	0	10	0	0	10
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1210	0	10	1640	0	10	0	10	0	0	10
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	1210	0	10	1640	0	10	0	10	0	0	10
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	0.98	0.92	0.92	1.00	0.95	0.92	1.00	0.92
Lanes:	0.00	3.00	1.00	1.00	3.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Final Sat.:	0	5700	1750	1750	5600	0	1750	0	1800	1750	0	1750
Capacity Analysis Module:												
Vol/Sat:	0.00	0.21	0.00	0.01	0.29	0.00	0.01	0.00	0.01	0.00	0.00	0.01
Crit Moves:		****		****			****					****
Green Time:	0.0	54.0	0.0	7.0	61.0	0.0	7.0	0.0	17.0	0.0	0.0	10.0
Volume/Cap:	0.00	0.35	0.00	0.07	0.43	0.00	0.07	0.00	0.03	0.00	0.00	0.05
Delay/Veh:	0.0	9.4	0.0	39.5	7.0	0.0	39.5	0.0	29.9	0.0	0.0	36.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	9.4	0.0	39.5	7.0	0.0	39.5	0.0	29.9	0.0	0.0	36.3
LOS by Move:	A	A	A	D	A	A	D	A	C	A	A	D
HCM2k95thQ:	0	11	0	1	13	0	1	0	1	0	0	1

Note: Queue reported is the number of cars per lane.

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Santa Clara City Place
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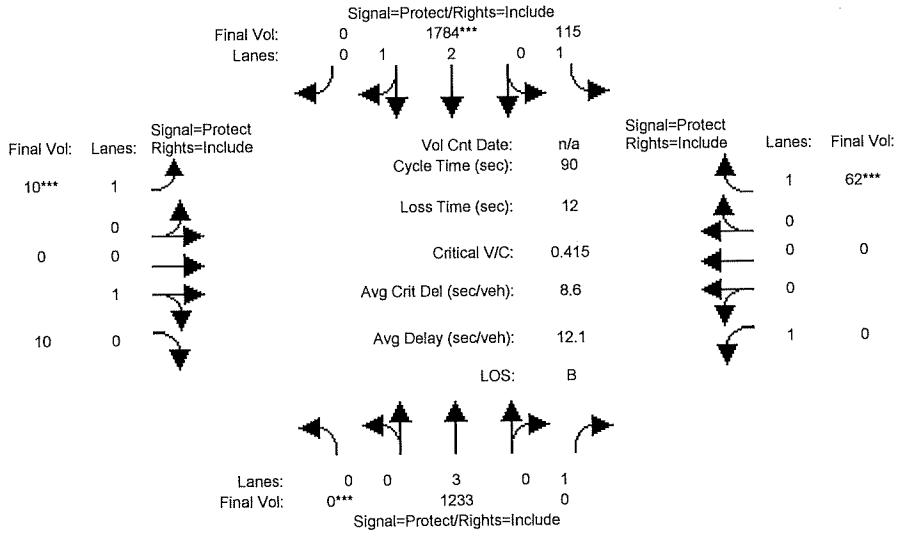
Background Conditions

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background Plus Project AM

Intersection #61: Great America Parkway / City Place Parkway (Future Driveway)



Street Name:	Greate America Parkway						City Place Parkway (Future Drivew					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	10	10	7	10	0	7	0	10	7	0	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	0	1210	0	10	1640	0	10	0	10	0	0	10
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	1210	0	10	1640	0	10	0	10	0	0	10
Added Vol:	0	23	0	105	144	0	0	0	0	0	0	52
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	1233	0	115	1784	0	10	0	10	0	0	62
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	1233	0	115	1784	0	10	0	10	0	0	62
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1233	0	115	1784	0	10	0	10	0	0	62
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	1233	0	115	1784	0	10	0	10	0	0	62
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	0.98	0.92	0.92	1.00	0.95	0.92	1.00	0.92
Lanes:	0.00	3.00	1.00	1.00	3.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Final Sat.:	0	5700	1750	1750	5600	0	1750	0	1800	1750	0	1750
Capacity Analysis Module:												
Vol/Sat:	0.00	0.22	0.00	0.07	0.32	0.00	0.01	0.00	0.01	0.00	0.00	0.04
Crit Moves:	****				****		****					****
Green Time:	0.0	44.9	0.0	16.1	61.0	0.0	7.0	0.0	17.0	0.0	0.0	10.0
Volume/Cap:	0.00	0.43	0.00	0.37	0.47	0.00	0.07	0.00	0.03	0.00	0.00	0.32
Delay/Veh:	0.0	14.9	0.0	35.7	7.3	0.0	39.5	0.0	29.9	0.0	0.0	41.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	14.9	0.0	35.7	7.3	0.0	39.5	0.0	29.9	0.0	0.0	41.1
LOS by Move:	A	B	A	D	A	A	D	A	C	A	A	D
HCM2k95thQ:	0	13	0	6	14	0	1	0	1	0	0	5

Note: Queue reported is the number of cars per lane.

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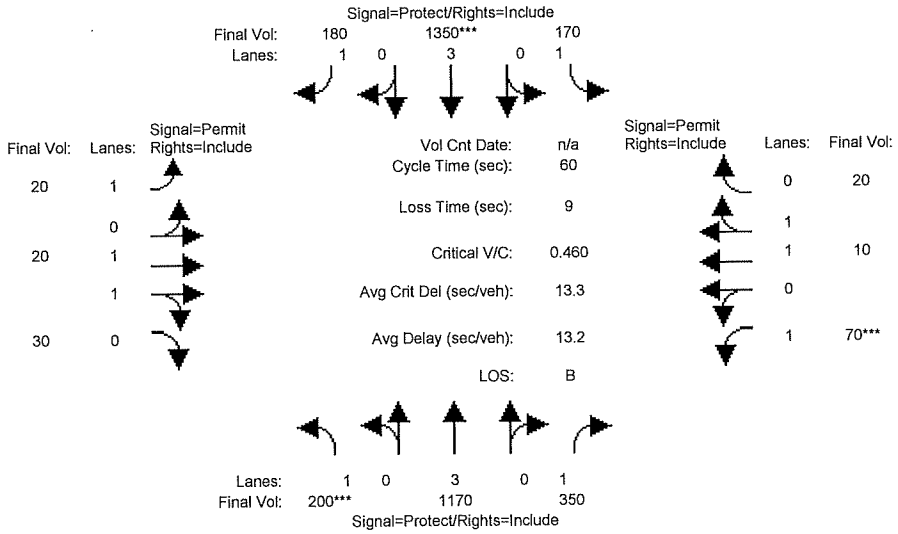
Background No Project AM

Intersection #63: Great America Parkway/Bunker Hill Lane



Street Name:	Great America Parkway						Bunker Hill Lane					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	10	10	10	10	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	200	1170	350	170	1350	180	20	20	30	70	10	20
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	200	1170	350	170	1350	180	20	20	30	70	10	20
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	200	1170	350	170	1350	180	20	20	30	70	10	20
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	200	1170	350	170	1350	180	20	20	30	70	10	20
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	200	1170	350	170	1350	180	20	20	30	70	10	20
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	200	1170	350	170	1350	180	20	20	30	70	10	20
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	1.00	3.00	1.00	1.00	3.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1750	5700	1750	1750	5700	1750	1750	1900	1750	1750	1900	1750
Capacity Analysis Module:												
Vol/Sat:	0.11	0.21	0.20	0.10	0.24	0.10	0.01	0.01	0.02	0.04	0.01	0.01
Crit Moves:	****				****					****		
Green Time:	13.3	26.1	26.1	14.9	27.7	27.7	10.0	10.0	10.0	10.0	10.0	10.0
Volume/Cap:	0.51	0.47	0.46	0.39	0.51	0.22	0.07	0.06	0.10	0.24	0.03	0.07
Delay/Veh:	21.7	12.2	12.4	19.4	11.6	9.9	21.2	21.1	21.3	22.1	21.0	21.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	21.7	12.2	12.4	19.4	11.6	9.9	21.2	21.1	21.3	22.1	21.0	21.1
LOS by Move:	C	B	B	B	B	A	C	C	C	C	C	C
HCM2k95thQ:	7	9	9	6	11	4	1	1	1	3	0	1

Note: Queue reported is the number of cars per lane.

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Santa Clara City Place
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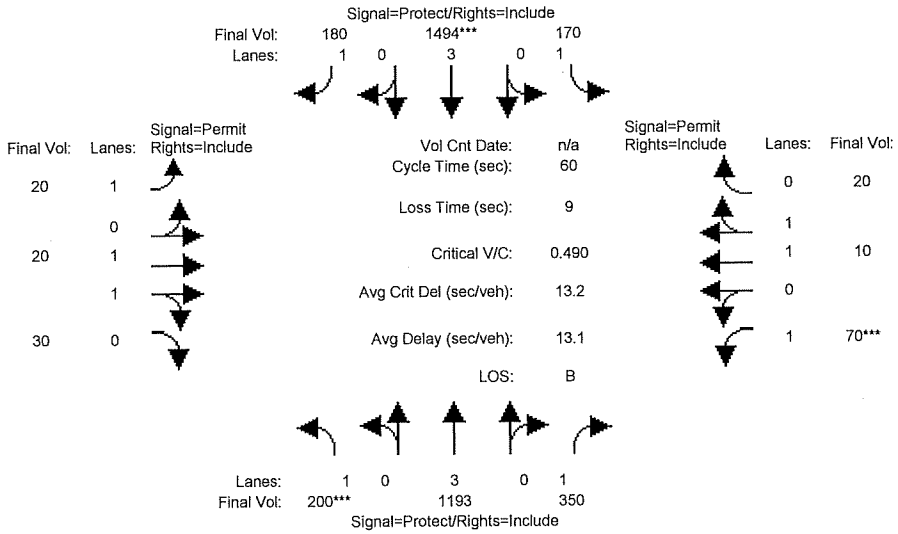
Background Plus Project AM

Intersection #63: Great America Parkway/Bunker Hill Lane



Street Name:	Great America Parkway						Bunker Hill Lane					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	10	10	10	10	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	200	1170	350	170	1350	180	20	20	30	70	10	20
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	200	1170	350	170	1350	180	20	20	30	70	10	20
Added Vol:	0	23	0	0	144	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	200	1193	350	170	1494	180	20	20	30	70	10	20
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	200	1193	350	170	1494	180	20	20	30	70	10	20
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	200	1193	350	170	1494	180	20	20	30	70	10	20
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	200	1193	350	170	1494	180	20	20	30	70	10	20
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	1.00	3.00	1.00	1.00	3.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1750	5700	1750	1750	5700	1750	1750	1900	1750	1750	1900	1750
Capacity Analysis Module:												
Vol/Sat:	0.11	0.21	0.20	0.10	0.26	0.10	0.01	0.01	0.02	0.04	0.01	0.01
Crit Moves:	****				****					****		
Green Time:	12.4	26.3	26.3	14.7	28.6	28.6	10.0	10.0	10.0	10.0	10.0	10.0
Volume/Cap:	0.55	0.48	0.46	0.40	0.55	0.22	0.07	0.06	0.10	0.24	0.03	0.07
Delay/Veh:	23.1	12.1	12.2	19.6	11.4	9.3	21.2	21.1	21.3	22.1	21.0	21.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	23.1	12.1	12.2	19.6	11.4	9.3	21.2	21.1	21.3	22.1	21.0	21.1
LOS by Move:	C	B	B	B	B	A	C	C	C	C	C	C
HCM2k95thQ:	7	10	9	6	12	4	1	1	1	3	0	1

Note: Queue reported is the number of cars per lane.

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Santa Clara City Place
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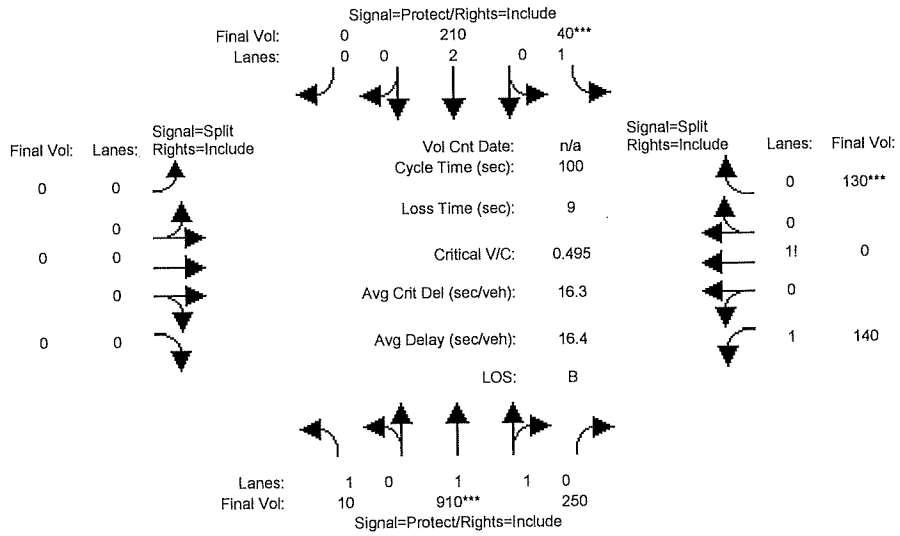
Background No Project AM

Intersection #90: Laffeyette Street / Calle De Luna



Street Name:	Lafayette Street						Calle De Luna					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	10	910	250	40	210	0	0	0	0	140	0	130
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	10	910	250	40	210	0	0	0	0	140	0	130
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	10	910	250	40	210	0	0	0	0	140	0	130
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	10	910	250	40	210	0	0	0	0	140	0	130
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	10	910	250	40	210	0	0	0	0	140	0	130
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	10	910	250	40	210	0	0	0	0	140	0	130
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.98	0.95	0.92	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	1.00	1.56	0.44	1.00	2.00	0.00	0.00	0.00	0.00	1.35	0.00	0.65
Final Sat.:	1750	2902	797	1750	3800	0	0	0	0	2363	0	1138
Capacity Analysis Module:												
Vol/Sat:	0.01	0.31	0.31	0.02	0.06	0.00	0.00	0.00	0.00	0.06	0.00	0.11
Crit Moves:		****		****								****
Green Time:	28.2	61.6	61.6	7.0	40.3	0.0	0.0	0.0	0.0	22.4	0.0	22.4
Volume/Cap:	0.02	0.51	0.51	0.33	0.14	0.00	0.00	0.00	0.00	0.26	0.00	0.51
Delay/Veh:	25.9	11.0	11.0	45.8	18.9	0.0	0.0	0.0	0.0	32.1	0.0	34.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	25.9	11.0	11.0	45.8	18.9	0.0	0.0	0.0	0.0	32.1	0.0	34.8
LOS by Move:	C	B	B	D	B	A	A	A	A	C	A	C
HCM2k95thQ:	0	19	19	3	4	0	0	0	0	6	0	12

Note: Queue reported is the number of cars per lane.

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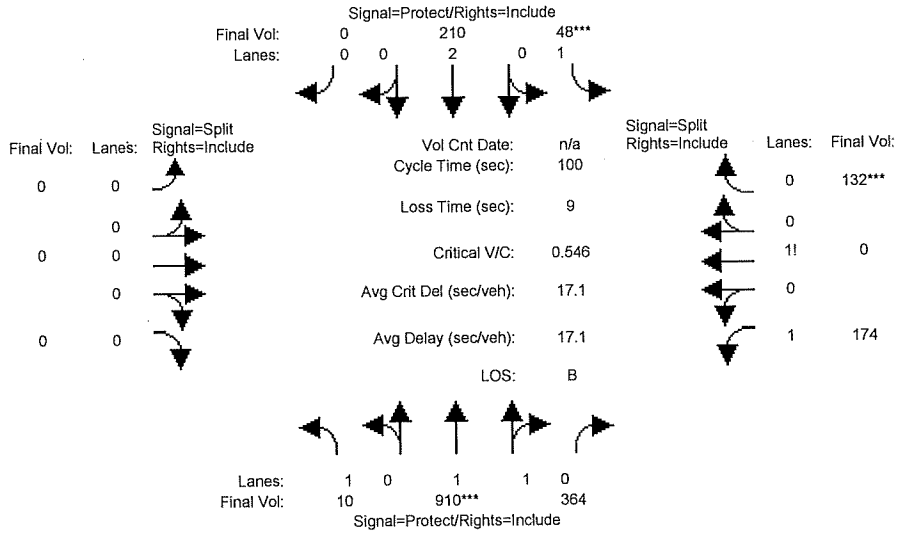
Intersection #90: Laffeyette Street / Calle De Luna



Street Name:	Lafayette Street						Calle De Luna					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	10	910	250	40	210	0	0	0	0	140	0	130
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	10	910	250	40	210	0	0	0	0	140	0	130
Added Vol:	0	0	114	8	0	0	0	0	0	34	0	2
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	10	910	364	48	210	0	0	0	0	174	0	132
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	10	910	364	48	210	0	0	0	0	174	0	132
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	10	910	364	48	210	0	0	0	0	174	0	132
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	10	910	364	48	210	0	0	0	0	174	0	132
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.98	0.95	0.92	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	1.00	1.41	0.59	1.00	2.00	0.00	0.00	0.00	0.00	1.40	0.00	0.60
Final Sat.:	1750	2642	1057	1750	3800	0	0	0	0	2445	0	1055
Capacity Analysis Module:												
Vol/Sat:	0.01	0.34	0.34	0.03	0.06	0.00	0.00	0.00	0.00	0.07	0.00	0.13
Crit Moves:		****		****								****
Green Time:	28.3	61.6	61.6	7.0	40.4	0.0	0.0	0.0	0.0	22.4	0.0	22.4
Volume/Cap:	0.02	0.56	0.56	0.39	0.14	0.00	0.00	0.00	0.00	0.32	0.00	0.56
Delay/Veh:	25.9	11.6	11.6	46.5	18.9	0.0	0.0	0.0	0.0	32.6	0.0	35.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	25.9	11.6	11.6	46.5	18.9	0.0	0.0	0.0	0.0	32.6	0.0	35.7
LOS by Move:	C	B	B	D	B	A	A	A	A	C	A	D
HCM2k95thQ:	0	22	22	4	4	0	0	0	0	7	0	13

Note: Queue reported is the number of cars per lane.

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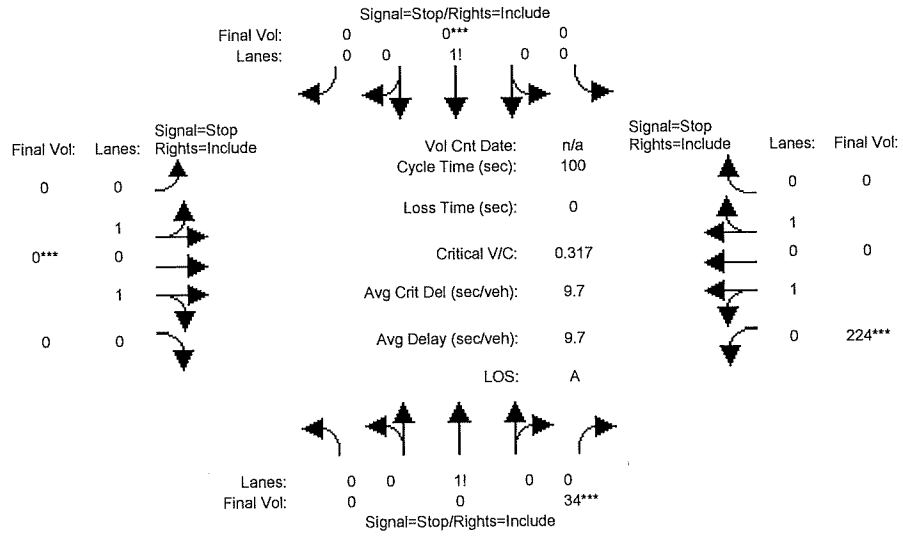
Santa Clara City Place
Phase 1 DAP Traffic Analysis January 2020
Background Conditions

Level Of Service Computation Report
2000 HCM 4-Way Stop (Future Volume Alternative)
Background Plus Project AM

Intersection #1002: Stars and Stripes Drive / Avenue A



Street Name:	Stars and Stripes Drive						Avenue A					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Volume Module:												
Base Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	0	0	0	0	0	0	0	0	0
Added Vol:	0	0	34	0	0	0	0	0	0	224	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	34	0	0	0	0	0	0	224	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	34	0	0	0	0	0	0	224	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	34	0	0	0	0	0	0	224	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	34	0	0	0	0	0	0	224	0	0
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	1.00	0.00	1.00	0.00	0.00	2.00	0.00	1.00	1.00	0.00
Final Sat.:	0	0	880	0	760	0	0	1507	0	708	785	0
Capacity Analysis Module:												
Vol/Sat:	xxxx	xxxx	0.04	xxxx	0.00	xxxx	xxxx	0.00	xxxx	0.32	0.00	xxxx
Crit Moves:			****		****			****		****		
Delay/Veh:	0.0	0.0	7.0	0.0	0.0	0.0	0.0	0.0	0.0	10.1	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	7.0	0.0	0.0	0.0	0.0	0.0	0.0	10.1	0.0	0.0
LOS by Move:	*	*	A	*	*	*	*	*	*	B	*	*
ApproachDel:		7.0			xxxxxx			xxxxxx			10.1	
Delay Adj:		1.00			xxxxx			xxxxx			1.00	
ApprAdjDel:		7.0			xxxxxx			xxxxxx			10.1	
LOS by Appr:		A			*			*			B	
AllWayAvgQ:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0

Note: Queue reported is the number of cars per lane.

Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #1002 Stars and Stripes Drive / Avenue A

****

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Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Stop Sign					Stop Sign				
Lanes:	0	0	0	0	1	0	0	1!	0	0	0	1	0	1	0	0	1	0	1	0
Initial Vol:	0		0		34	0		0		0	0		0		0	224		0		0

Major Street Volume: 224
Minor Approach Volume: 34
Minor Approach Volume Threshold: 800

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

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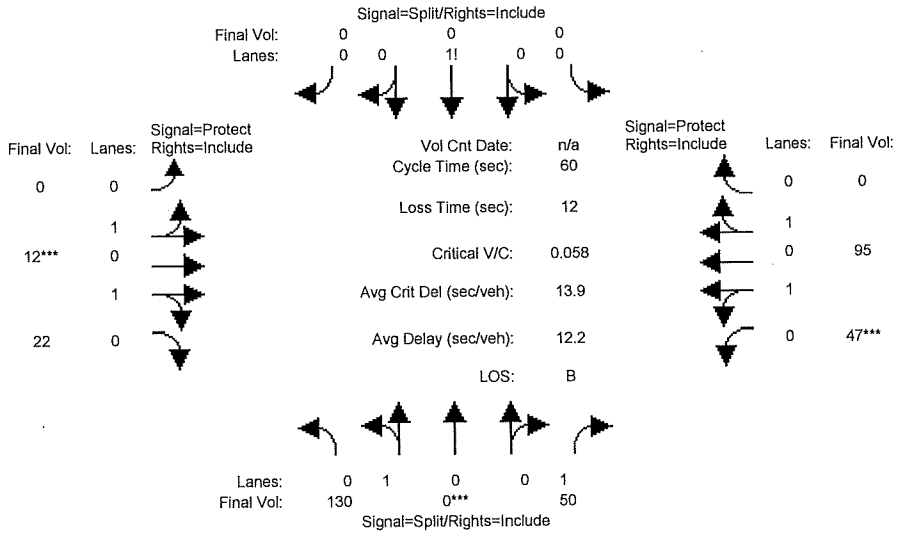
Santa Clara City Place
Phase 1 DAP Traffic Analysis January 2020
Background Conditions

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background Plus Project AM

Intersection #1003: Centennial Boulevard / Stars and Stripes Drive



Street Name:	Centennial Boulevard						Stars and Stripes Drive					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	0	0	20	0	0	0	0	0	0	20	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	20	0	0	0	0	0	0	20	0	0
Added Vol:	130	0	30	0	0	0	0	12	22	27	95	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	130	0	50	0	0	0	0	12	22	47	95	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	130	0	50	0	0	0	0	12	22	47	95	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	130	0	50	0	0	0	0	12	22	47	95	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	130	0	50	0	0	0	0	12	22	47	95	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.92	0.92	0.92	0.92	0.92	0.95	0.95	0.95	0.95	0.92
Lanes:	1.00	0.00	1.00	0.00	1.00	0.00	0.00	1.00	1.00	0.66	1.34	0.00
Final Sat.:	1800	0	1750	0	1750	0	0	1800	1800	1192	2408	0
Capacity Analysis Module:												
Vol/Sat:	0.07	0.00	0.03	0.00	0.00	0.00	0.00	0.01	0.01	0.04	0.04	0.00
Crit Moves:		****						****		****		
Green Time:	75.2	0.0	75.2	0.0	0.0	0.0	0.0	10.0	10.0	7.0	10.0	0.0
Volume/Cap:	0.06	0.00	0.02	0.00	0.00	0.00	0.00	0.04	0.07	0.34	0.24	0.00
Delay/Veh:	2.1	0.0	2.0	0.0	0.0	0.0	0.0	21.0	21.2	24.9	21.9	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	2.1	0.0	2.0	0.0	0.0	0.0	0.0	21.0	21.2	24.9	21.9	0.0
LOS by Move:	A	A	A	A	A	A	A	C	C	C	C	A
HCM2k95thQ:	0	0	0	0	0	0	0	0	1	3	3	0

Note: Queue reported is the number of cars per lane.

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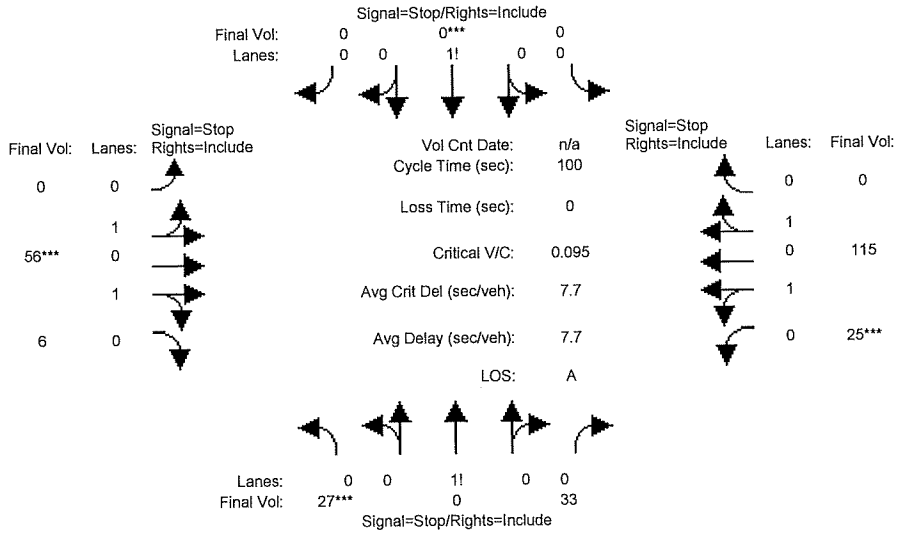
Santa Clara City Place
Phase 1 DAP Traffic Analysis January 2020
Background Conditions

Level Of Service Computation Report
2000 HCM 4-Way Stop (Future Volume Alternative)
Background Plus Project AM

Intersection #1004: Stars and Stripes Drive / Avenue B



Street Name:	Stars and Stripes Drive						Avenue B					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Volume Module:												
Base Vol:	0	0	0	0	0	0	0	20	0	0	20	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	0	0	0	0	20	0	0	20	0
Added Vol:	27	0	33	0	0	0	0	36	6	25	95	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	27	0	33	0	0	0	0	56	6	25	115	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	27	0	33	0	0	0	0	56	6	25	115	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	27	0	33	0	0	0	0	56	6	25	115	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	27	0	33	0	0	0	0	56	6	25	115	0
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.45	0.00	0.55	0.00	1.00	0.00	0.00	1.81	0.19	0.36	1.64	0.00
Final Sat.:	378	0	462	0	781	0	0	1373	149	262	1235	0
Capacity Analysis Module:												
Vol/Sat:	0.07	xxxx	0.07	xxxx	0.00	xxxx	xxxx	0.04	0.04	0.10	0.09	xxxx
Crit Moves:	****				****			****		****		
Delay/Veh:	7.4	0.0	7.4	0.0	0.0	0.0	0.0	7.6	7.5	8.1	7.9	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	7.4	0.0	7.4	0.0	0.0	0.0	0.0	7.6	7.5	8.1	7.9	0.0
LOS by Move:	A	*	A	*	*	*	*	A	A	A	A	*
ApproachDel:		7.4		xxxxxx				7.6			7.9	
Delay Adj:		1.00		xxxxx				1.00			1.00	
ApprAdjDel:		7.4		xxxxxx				7.6			7.9	
LOS by Appr:		A			*			A			A	
AllWayAvgQ:	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1

Note: Queue reported is the number of cars per lane.

Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #1004 Stars and Stripes Drive / Avenue B

****

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Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Stop Sign					Stop Sign				
Lanes:	0	0	1!	0	0	0	0	1!	0	0	0	1	0	1	0	0	1	0	1	0
Initial Vol:	27		0		33	0		0		0	0		56		6	25		115		0

Major Street Volume: 202
Minor Approach Volume: 60
Minor Approach Volume Threshold: 836

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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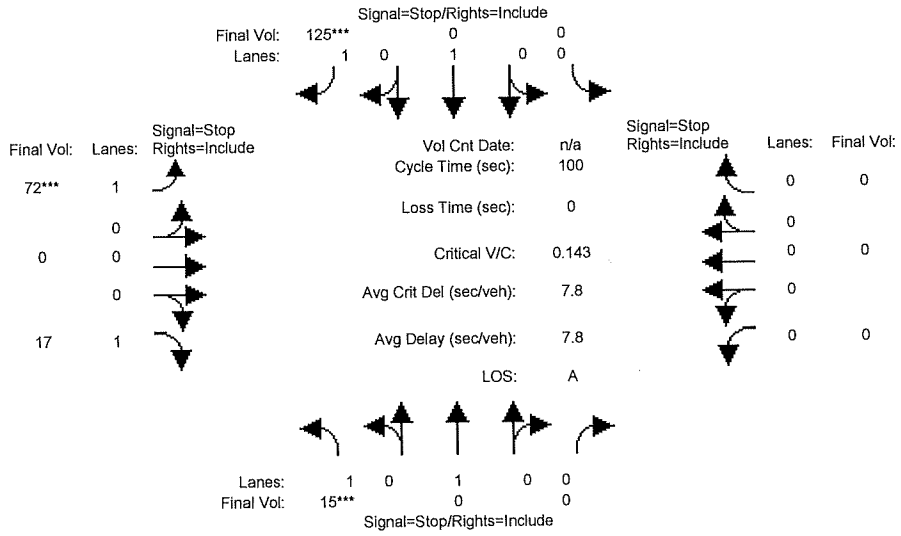
Santa Clara City Place
Phase 1 DAP Traffic Analysis January 2020
Background Conditions

Level Of Service Computation Report
2000 HCM 4-Way Stop (Future Volume Alternative)
Background Plus Project AM

Intersection #1005: Stars and Stripes Drive / Avenue C



Street Name:	Stars and Stripes Drive						Avenue C					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Volume Module:												
Base Vol:	0	0	0	0	0	20	20	0	0	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	0	0	20	20	0	0	0	0	0
Added Vol:	15	0	0	0	0	105	52	0	17	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	15	0	0	0	0	125	72	0	17	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	15	0	0	0	0	125	72	0	17	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	15	0	0	0	0	125	72	0	17	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	15	0	0	0	0	125	72	0	17	0	0	0
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00	0.00
Final Sat.:	667	734	0	0	747	876	667	0	855	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.02	0.00	xxxx	xxxx	0.00	0.14	0.11	xxxx	0.02	xxxx	xxxx	xxxx
Crit Moves:	****					****	****					
Delay/Veh:	8.1	0.0	0.0	0.0	0.0	7.4	8.6	0.0	6.9	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	8.1	0.0	0.0	0.0	0.0	7.4	8.6	0.0	6.9	0.0	0.0	0.0
LOS by Move:	A	*	*	*	*	A	A	*	A	*	*	*
ApproachDel:		8.1			7.4			8.3			xxxxxx	
Delay Adj:		1.00			1.00			1.00			xxxxx	
ApprAdjDel:		8.1			7.4			8.3			xxxxxx	
LOS by Appr:		A			A			A			*	
AllWayAvgQ:	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.0

Note: Queue reported is the number of cars per lane.

Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #1005 Stars and Stripes Drive / Avenue C

****

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Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	1 0	1 0	0	0 0	1 0	1	1 0	0 0	1	0 0	0 0	0
Initial Vol:	15	0	0	0	0	125	72	0	17	0	0	0

Major Street Volume: 140
Minor Approach Volume: 89
Minor Approach Volume Threshold: 1220

SIGNAL WARRANT DISCLAIMER
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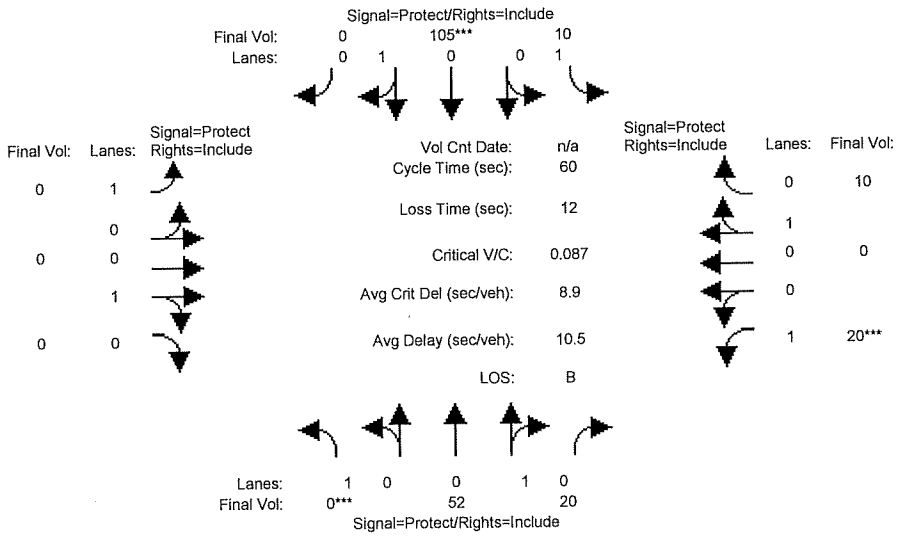
Santa Clara City Place
Phase 1 DAP Traffic Analysis January 2020
Background Conditions

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background Plus Project AM

Intersection #1006: Avenue C / Station Road



Street Name:	Avenue C						Station Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	0	0	20	10	0	0	0	0	0	20	0	10
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	20	10	0	0	0	0	0	20	0	10
Added Vol:	0	52	0	0	105	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	52	20	10	105	0	0	0	0	20	0	10
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	52	20	10	105	0	0	0	0	20	0	10
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	52	20	10	105	0	0	0	0	20	0	10
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	52	20	10	105	0	0	0	0	20	0	10
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.95	0.95	0.92	0.95	0.92	0.92	1.00	0.92	0.92	1.00	0.95
Lanes:	1.00	0.72	0.28	1.00	1.00	0.00	1.00	1.00	0.00	1.00	0.00	1.00
Final Sat.:	1750	1300	500	1750	1800	0	1750	1900	0	1750	0	1800
Capacity Analysis Module:												
Vol/Sat:	0.00	0.04	0.04	0.01	0.06	0.00	0.00	0.00	0.00	0.01	0.00	0.01
Crit Moves:	****				****					****		
Green Time:	0.0	24.1	24.1	16.9	34.0	0.0	0.0	0.0	0.0	7.0	0.0	10.0
Volume/Cap:	0.00	0.10	0.10	0.02	0.10	0.00	0.00	0.00	0.00	0.10	0.00	0.03
Delay/Veh:	0.0	11.2	11.2	15.6	6.0	0.0	0.0	0.0	0.0	23.9	0.0	21.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	11.2	11.2	15.6	6.0	0.0	0.0	0.0	0.0	23.9	0.0	21.0
LOS by Move:	A	B	B	B	A	A	A	A	A	C	A	C
HCM2k95thQ:	0	2	2	0	2	0	0	0	0	1	0	0

Note: Queue reported is the number of cars per lane.

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Santa Clara City Place
Phase 1 DAP Traffic Analysis January 2020
Background Conditions

Summary Scenario Comparison Report (With Average Critical Delay)
Future Volume Alternative

Intersection		Background No Project PM				Background Plus Project PM				???						???			
		LOS	Avg Del (sec)	Crit V/C	Avg Crit Del (sec)	LOS	Avg Del (sec)	Crit V/C	Avg Crit Del (sec)	LOS	Avg Del (sec)	Crit V/C	Crit V/C Change	Avg Crit Del (sec)	Avg Crit Del Change	LOS	Avg Del (sec)	Crit V/C	Avg Crit Del (sec)
#8	Great America Parkway / Tasman Drive (CMP)	D	51.8	0.992	63.1	E	69.0	1.050	83.0	?	xx.x	x.xxx	x.xxx	xx.x	xx.x	?	xx.x	x.xxx	xx.x
#9	Convention Center / Tasman Drive	C	21.9	0.705	24.6	C	25.5	0.765	30.1	?	xx.x	x.xxx	x.xxx	xx.x	xx.x	?	xx.x	x.xxx	xx.x
#10	Avenue A (Future Driveway) / Tasman Drive					C	22.8	0.488	1.2	?	xx.x	x.xxx	x.xxx	xx.x	xx.x	?	xx.x	x.xxx	xx.x
#11	Centennial Boulevard / Tasman Drive	C	23.8	0.634	28.0	C	28.1	0.678	32.7	?	xx.x	x.xxx	x.xxx	xx.x	xx.x	?	xx.x	x.xxx	xx.x
#12	Avenue C / Tasman Drive					C	15.5	0.099	0.2	?	xx.x	x.xxx	x.xxx	xx.x	xx.x	?	xx.x	x.xxx	xx.x
#13	Calle Del Sol / Tasman Drive	B	19.0	0.704	17.9	C	21.6	0.762	20.0	?	xx.x	x.xxx	x.xxx	xx.x	xx.x	?	xx.x	x.xxx	xx.x
#60	Great America Parkway / Old Mountain View-Alviso Road	D	37.2	0.783	45.8	D	43.5	0.816	57.0	?	xx.x	x.xxx	x.xxx	xx.x	xx.x	?	xx.x	x.xxx	xx.x
#61	Great America Parkway / City Place Parkway (Future	A	9.3	0.370	11.3	B	11.3	0.479	14.5	?	xx.x	x.xxx	x.xxx	xx.x	xx.x	?	xx.x	x.xxx	xx.x
#63	Great America Parkway/Bunker Hill Lane	B	15.7	0.531	14.8	B	15.7	0.545	14.7	?	xx.x	x.xxx	x.xxx	xx.x	xx.x	?	xx.x	x.xxx	xx.x
#90	Laffeyette Street / Calle De Luna	C	20.9	0.429	18.8	C	22.9	0.476	20.9	?	xx.x	x.xxx	x.xxx	xx.x	xx.x	?	xx.x	x.xxx	xx.x
#1002	Stars and Stripes Drive / Avenue A					A	7.9	0.215	7.9	?	xx.x	x.xxx	x.xxx	xx.x	xx.x	?	xx.x	x.xxx	xx.x
#1003	Centennial Boulevard / Stars and Stripes Drive					B	14.2	0.164	14.9	?	xx.x	x.xxx	x.xxx	xx.x	xx.x	?	xx.x	x.xxx	xx.x
#1004	Stars and Stripes Drive / Avenue B					A	8.0	0.141	8.0	?	xx.x	x.xxx	x.xxx	xx.x	xx.x	?	xx.x	x.xxx	xx.x
#1005	Stars and Stripes Drive / Avenue C					A	8.2	0.176	8.2	?	xx.x	x.xxx	x.xxx	xx.x	xx.x	?	xx.x	x.xxx	xx.x
#1006	Avenue C / Station Road					B	11.0	0.090	10.2	?	xx.x	x.xxx	x.xxx	xx.x	xx.x	?	xx.x	x.xxx	xx.x

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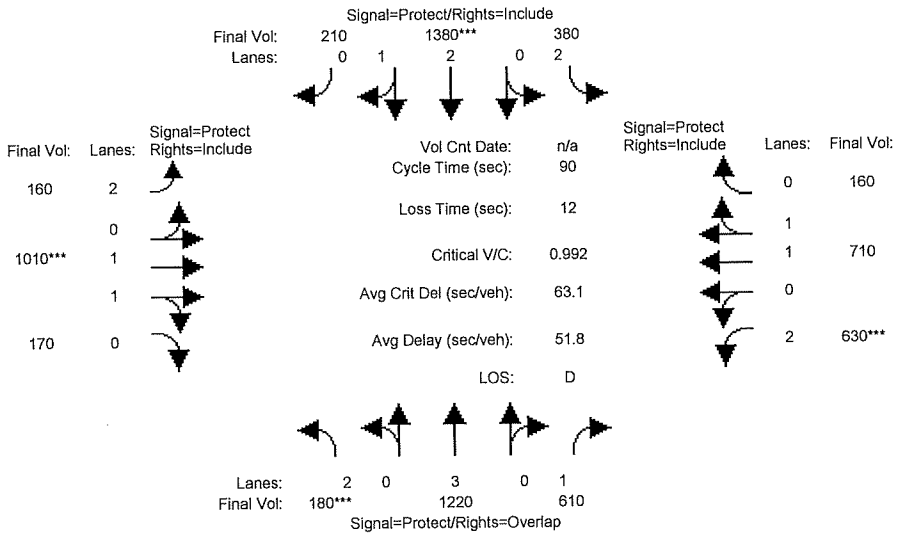
Santa Clara City Place
Phase 1 DAP Traffic Analysis January 2020
Background Conditions

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background No Project PM

Intersection #8: Great America Parkway / Tasman Drive (CMP)



Street Name:	Great America Parkway						Tasman Drive					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	180	1220	610	380	1380	210	160	1010	170	630	710	160
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	180	1220	610	380	1380	210	160	1010	170	630	710	160
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	180	1220	610	380	1380	210	160	1010	170	630	710	160
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	180	1220	610	380	1380	210	160	1010	170	630	710	160
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	180	1220	610	380	1380	210	160	1010	170	630	710	160
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	180	1220	610	380	1380	210	160	1010	170	630	710	160
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	1.00	0.92	0.83	0.99	0.95	0.83	0.98	0.95	0.83	0.98	0.95
Lanes:	2.00	3.00	1.00	2.00	2.59	0.41	2.00	1.70	0.30	2.00	1.62	0.38
Final Sat.:	3150	5700	1750	3150	4859	739	3150	3167	533	3150	3019	680
Capacity Analysis Module:												
Vol/Sat:	0.06	0.21	0.35	0.12	0.28	0.28	0.05	0.32	0.32	0.20	0.24	0.24
Crit Moves:	****				****			****		****		
Green Time:	7.0	20.5	38.2	11.6	25.1	25.1	11.4	28.2	28.2	17.7	34.5	34.5
Volume/Cap:	0.73	0.94	0.82	0.94	1.02	1.02	0.40	1.02	1.02	1.02	0.61	0.61
Delay/Veh:	51.6	47.0	30.1	68.3	59.8	59.8	36.8	61.9	61.9	76.9	23.2	23.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	51.6	47.0	30.1	68.3	59.8	59.8	36.8	61.9	61.9	76.9	23.2	23.2
LOS by Move:	D	D	C	E	E	E	D	E	E	E	C	C
HCM2k95thQ:	9	27	32	14	33	33	6	41	41	24	18	18

Note: Queue reported is the number of cars per lane.

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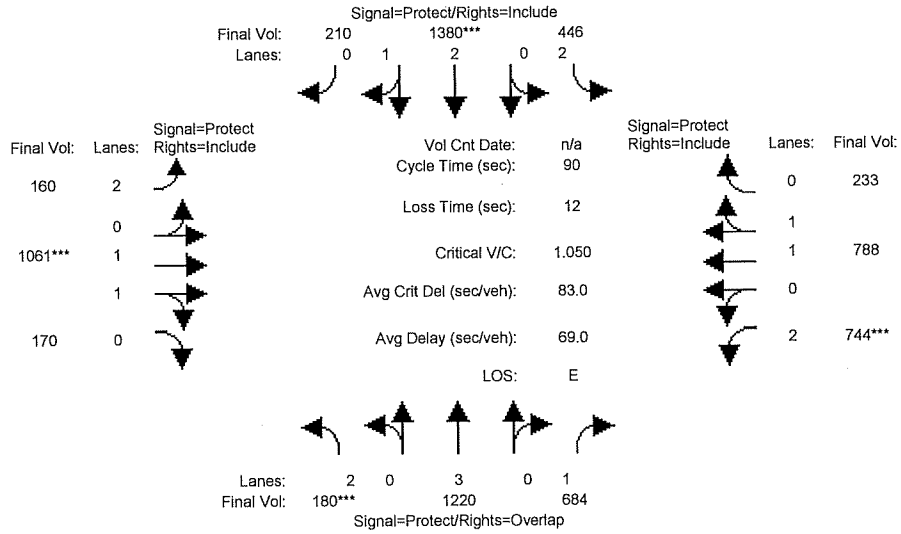
Santa Clara City Place
Phase 1 DAP Traffic Analysis January 2020
Background Conditions

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background Plus Project PM

Intersection #8: Great America Parkway / Tasman Drive (CMP)



Street Name:	Great America Parkway						Tasman Drive					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	180	1220	610	380	1380	210	160	1010	170	630	710	160
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	180	1220	610	380	1380	210	160	1010	170	630	710	160
Added Vol:	0	0	74	66	0	0	0	51	0	114	78	73
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	180	1220	684	446	1380	210	160	1061	170	744	788	233
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	180	1220	684	446	1380	210	160	1061	170	744	788	233
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	180	1220	684	446	1380	210	160	1061	170	744	788	233
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	180	1220	684	446	1380	210	160	1061	170	744	788	233
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	1.00	0.92	0.83	0.99	0.95	0.83	0.98	0.95	0.83	0.98	0.95
Lanes:	2.00	3.00	1.00	2.00	2.59	0.41	2.00	1.72	0.28	2.00	1.53	0.47
Final Sat.:	3150	5700	1750	3150	4859	739	3150	3189	511	3150	2855	844
Capacity Analysis Module:												
Vol/Sat:	0.06	0.21	0.39	0.14	0.28	0.28	0.05	0.33	0.33	0.24	0.28	0.28
Crit Moves:	****				****			****		****		
Green Time:	7.0	18.4	38.1	12.2	23.6	23.6	10.4	27.7	27.7	19.7	36.9	36.9
Volume/Cap:	0.73	1.04	0.92	1.04	1.08	1.08	0.44	1.08	1.08	1.08	0.67	0.67
Delay/Veh:	51.6	74.5	41.7	94.6	81.9	81.9	37.9	82.6	82.6	93.5	22.8	22.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	51.6	74.5	41.7	94.6	81.9	81.9	37.9	82.6	82.6	93.5	22.8	22.8
LOS by Move:	D	E	D	F	F	F	D	F	F	F	C	C
HCM2k95thQ:	9	32	40	19	36	36	6	46	46	30	21	21

Note: Queue reported is the number of cars per lane.

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Santa Clara City Place
Phase 1 DAP Traffic Analysis January 2020
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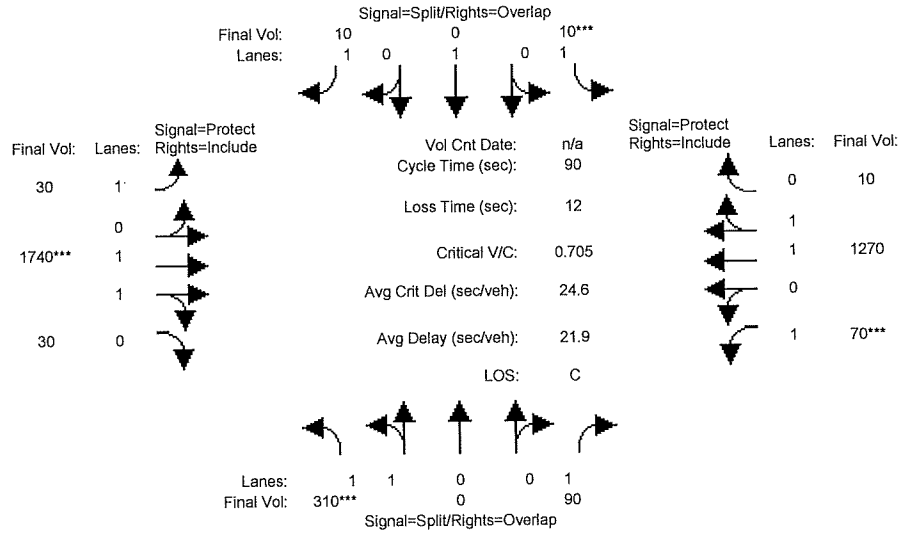
Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background No Project PM

Intersection #9: Convention Center / Tasman Drive



Street Name:	Convention Center						Tasman Drive					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	10	10	10	10	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	310	0	90	10	0	10	30	1740	30	70	1270	10
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	310	0	90	10	0	10	30	1740	30	70	1270	10
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	310	0	90	10	0	10	30	1740	30	70	1270	10
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	310	0	90	10	0	10	30	1740	30	70	1270	10
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	310	0	90	10	0	10	30	1740	30	70	1270	10
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	310	0	90	10	0	10	30	1740	30	70	1270	10
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	1.00	0.92	0.92	1.00	0.92	0.92	0.97	0.95	0.92	0.97	0.95
Lanes:	2.00	0.00	1.00	1.00	1.00	1.00	1.00	1.97	0.03	1.00	1.98	0.02
Final Sat.:	3550	0	1750	1750	1900	1750	1750	3637	63	1750	3671	29
Capacity Analysis Module:												
Vol/Sat:	0.09	0.00	0.05	0.01	0.00	0.01	0.02	0.48	0.48	0.04	0.35	0.35
Crit Moves:	****			****				****		****		
Green Time:	10.0	0.0	17.0	10.0	0.0	20.6	10.6	51.0	51.0	7.0	47.4	47.4
Volume/Cap:	0.79	0.00	0.27	0.05	0.00	0.02	0.14	0.84	0.84	0.51	0.66	0.66
Delay/Veh:	49.0	0.0	31.7	35.9	0.0	26.9	35.9	19.5	19.5	43.2	16.3	16.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	49.0	0.0	31.7	35.9	0.0	26.9	35.9	19.5	19.5	43.2	16.3	16.3
LOS by Move:	D	A	C	D	A	C	D	B	B	D	B	B
HCM2k95thQ:	13	0	5	1	0	0	2	33	33	4	23	23

Note: Queue reported is the number of cars per lane.

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Santa Clara City Place
Phase 1 DAP Traffic Analysis January 2020
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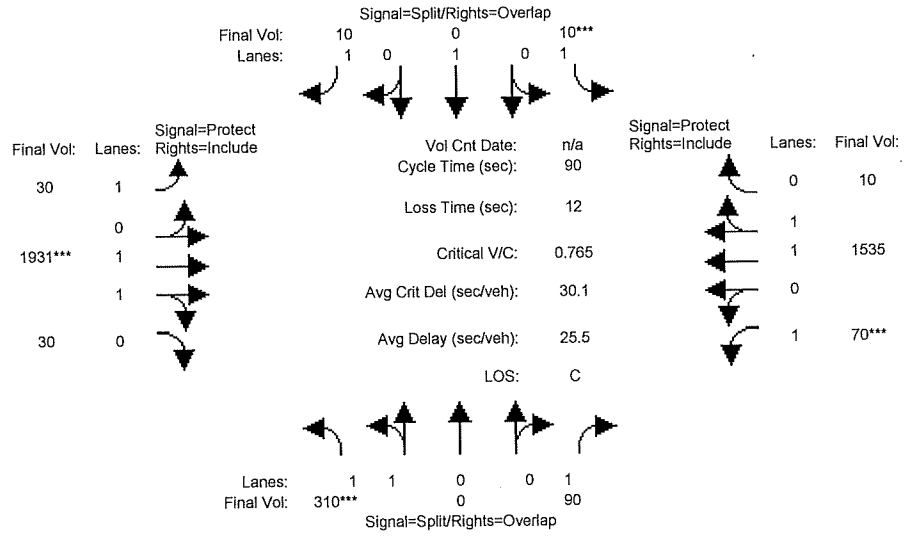
Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background Plus Project PM

Intersection #9: Convention Center / Tasman Drive



Street Name:	Convention Center						Tasman Drive					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	10	10	10	10	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	310	0	90	10	0	10	30	1740	30	70	1270	10
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	310	0	90	10	0	10	30	1740	30	70	1270	10
Added Vol:	0	0	0	0	0	0	0	191	0	0	265	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	310	0	90	10	0	10	30	1931	30	70	1535	10
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	310	0	90	10	0	10	30	1931	30	70	1535	10
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	310	0	90	10	0	10	30	1931	30	70	1535	10
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	310	0	90	10	0	10	30	1931	30	70	1535	10
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	1.00	0.92	0.92	1.00	0.92	0.92	0.97	0.95	0.92	0.97	0.95
Lanes:	2.00	0.00	1.00	1.00	1.00	1.00	1.00	1.97	0.03	1.00	1.99	0.01
Final Sat.:	3550	0	1750	1750	1900	1750	1750	3643	57	1750	3676	24
Capacity Analysis Module:												
Vol/Sat:	0.09	0.00	0.05	0.01	0.00	0.01	0.02	0.53	0.53	0.04	0.42	0.42
Crit Moves:	****			****				****		****		
Green Time:	10.0	0.0	17.0	10.0	0.0	19.1	9.1	51.0	51.0	7.0	48.9	48.9
Volume/Cap:	0.79	0.00	0.27	0.05	0.00	0.03	0.17	0.94	0.94	0.51	0.77	0.77
Delay/Veh:	49.0	0.0	31.7	35.9	0.0	28.1	37.4	26.6	26.6	43.2	18.0	18.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	49.0	0.0	31.7	35.9	0.0	28.1	37.4	26.6	26.6	43.2	18.0	18.0
LOS by Move:	D	A	C	D	A	C	D	C	C	D	B	B
HCM2k95thQ:	13	0	5	1	0	1	2	40	40	4	30	30

Note: Queue reported is the number of cars per lane.

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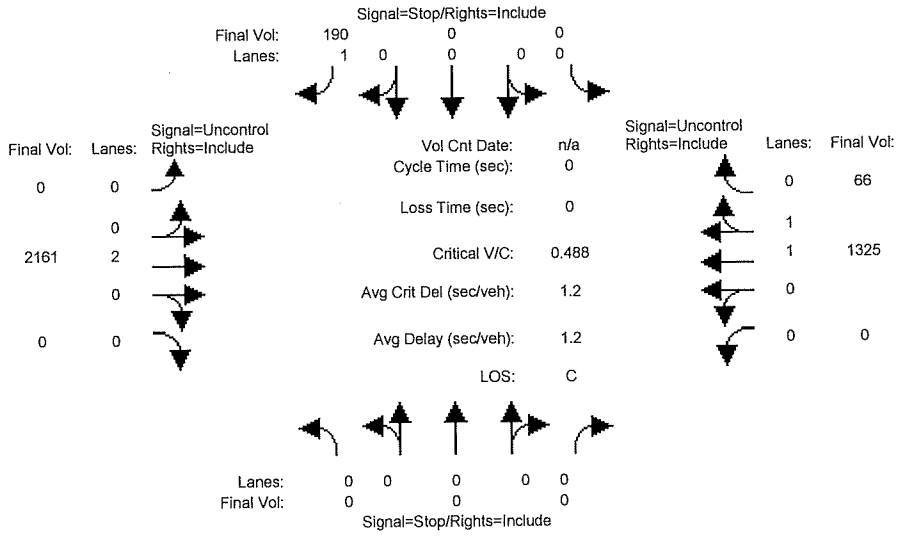
Santa Clara City Place
Phase 1 DAP Traffic Analysis January 2020
Background Conditions

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Background Plus Project PM

Intersection #10: Avenue A (Future Driveway) / Tasman Drive




```
Street Name:    Avenue A (Future Driveway)                Tasman Drive
Approach:      North Bound      South Bound        East Bound        West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0     0     0     0     0     0     0  1970     0     0  1250     0
Growth Adj:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Initial Bse:    0     0     0     0     0     0     0  1970     0     0  1250     0
Added Vol:      0     0     0     0     0   190     0   191     0     0    75    66
PasserByVol:    0     0     0     0     0     0     0     0     0     0     0     0
Initial Fut:    0     0     0     0     0   190     0  2161     0     0  1325    66
User Adj:    1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Volume:     0     0     0     0     0   190     0  2161     0     0  1325    66
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
FinalVolume:    0     0     0     0     0   190     0  2161     0     0  1325    66
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx xxxxx xxxx   6.9 xxxxx xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx xxxxx xxxx   3.3 xxxxx xxxx xxxxx xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx  xxxx xxxx   696  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx  xxxx xxxx   389  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx xxxxx  xxxx xxxx   389  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  xxxx  xxxx xxxx  0.49  xxxx xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx   2.6  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx  22.8 xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *     *     *     *     *     C     *     *     *     *     *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *     *     *     *     *     *     *     *     *     *     *     *
ApproachDel:    xxxxxx             22.8            xxxxxx            xxxxxx
ApproachLOS:         *                C                 *                 *
Note: Queue reported is the number of cars per lane.
```

Peak Hour Delay Signal Warrant Report

```
*******************************************************************************
Intersection #10 Avenue A (Future Driveway) / Tasman Drive
*******************************************************************************
Future Volume Alternative: Peak Hour Warrant NOT Met
```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```
------------|---------------||---------------||---------------||---------------|
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Lanes:        0  0  0  0  0    0  0  0  0  1    0  0  2  0  0    0  0  1  1  0
Initial Vol:    0     0     0     0     0   190     0 2161     0     0 1325    66
ApproachDel:    xxxxxx             22.8           xxxxxx           xxxxxx
------------|---------------||---------------||---------------||---------------|
Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=1.2]
   FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=190]
   SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=3742]
   SUCCEED - Total volume greater than or equal to 650 for intersection
             with less than four approaches.
--------------------------------------------------------------------------------
SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an
"indicator" of the likelihood of an unsignalized intersection warranting
a traffic signal in the future.  Intersections that exceed this warrant
are probably more likely to meet one or more of the other volume based
signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace
a rigorous and complete traffic signal warrant analysis by the responsible
jurisdiction.  Consideration of the other signal warrants, which is beyond
the scope of this software, may yield different results.
                Peak Hour Volume Signal Warrant Report [Urban]
********************************************************************************
Intersection #10 Avenue A (Future Driveway) / Tasman Drive
********************************************************************************
Future Volume Alternative: Peak Hour Warrant Met
------------|---------------||---------------||---------------||---------------|
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Lanes:        0  0  0  0  0    0  0  0  0  1    0  0  2  0  0    0  0  1  1  0
Initial Vol:    0     0     0     0     0   190     0 2161     0     0 1325    66
------------|---------------||---------------||---------------||---------------|
Major Street Volume:              3552
Minor Approach Volume:            190
Minor Approach Volume Threshold: -152 [less than minimum of 100]
--------------------------------------------------------------------------------
SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an
"indicator" of the likelihood of an unsignalized intersection warranting
a traffic signal in the future.  Intersections that exceed this warrant
are probably more likely to meet one or more of the other volume based
signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace
a rigorous and complete traffic signal warrant analysis by the responsible
jurisdiction.  Consideration of the other signal warrants, which is beyond
the scope of this software, may yield different results.
```


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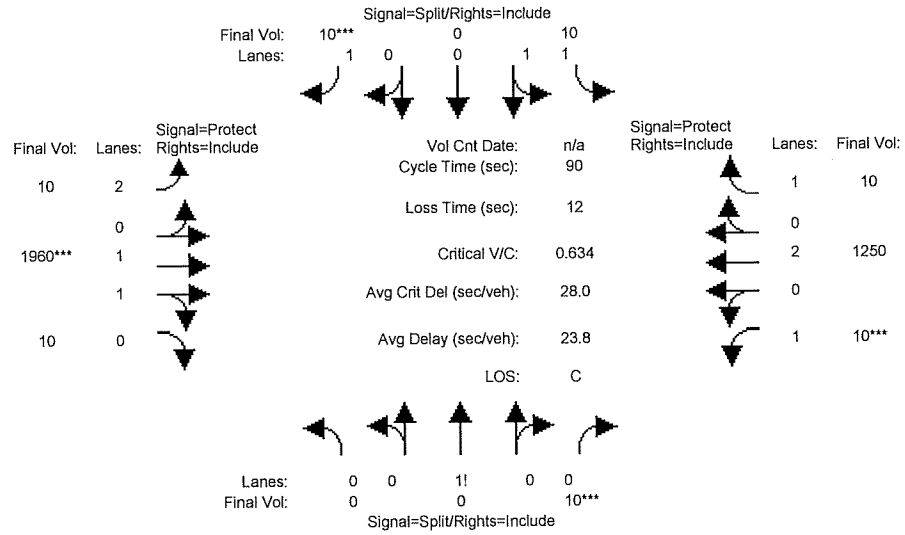
Santa Clara City Place
Phase 1 DAP Traffic Analysis January 2020
Background Conditions

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background No Project PM

Intersection #11: Centennial Boulevard / Tasman Drive



Street Name:	Centennial Boulevard						Tasman Drive					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	0	0	10	10	0	10	10	1960	10	10	1250	10
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	10	10	0	10	10	1960	10	10	1250	10
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	10	10	0	10	10	1960	10	10	1250	10
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	10	10	0	10	10	1960	10	10	1250	10
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	10	10	0	10	10	1960	10	10	1250	10
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	10	10	0	10	10	1960	10	10	1250	10
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.93	1.00	0.92	0.83	0.97	0.95	0.92	1.00	0.92
Lanes:	0.00	0.00	1.00	2.00	0.00	1.00	2.00	1.99	0.01	1.00	2.00	1.00
Final Sat.:	0	0	1750	3550	0	1750	3150	3681	19	1750	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.01	0.00	0.00	0.01	0.00	0.53	0.53	0.01	0.33	0.01
Crit Moves:			****			****		****		****		
Green Time:	0.0	0.0	10.0	10.0	0.0	10.0	11.1	51.0	51.0	7.0	46.9	46.9
Volume/Cap:	0.00	0.00	0.05	0.03	0.00	0.05	0.03	0.94	0.94	0.07	0.63	0.01
Delay/Veh:	0.0	0.0	36.3	35.8	0.0	36.3	34.8	27.9	27.9	39.5	16.9	10.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	36.3	35.8	0.0	36.3	34.8	27.9	27.9	39.5	16.9	10.4
LOS by Move:	A	A	D	D	A	D	C	C	C	D	B	B
HCM2k95thQ:	0	0	1	0	0	1	0	45	45	1	21	0

Note: Queue reported is the number of cars per lane.

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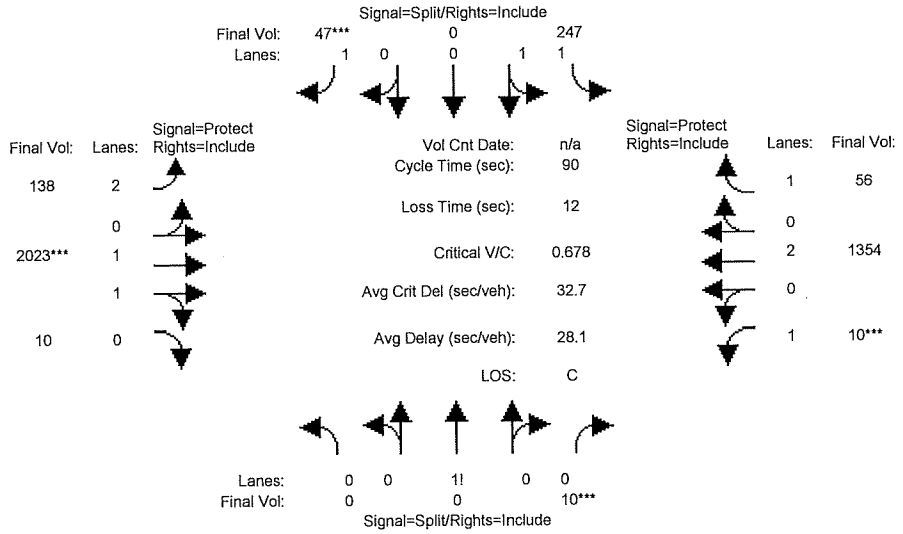
Santa Clara City Place
Phase 1 DAP Traffic Analysis January 2020
Background Conditions

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background Plus Project PM

Intersection #11: Centennial Boulevard / Tasman Drive



Street Name:	Centennial Boulevard						Tasman Drive					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	0	0	10	10	0	10	10	1960	10	10	1250	10
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	10	10	0	10	10	1960	10	10	1250	10
Added Vol:	0	0	0	237	0	37	128	63	0	0	104	46
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	10	247	0	47	138	2023	10	10	1354	56
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	10	247	0	47	138	2023	10	10	1354	56
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	10	247	0	47	138	2023	10	10	1354	56
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	10	247	0	47	138	2023	10	10	1354	56
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.93	1.00	0.92	0.83	0.97	0.95	0.92	1.00	0.92
Lanes:	0.00	0.00	1.00	2.00	0.00	1.00	2.00	1.99	0.01	1.00	2.00	1.00
Final Sat.:	0	0	1750	3550	0	1750	3150	3682	18	1750	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.01	0.07	0.00	0.03	0.04	0.55	0.55	0.01	0.36	0.03
Crit Moves:			****			****		****		****		
Green Time:	0.0	0.0	10.0	10.0	0.0	10.0	10.4	51.0	51.0	7.0	47.6	47.6
Volume/Cap:	0.00	0.00	0.05	0.63	0.00	0.24	0.38	0.97	0.97	0.07	0.67	0.06
Delay/Veh:	0.0	0.0	36.3	45.5	0.0	39.5	39.8	32.4	32.4	39.5	17.3	10.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	36.3	45.5	0.0	39.5	39.8	32.4	32.4	39.5	17.3	10.4
LOS by Move:	A	A	D	D	A	D	D	C	C	D	B	B
HCM2k95thQ:	0	0	1	8	0	3	5	47	47	1	23	2

Note: Queue reported is the number of cars per lane.

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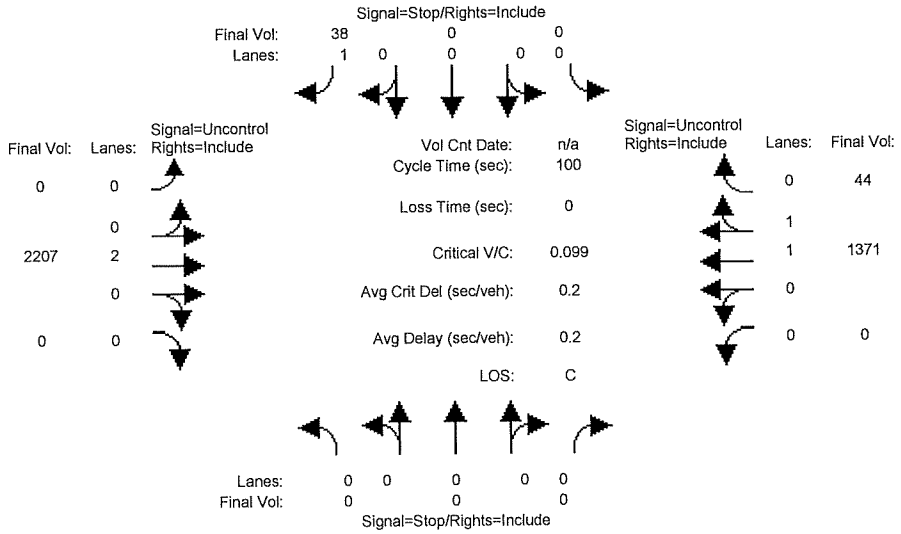
Santa Clara City Place
Phase 1 DAP Traffic Analysis January 2020
Background Conditions

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Background Plus Project PM

Intersection #12: Avenue C / Tasman Drive




```
Street Name:              Avenue C                          Tasman Drive
Approach:       North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0     0     0     0     0     0     0  1970     0     0  1260     0
Growth Adj:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Initial Bse:    0     0     0     0     0     0     0  1970     0     0  1260     0
Added Vol:      0     0     0     0     0    38     0   237     0     0   111    44
PasserByVol:    0     0     0     0     0     0     0     0     0     0     0     0
Initial Fut:    0     0     0     0     0    38     0  2207     0     0  1371    44
User Adj:    1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Volume:     0     0     0     0     0    38     0  2207     0     0  1371    44
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
FinalVolume:    0     0     0     0     0    38     0  2207     0     0  1371    44
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx xxxxx xxxx   6.9 xxxxx xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx xxxxx xxxx   3.3 xxxxx xxxx xxxxx xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx  xxxx xxxx   708  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx  xxxx xxxx   382  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx xxxxx  xxxx xxxx   382  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  xxxx  xxxx xxxx  0.10  xxxx xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx   0.3  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx  15.5 xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *     *     *     *     *     C     *     *     *     *     *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *     *     *     *     *     *     *     *     *     *     *     *
ApproachDel:    xxxxxx            15.5            xxxxxx            xxxxxx
ApproachLOS:         *               C                 *                 *
Note: Queue reported is the number of cars per lane.
```

Peak Hour Delay Signal Warrant Report

****

Intersection #12 Avenue C / Tasman Drive

****

Future Volume Alternative: Peak Hour Warrant NOT Met

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```
------------|---------------||---------------||---------------||---------------|
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Lanes:        0  0  0  0  0    0  0  0  0  1    0  0  2  0  0    0  0  1  1  0
Initial Vol:    0     0     0     0     0    38     0 2207     0     0 1371    44
ApproachDel:    xxxxxx              15.5           xxxxxx           xxxxxx
------------|---------------||---------------||---------------||---------------|
Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.2]
   FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=38]
   FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=3660]
   SUCCEED - Total volume greater than or equal to 650 for intersection
             with less than four approaches.
--------------------------------------------------------------------------------
SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an
"indicator" of the likelihood of an unsignalized intersection warranting
a traffic signal in the future.  Intersections that exceed this warrant
are probably more likely to meet one or more of the other volume based
signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace
a rigorous and complete traffic signal warrant analysis by the responsible
jurisdiction.  Consideration of the other signal warrants, which is beyond
the scope of this software, may yield different results.
                 Peak Hour Volume Signal Warrant Report [Urban]
********************************************************************************
Intersection #12 Avenue C / Tasman Drive
********************************************************************************
Future Volume Alternative: Peak Hour Warrant NOT Met
------------|---------------||---------------||---------------||---------------|
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Lanes:        0  0  0  0  0    0  0  0  0  1    0  0  2  0  0    0  0  1  1  0
Initial Vol:    0     0     0     0     0    38     0 2207     0     0 1371    44
------------|---------------||---------------||---------------||---------------|
Major Street Volume:              3622
Minor Approach Volume:            38
Minor Approach Volume Threshold: -159 [less than minimum of 100]
--------------------------------------------------------------------------------
SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an
"indicator" of the likelihood of an unsignalized intersection warranting
a traffic signal in the future.  Intersections that exceed this warrant
are probably more likely to meet one or more of the other volume based
signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace
a rigorous and complete traffic signal warrant analysis by the responsible
jurisdiction.  Consideration of the other signal warrants, which is beyond
the scope of this software, may yield different results.
```


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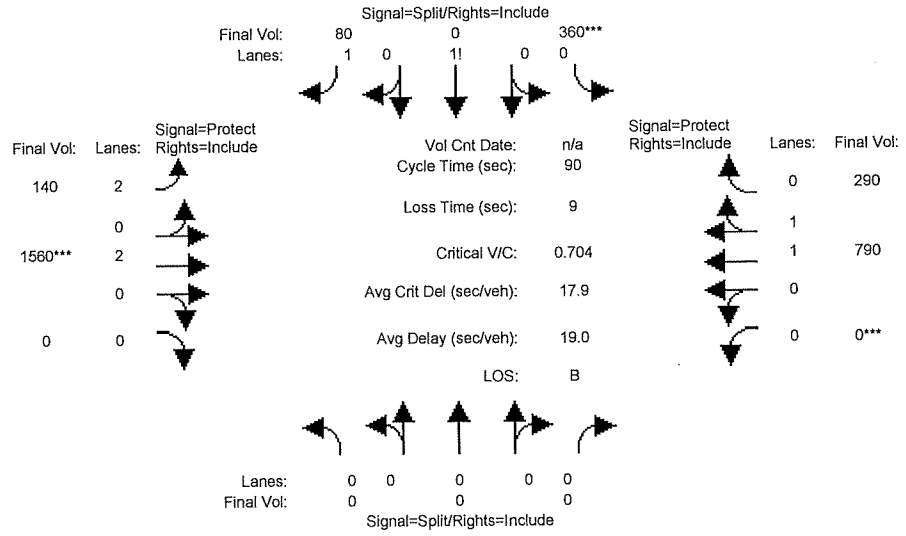
Santa Clara City Place
Phase 1 DAP Traffic Analysis January 2020
Background Conditions

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background No Project PM

Intersection #13: Calle Del Sol / Tasman Drive



Street Name:	Calle Del Sol						Tasman Drive					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	10	0	10	7	10	0	0	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	0	0	0	360	0	80	140	1560	0	0	790	290
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	360	0	80	140	1560	0	0	790	290
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	360	0	80	140	1560	0	0	790	290
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	360	0	80	140	1560	0	0	790	290
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	360	0	80	140	1560	0	0	790	290
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	360	0	80	140	1560	0	0	790	290
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.95	0.95	0.92	0.83	1.00	0.92	0.92	0.98	0.95
Lanes:	0.00	0.00	0.00	0.90	0.00	1.10	2.00	2.00	0.00	0.00	1.45	0.55
Final Sat.:	0	0	0	1615	0	1929	3150	3800	0	0	2706	993
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.22	0.00	0.04	0.04	0.41	0.00	0.00	0.29	0.29
Crit Moves:				****				****		****		
Green Time:	0.0	0.0	0.0	28.5	0.0	28.5	11.0	52.5	0.0	0.0	41.5	41.5
Volume/Cap:	0.00	0.00	0.00	0.70	0.00	0.13	0.36	0.70	0.00	0.00	0.63	0.63
Delay/Veh:	0.0	0.0	0.0	30.7	0.0	21.9	36.8	14.3	0.0	0.0	19.3	19.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	30.7	0.0	21.9	36.8	14.3	0.0	0.0	19.3	19.3
LOS by Move:	A	A	A	C	A	C	D	B	A	A	B	B
HCM2k95thQ:	0	0	0	21	0	3	4	25	0	0	21	21

Note: Queue reported is the number of cars per lane.

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Santa Clara City Place
Phase 1 DAP Traffic Analysis January 2020
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Level Of Service Computation Report
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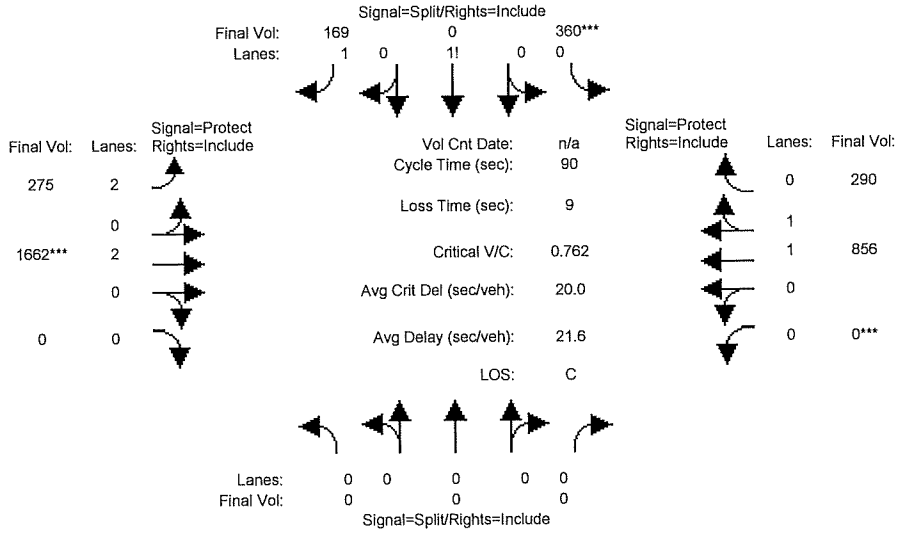
Background Plus Project PM

Intersection #13: Calle Del Sol / Tasman Drive



Street Name:	Calle Del Sol						Tasman Drive					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	10	0	10	7	10	0	0	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	0	0	0	360	0	80	140	1560	0	0	790	290
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	360	0	80	140	1560	0	0	790	290
Added Vol:	0	0	0	0	0	89	135	102	0	0	66	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	360	0	169	275	1662	0	0	856	290
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	360	0	169	275	1662	0	0	856	290
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	360	0	169	275	1662	0	0	856	290
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	360	0	169	275	1662	0	0	856	290
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.95	0.95	0.92	0.83	1.00	0.92	0.92	0.98	0.95
Lanes:	0.00	0.00	0.00	0.81	0.00	1.19	2.00	2.00	0.00	0.00	1.48	0.52
Final Sat.:	0	0	0	1450	0	2090	3150	3800	0	0	2763	936
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.25	0.00	0.08	0.09	0.44	0.00	0.00	0.31	0.31
Crit Moves:				****				****		****		
Green Time:	0.0	0.0	0.0	29.3	0.0	29.3	11.4	51.7	0.0	0.0	40.3	40.3
Volume/Cap:	0.00	0.00	0.00	0.76	0.00	0.25	0.69	0.76	0.00	0.00	0.69	0.69
Delay/Veh:	0.0	0.0	0.0	32.2	0.0	22.3	42.8	16.1	0.0	0.0	21.1	21.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	32.2	0.0	22.3	42.8	16.1	0.0	0.0	21.1	21.1
LOS by Move:	A	A	A	C	A	C	D	B	A	A	C	C
HCM2k95thQ:	0	0	0	24	0	6	8	28	0	0	23	23

Note: Queue reported is the number of cars per lane.

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Santa Clara City Place
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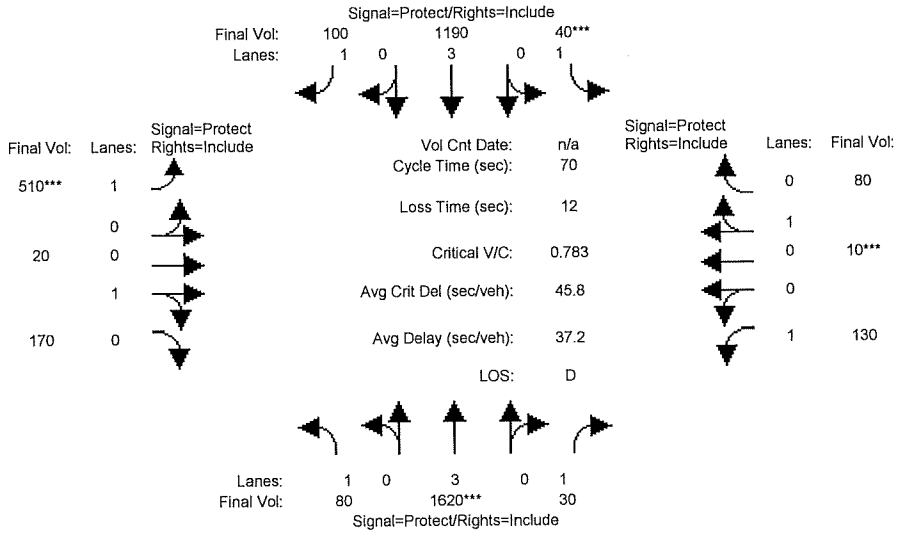
Background No Project PM

Intersection #60: Great America Parkway / Old Mountain View-Alviso Road



Street Name:	Great America Parkway						Old Mountain View-Alviso Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	80	1620	30	40	1190	100	510	20	170	130	10	80
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	80	1620	30	40	1190	100	510	20	170	130	10	80
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	80	1620	30	40	1190	100	510	20	170	130	10	80
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	80	1620	30	40	1190	100	510	20	170	130	10	80
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	80	1620	30	40	1190	100	510	20	170	130	10	80
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	80	1620	30	40	1190	100	510	20	170	130	10	80
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.92	0.95	0.95	0.92	0.95	0.95
Lanes:	1.00	3.00	1.00	1.00	3.00	1.00	1.00	0.11	0.89	1.00	0.11	0.89
Final Sat.:	1750	5700	1750	1750	5700	1750	1750	189	1611	1750	200	1600
Capacity Analysis Module:												
Vol/Sat:	0.05	0.28	0.02	0.02	0.21	0.06	0.29	0.11	0.11	0.07	0.05	0.05
Crit Moves:		****		****			****				****	
Green Time:	8.8	20.2	20.2	7.0	18.4	18.4	20.8	18.1	18.1	12.7	10.0	10.0
Volume/Cap:	0.36	0.98	0.06	0.23	0.79	0.22	0.98	0.41	0.41	0.41	0.35	0.35
Delay/Veh:	29.0	42.8	18.0	29.7	27.0	20.4	59.4	22.1	22.1	26.2	27.9	27.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	29.0	42.8	18.0	29.7	27.0	20.4	59.4	22.1	22.1	26.2	27.9	27.9
LOS by Move:	C	D	B	C	C	C	E	C	C	C	C	C
HCM2k95thQ:	3	26	1	2	16	4	32	8	8	6	4	4

Note: Queue reported is the number of cars per lane.

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Santa Clara City Place
Phase 1 DAP Traffic Analysis January 2020
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Level Of Service Computation Report
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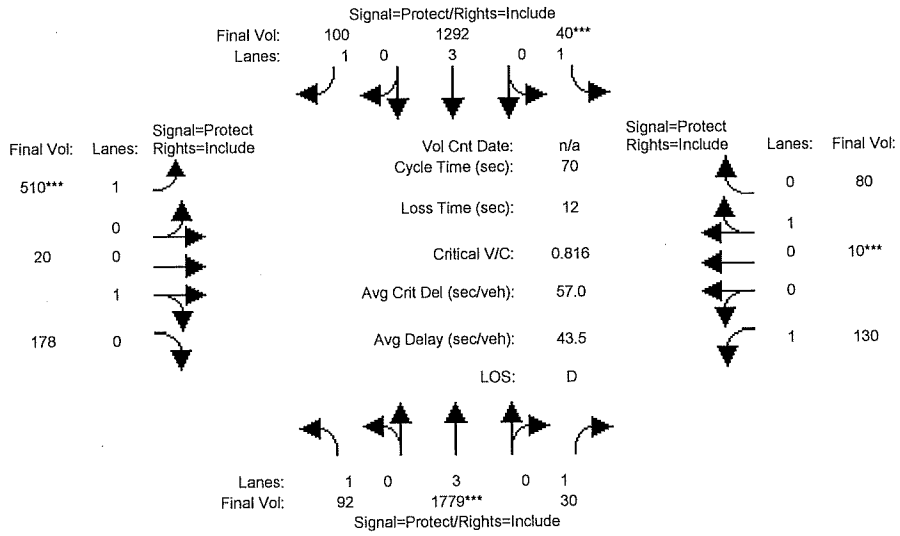
Background Plus Project PM

Intersection #60: Great America Parkway / Old Mountain View-Alviso Road



Street Name:	Great America Parkway						Old Mountain View-Alviso Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	80	1620	30	40	1190	100	510	20	170	130	10	80
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	80	1620	30	40	1190	100	510	20	170	130	10	80
Added Vol:	12	159	0	0	102	0	0	0	8	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	92	1779	30	40	1292	100	510	20	178	130	10	80
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	92	1779	30	40	1292	100	510	20	178	130	10	80
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	92	1779	30	40	1292	100	510	20	178	130	10	80
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	92	1779	30	40	1292	100	510	20	178	130	10	80
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.92	0.95	0.95	0.92	0.95	0.95
Lanes:	1.00	3.00	1.00	1.00	3.00	1.00	1.00	0.10	0.90	1.00	0.11	0.89
Final Sat.:	1750	5700	1750	1750	5700	1750	1750	182	1618	1750	200	1600
Capacity Analysis Module:												
Vol/Sat:	0.05	0.31	0.02	0.02	0.23	0.06	0.29	0.11	0.11	0.07	0.05	0.05
Crit Moves:		****		****			****				****	
Green Time:	8.6	21.2	21.2	7.0	19.6	19.6	19.8	17.5	17.5	12.3	10.0	10.0
Volume/Cap:	0.43	1.03	0.06	0.23	0.81	0.20	1.03	0.44	0.44	0.42	0.35	0.35
Delay/Veh:	29.7	54.3	17.4	29.7	26.7	19.5	73.6	22.8	22.8	26.7	27.9	27.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	29.7	54.3	17.4	29.7	26.7	19.5	73.6	22.8	22.8	26.7	27.9	27.9
LOS by Move:	C	D	B	C	C	B	E	C	C	C	C	C
HCM2k95thQ:	4	31	1	2	17	3	34	8	8	6	4	4

Note: Queue reported is the number of cars per lane.

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Santa Clara City Place
Phase 1 DAP Traffic Analysis January 2020
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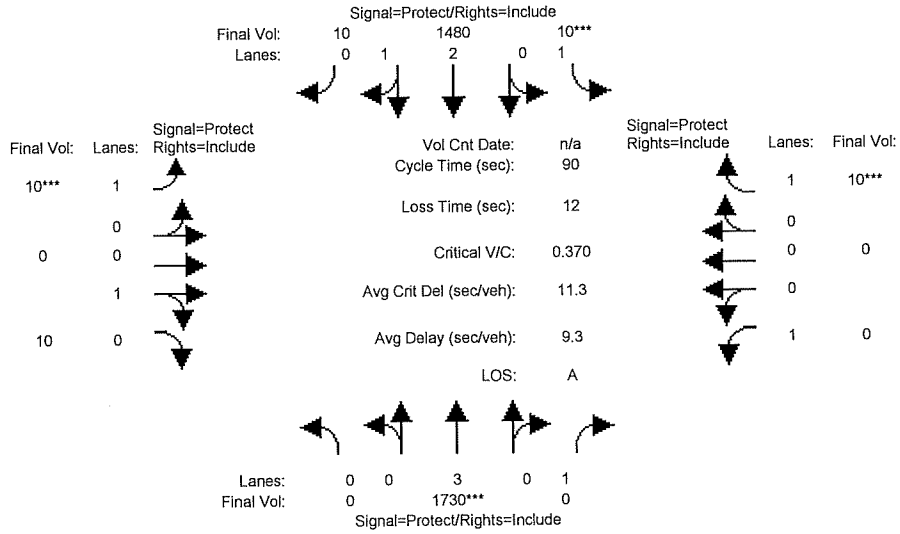
2000 HCM Operations (Future Volume Alternative)
Background No Project PM

Intersection #61: Great America Parkway / City Place Parkway (Future Driveway)



Street Name:	Greate America Parkway						City Place Parkway (Future Drivew					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	10	10	7	10	0	7	0	10	7	0	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	0	1730	0	10	1480	10	10	0	10	0	0	10
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	1730	0	10	1480	10	10	0	10	0	0	10
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	1730	0	10	1480	10	10	0	10	0	0	10
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	1730	0	10	1480	10	10	0	10	0	0	10
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1730	0	10	1480	10	10	0	10	0	0	10
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	1730	0	10	1480	10	10	0	10	0	0	10
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	0.98	0.95	0.92	1.00	0.95	0.92	1.00	0.92
Lanes:	0.00	3.00	1.00	1.00	2.98	0.02	1.00	0.00	1.00	1.00	0.00	1.00
Final Sat.:	0	5700	1750	1750	5562	38	1750	0	1800	1750	0	1750
Capacity Analysis Module:												
Vol/Sat:	0.00	0.30	0.00	0.01	0.27	0.27	0.01	0.00	0.01	0.00	0.00	0.01
Crit Moves:		****		****			****					****
Green Time:	0.0	54.0	0.0	7.0	61.0	61.0	7.0	0.0	17.0	0.0	0.0	10.0
Volume/Cap:	0.00	0.51	0.00	0.07	0.39	0.39	0.07	0.00	0.03	0.00	0.00	0.05
Delay/Veh:	0.0	10.9	0.0	39.5	6.7	6.7	39.5	0.0	29.9	0.0	0.0	36.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	10.9	0.0	39.5	6.7	6.7	39.5	0.0	29.9	0.0	0.0	36.3
LOS by Move:	A	B	A	D	A	A	D	A	C	A	A	D
HCM2k95thQ:	0	16	0	1	11	11	1	0	1	0	0	1

Note: Queue reported is the number of cars per lane.

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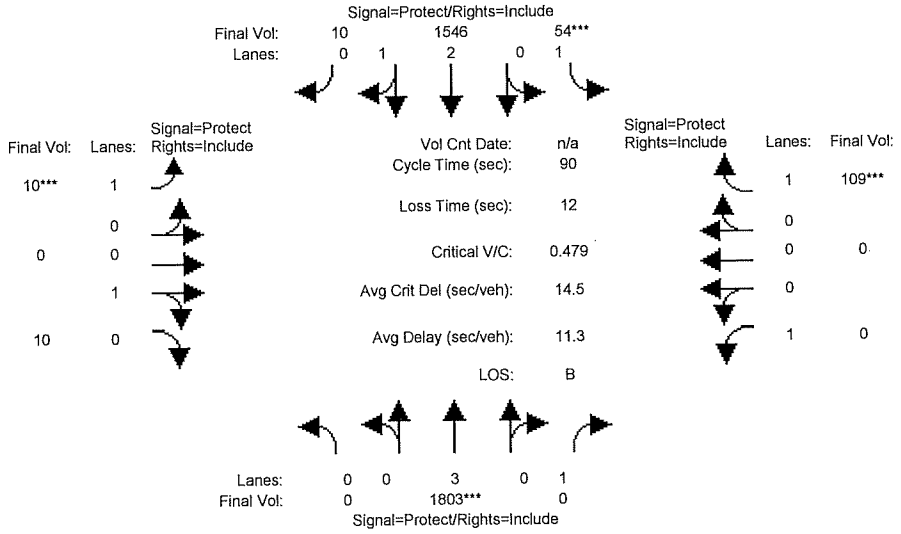
Intersection #61: Great America Parkway / City Place Parkway (Future Driveway)



Street Name:	Greate America Parkway						City Place Parkway (Future Drivew					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	10	10	7	10	0	7	0	10	7	0	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	0	1730	0	10	1480	10	10	0	10	0	0	10
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	1730	0	10	1480	10	10	0	10	0	0	10
Added Vol:	0	73	0	44	66	0	0	0	0	0	0	99
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	1803	0	54	1546	10	10	0	10	0	0	109
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	1803	0	54	1546	10	10	0	10	0	0	109
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1803	0	54	1546	10	10	0	10	0	0	109
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	1803	0	54	1546	10	10	0	10	0	0	109
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	0.98	0.95	0.92	1.00	0.95	0.92	1.00	0.92
Lanes:	0.00	3.00	1.00	1.00	2.98	0.02	1.00	0.00	1.00	1.00	0.00	1.00
Final Sat.:	0	5700	1750	1750	5564	36	1750	0	1800	1750	0	1750
Capacity Analysis Module:												
Vol/Sat:	0.00	0.32	0.00	0.03	0.28	0.28	0.01	0.00	0.01	0.00	0.00	0.06
Crit Moves:		****		****			****					****
Green Time:	0.0	53.5	0.0	7.0	60.5	60.5	7.0	0.0	17.5	0.0	0.0	10.5
Volume/Cap:	0.00	0.53	0.00	0.40	0.41	0.41	0.07	0.00	0.03	0.00	0.00	0.53
Delay/Veh:	0.0	11.4	0.0	47.9	7.0	7.0	39.5	0.0	29.5	0.0	0.0	47.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	11.4	0.0	47.9	7.0	7.0	39.5	0.0	29.5	0.0	0.0	47.0
LOS by Move:	A	B	A	D	A	A	D	A	C	A	A	D
HCM2k95thQ:	0	17	0	3	12	12	1	0	1	0	0	8

Note: Queue reported is the number of cars per lane.

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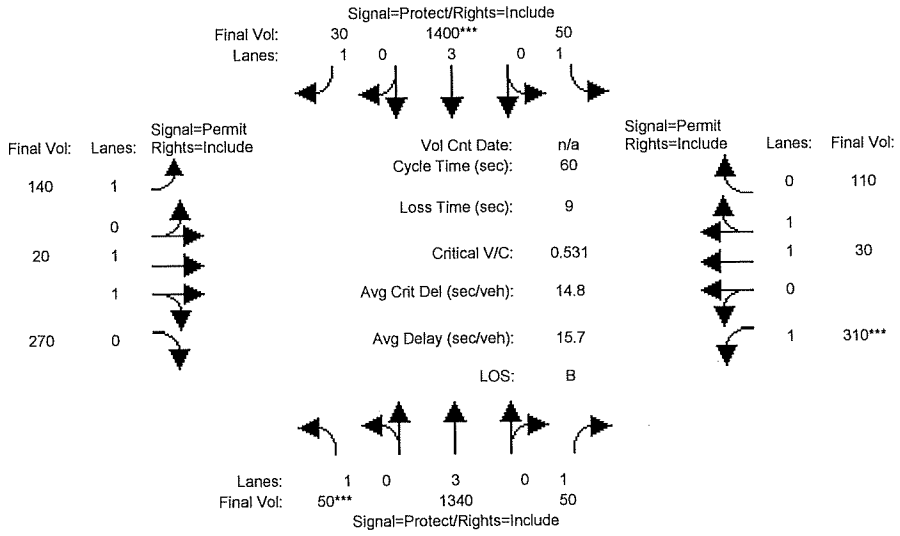
Santa Clara City Place
Phase 1 DAP Traffic Analysis January 2020
Background Conditions

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background No Project PM

Intersection #63: Great America Parkway/Bunker Hill Lane



Street Name:	Great America Parkway						Bunker Hill Lane					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	10	10	10	10	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	50	1340	50	50	1400	30	140	20	270	310	30	110
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	50	1340	50	50	1400	30	140	20	270	310	30	110
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	50	1340	50	50	1400	30	140	20	270	310	30	110
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	50	1340	50	50	1400	30	140	20	270	310	30	110
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	50	1340	50	50	1400	30	140	20	270	310	30	110
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	50	1340	50	50	1400	30	140	20	270	310	30	110
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	1.00	3.00	1.00	1.00	3.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1750	5700	1750	1750	5700	1750	1750	1900	1750	1750	1900	1750
Capacity Analysis Module:												
Vol/Sat:	0.03	0.24	0.03	0.03	0.25	0.02	0.08	0.01	0.15	0.18	0.02	0.06
Crit Moves:	****				****					****		
Green Time:	7.0	21.8	21.8	10.8	25.6	25.6	18.4	18.4	18.4	18.4	18.4	18.4
Volume/Cap:	0.24	0.65	0.08	0.16	0.58	0.04	0.26	0.03	0.50	0.58	0.05	0.20
Delay/Veh:	24.7	16.7	12.6	21.0	13.4	10.1	15.9	14.6	17.7	19.0	14.6	15.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	24.7	16.7	12.6	21.0	13.4	10.1	15.9	14.6	17.7	19.0	14.6	15.5
LOS by Move:	C	B	B	C	B	B	B	B	B	B	B	B
HCM2k95thQ:	2	12	1	2	12	1	5	1	10	12	1	4

Note: Queue reported is the number of cars per lane.

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Santa Clara City Place
Phase 1 DAP Traffic Analysis January 2020
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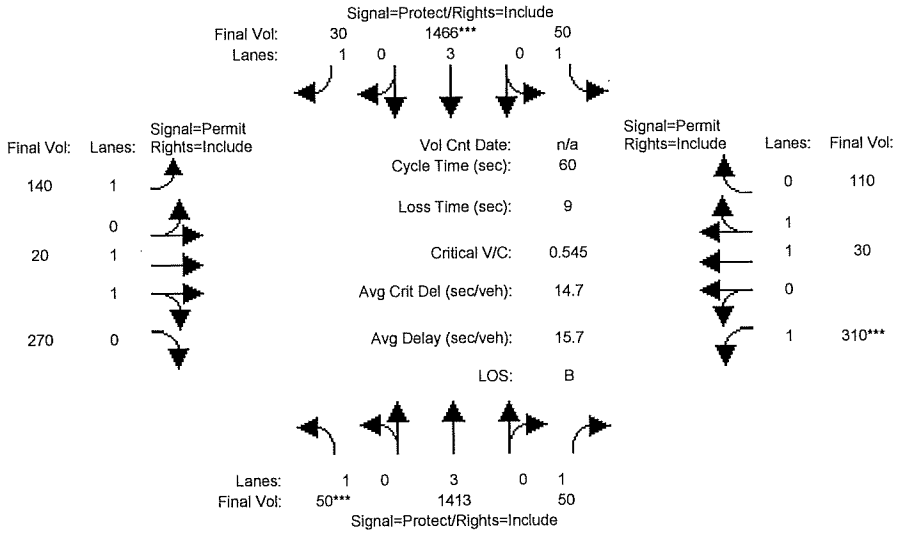
Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background Plus Project PM

Intersection #63: Great America Parkway/Bunker Hill Lane



Street Name:	Great America Parkway						Bunker Hill Lane					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	10	10	10	10	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	50	1340	50	50	1400	30	140	20	270	310	30	110
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	50	1340	50	50	1400	30	140	20	270	310	30	110
Added Vol:	0	73	0	0	66	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	50	1413	50	50	1466	30	140	20	270	310	30	110
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	50	1413	50	50	1466	30	140	20	270	310	30	110
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	50	1413	50	50	1466	30	140	20	270	310	30	110
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	50	1413	50	50	1466	30	140	20	270	310	30	110
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	1.00	3.00	1.00	1.00	3.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1750	5700	1750	1750	5700	1750	1750	1900	1750	1750	1900	1750
Capacity Analysis Module:												
Vol/Sat:	0.03	0.25	0.03	0.03	0.26	0.02	0.08	0.01	0.15	0.18	0.02	0.06
Crit Moves:	****				****					****		
Green Time:	7.0	22.5	22.5	10.6	26.1	26.1	17.9	17.9	17.9	17.9	17.9	17.9
Volume/Cap:	0.24	0.66	0.08	0.16	0.59	0.04	0.27	0.04	0.52	0.59	0.05	0.21
Delay/Veh:	24.7	16.4	12.1	21.2	13.3	9.8	16.3	14.9	18.3	19.7	15.0	15.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	24.7	16.4	12.1	21.2	13.3	9.8	16.3	14.9	18.3	19.7	15.0	15.9
LOS by Move:	C	B	B	C	B	A	B	B	B	B	B	B
HCM2k95thQ:	2	13	1	2	13	1	5	1	10	12	1	4

Note: Queue reported is the number of cars per lane.

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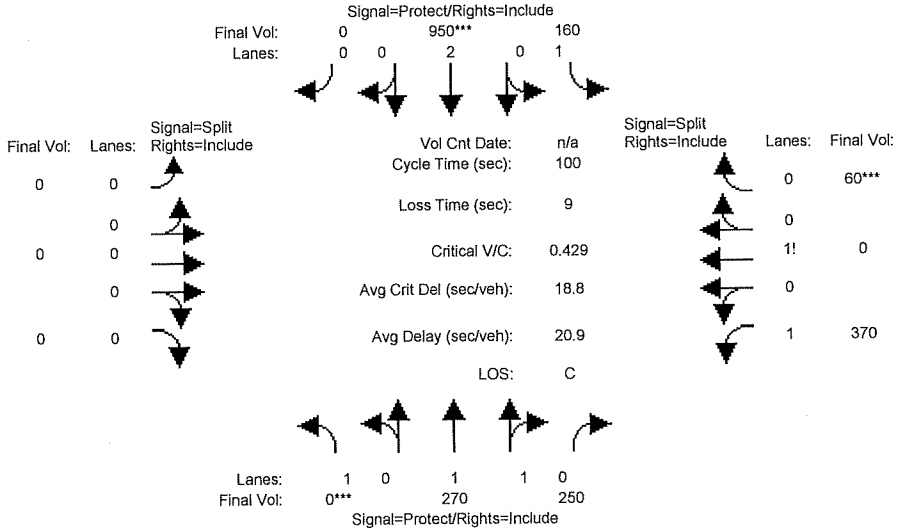
Santa Clara City Place
Phase 1 DAP Traffic Analysis January 2020
Background Conditions

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background No Project PM

Intersection #90: Laffeyette Street / Calle De Luna



Street Name:	Lafayette Street						Calle De Luna					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	0	270	250	160	950	0	0	0	0	370	0	60
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	270	250	160	950	0	0	0	0	370	0	60
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	270	250	160	950	0	0	0	0	370	0	60
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	270	250	160	950	0	0	0	0	370	0	60
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	270	250	160	950	0	0	0	0	370	0	60
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	270	250	160	950	0	0	0	0	370	0	60
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.95	0.92	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	1.00	1.01	0.99	1.00	2.00	0.00	0.00	0.00	0.00	1.76	0.00	0.24
Final Sat.:	1750	1920	1778	1750	3800	0	0	0	0	3071	0	429
Capacity Analysis Module:												
Vol/Sat:	0.00	0.14	0.14	0.09	0.25	0.00	0.00	0.00	0.00	0.12	0.00	0.14
Crit Moves:	****				****							****
Green Time:	0.0	36.9	36.9	24.0	53.8	0.0	0.0	0.0	0.0	30.2	0.0	30.2
Volume/Cap:	0.00	0.38	0.38	0.38	0.46	0.00	0.00	0.00	0.00	0.40	0.00	0.46
Delay/Veh:	0.0	23.4	23.4	32.4	14.4	0.0	0.0	0.0	0.0	28.0	0.0	28.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	23.4	23.4	32.4	14.4	0.0	0.0	0.0	0.0	28.0	0.0	28.7
LOS by Move:	A	C	C	C	B	A	A	A	A	C	A	C
HCM2k95thQ:	0	12	12	9	17	0	0	0	0	11	0	13

Note: Queue reported is the number of cars per lane.

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Santa Clara City Place
Phase 1 DAP Traffic Analysis January 2020
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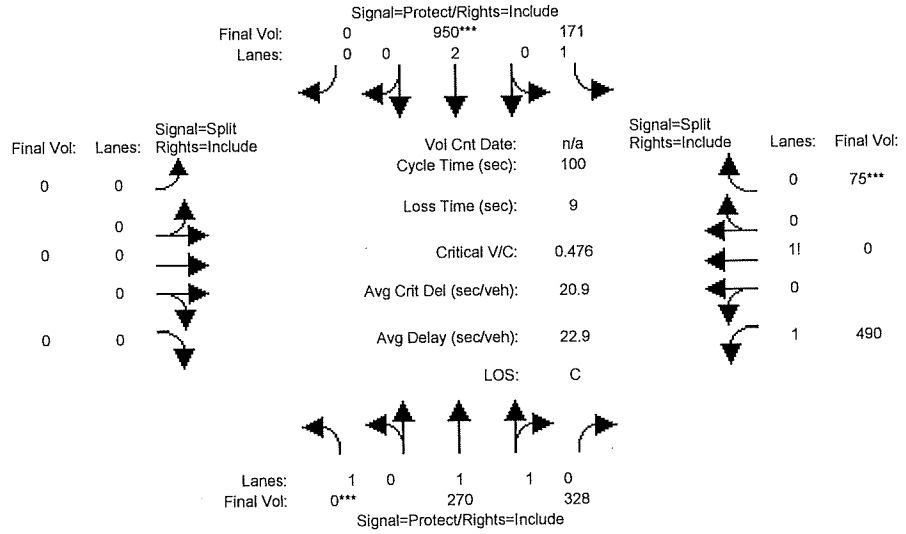
Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background Plus Project PM

Intersection #90: Laffeyette Street / Calle De Luna



Street Name:	Lafayette Street						Calle De Luna					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	0	270	250	160	950	0	0	0	0	370	0	60
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	270	250	160	950	0	0	0	0	370	0	60
Added Vol:	0	0	78	11	0	0	0	0	0	120	0	15
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	270	328	171	950	0	0	0	0	490	0	75
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	270	328	171	950	0	0	0	0	490	0	75
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	270	328	171	950	0	0	0	0	490	0	75
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	270	328	171	950	0	0	0	0	490	0	75
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	1.00	1.00	1.00	1.00	2.00	0.00	0.00	0.00	0.00	1.77	0.00	0.23
Final Sat.:	1750	1900	1750	1750	3800	0	0	0	0	3090	0	410
Capacity Analysis Module:												
Vol/Sat:	0.00	0.14	0.19	0.10	0.25	0.00	0.00	0.00	0.00	0.16	0.00	0.18
Crit Moves:	****				****							****
Green Time:	0.0	36.5	36.5	19.0	48.5	0.0	0.0	0.0	0.0	35.5	0.0	35.5
Volume/Cap:	0.00	0.39	0.51	0.51	0.52	0.00	0.00	0.00	0.00	0.45	0.00	0.52
Delay/Veh:	0.0	23.7	25.2	37.7	17.9	0.0	0.0	0.0	0.0	25.0	0.0	25.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	23.7	25.2	37.7	17.9	0.0	0.0	0.0	0.0	25.0	0.0	25.9
LOS by Move:	A	C	C	D	B	A	A	A	A	C	A	C
HCM2k95thQ:	0	12	16	11	19	0	0	0	0	14	0	16

Note: Queue reported is the number of cars per lane.

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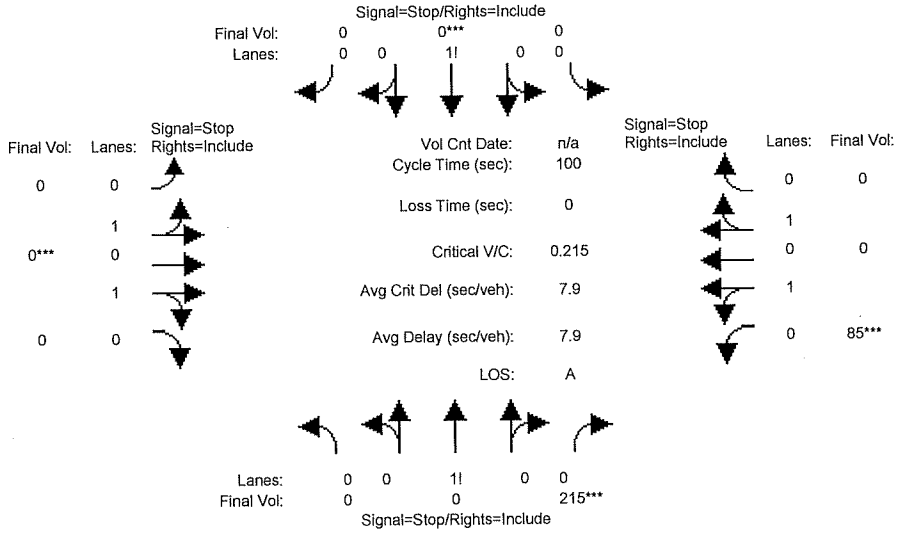
Santa Clara City Place
Phase 1 DAP Traffic Analysis January 2020
Background Conditions

Level Of Service Computation Report
2000 HCM 4-Way Stop (Future Volume Alternative)
Background Plus Project PM

Intersection #1002: Stars and Stripes Drive / Avenue A



Street Name:	Stars and Stripes Drive						Avenue A					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Volume Module:												
Base Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	0	0	0	0	0	0	0	0	0
Added Vol:	0	0	215	0	0	0	0	0	0	85	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	215	0	0	0	0	0	0	85	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	215	0	0	0	0	0	0	85	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	215	0	0	0	0	0	0	85	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	215	0	0	0	0	0	0	85	0	0
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	1.00	0.00	1.00	0.00	0.00	2.00	0.00	1.00	1.00	0.00
Final Sat.:	0	0	999	0	812	0	0	1387	0	646	710	0
Capacity Analysis Module:												
Vol/Sat:	xxxx	xxxx	0.22	xxxx	0.00	xxxx	xxxx	0.00	xxxx	0.13	0.00	xxxx
Crit Moves:			****		****			****		****		
Delay/Veh:	0.0	0.0	7.5	0.0	0.0	0.0	0.0	0.0	0.0	8.9	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	7.5	0.0	0.0	0.0	0.0	0.0	0.0	8.9	0.0	0.0
LOS by Move:	*	*	A	*	*	*	*	*	*	A	*	*
ApproachDel:		7.5			xxxxxx			xxxxxx			8.9	
Delay Adj:		1.00			xxxxx			xxxxx			1.00	
ApprAdjDel:		7.5			xxxxxx			xxxxxx			8.9	
LOS by Appr:		A			*			*			A	
AllWayAvgQ:	0.3	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0

Note: Queue reported is the number of cars per lane.

Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #1002 Stars and Stripes Drive / Avenue A

****

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Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	0 0 0	0 1		0 0	1! 0	0	0 1	0 1	0	0 1	0 1	0
Initial Vol:	0	0	215	0	0	0	0	0	0	85	0	0

Major Street Volume: 215
Minor Approach Volume: 85
Minor Approach Volume Threshold: 776

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

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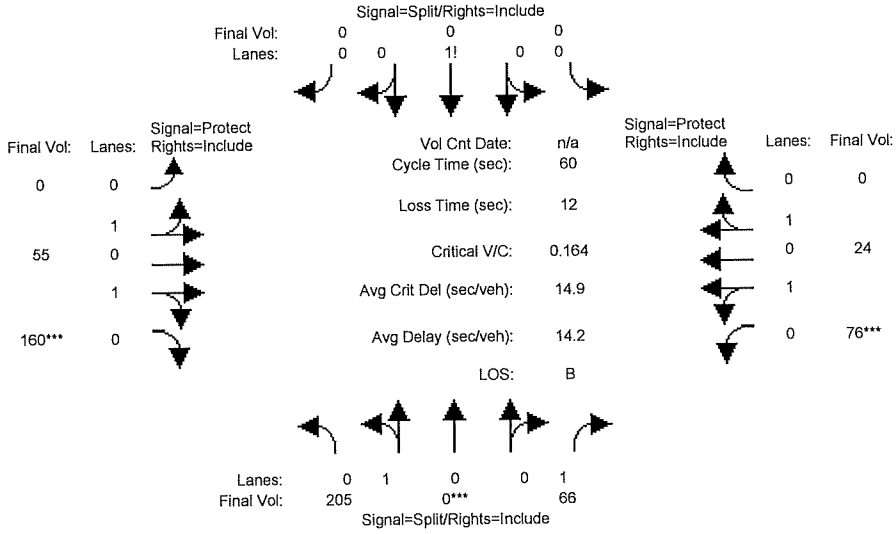
Santa Clara City Place
Phase 1 DAP Traffic Analysis January 2020
Background Conditions

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background Plus Project PM

Intersection #1003: Centennial Boulevard / Stars and Stripes Drive



Street Name:	Centennial Boulevard						Stars and Stripes Drive					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	144	0	20	0	0	0	0	0	0	20	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	144	0	20	0	0	0	0	0	0	20	0	0
Added Vol:	61	0	46	0	0	0	0	55	160	56	24	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	205	0	66	0	0	0	0	55	160	76	24	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	205	0	66	0	0	0	0	55	160	76	24	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	205	0	66	0	0	0	0	55	160	76	24	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	205	0	66	0	0	0	0	55	160	76	24	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.92	0.92	0.92	0.92	0.92	0.95	0.95	0.95	0.95	0.92
Lanes:	1.00	0.00	1.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00
Final Sat.:	1800	0	1750	0	1750	0	0	1800	1800	1800	1800	0
Capacity Analysis Module:												
Vol/Sat:	0.11	0.00	0.04	0.00	0.00	0.00	0.00	0.03	0.09	0.04	0.01	0.00
Crit Moves:		****							****	****		
Green Time:	41.7	0.0	41.7	0.0	0.0	0.0	0.0	10.0	10.0	7.0	10.0	0.0
Volume/Cap:	0.16	0.00	0.05	0.00	0.00	0.00	0.00	0.18	0.53	0.36	0.08	0.00
Delay/Veh:	3.2	0.0	2.9	0.0	0.0	0.0	0.0	21.6	24.3	25.3	21.1	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	3.2	0.0	2.9	0.0	0.0	0.0	0.0	21.6	24.3	25.3	21.1	0.0
LOS by Move:	A	A	A	A	A	A	A	C	C	C	C	A
HCM2k95thQ:	3	0	1	0	0	0	0	2	7	4	1	0

Note: Queue reported is the number of cars per lane.

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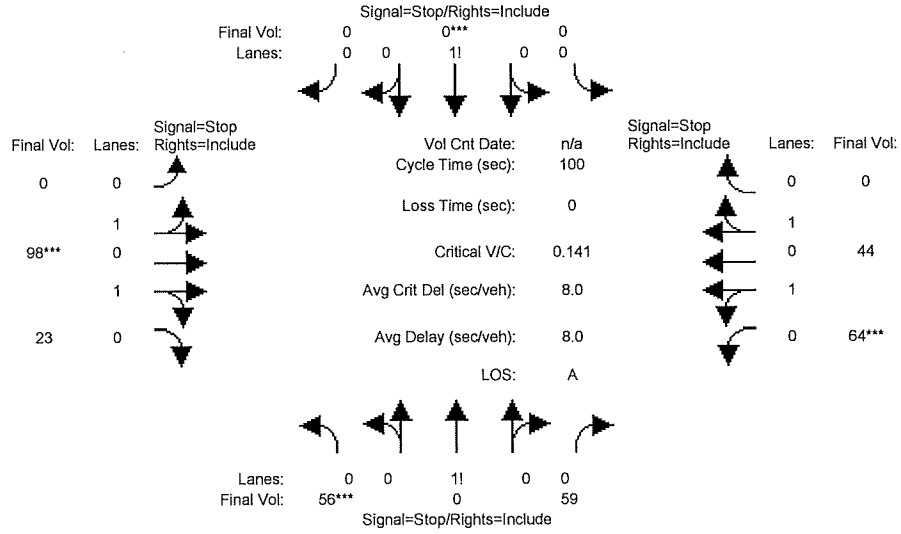
Santa Clara City Place
Phase 1 DAP Traffic Analysis January 2020
Background Conditions

Level Of Service Computation Report
2000 HCM 4-Way Stop (Future Volume Alternative)
Background Plus Project PM

Intersection #1004: Stars and Stripes Drive / Avenue B



Street Name:	Stars and Stripes Drive						Avenue B					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Volume Module:												
Base Vol:	0	0	0	0	0	0	0	20	0	0	20	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	0	0	0	0	20	0	0	20	0
Added Vol:	56	0	59	0	0	0	0	78	23	64	24	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	56	0	59	0	0	0	0	98	23	64	44	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	56	0	59	0	0	0	0	98	23	64	44	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	56	0	59	0	0	0	0	98	23	64	44	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	56	0	59	0	0	0	0	98	23	64	44	0
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.49	0.00	0.51	0.00	1.00	0.00	0.00	1.62	0.38	1.00	1.00	0.00
Final Sat.:	398	0	420	0	751	0	0	1205	293	661	727	0
Capacity Analysis Module:												
Vol/Sat:	0.14	xxxx	0.14	xxxx	0.00	xxxx	xxxx	0.08	0.08	0.10	0.06	xxxx
Crit Moves:	****				****			****		****		
Delay/Veh:	7.9	0.0	7.9	0.0	0.0	0.0	0.0	7.8	7.7	8.6	7.8	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	7.9	0.0	7.9	0.0	0.0	0.0	0.0	7.8	7.7	8.6	7.8	0.0
LOS by Move:	A	*	A	*	*	*	*	A	A	A	A	*
ApproachDel:	7.9			xxxxxx			7.8			8.3		
Delay Adj:	1.00			xxxxx			1.00			1.00		
ApprAdjDel:	7.9			xxxxxx			7.8			8.3		
LOS by Appr:	A			*			A			A		
AllWayAvgQ:	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1

Note: Queue reported is the number of cars per lane.

Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #1004 Stars and Stripes Drive / Avenue B

****

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Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Stop Sign				Stop Sign				Stop Sign				Stop Sign			
Lanes:	0	0	1!	0 0	0	0	1!	0 0	0	1	0	1 0	0	1	0	1 0
Initial Vol:	56		0	59	0		0	0	0		98	23	64		44	0

Major Street Volume: 229
Minor Approach Volume: 115
Minor Approach Volume Threshold: 793

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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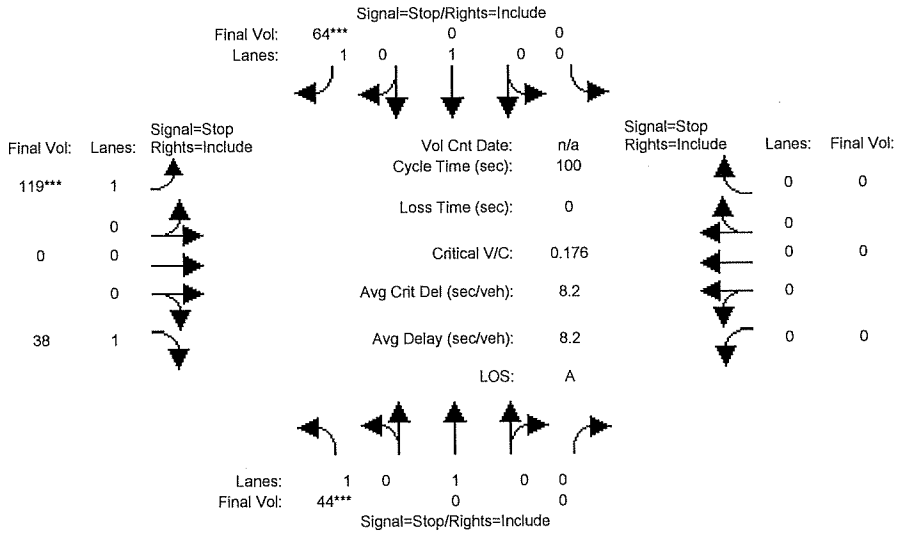
Santa Clara City Place
Phase 1 DAP Traffic Analysis January 2020
Background Conditions

Level Of Service Computation Report
2000 HCM 4-Way Stop (Future Volume Alternative)
Background Plus Project PM

Intersection #1005: Stars and Stripes Drive / Avenue C



Street Name:	Stars and Stripes Drive						Avenue C					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Volume Module:												
Base Vol:	0	0	0	0	0	20	20	0	0	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	0	0	20	20	0	0	0	0	0
Added Vol:	44	0	0	0	0	44	99	0	38	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	44	0	0	0	0	64	119	0	38	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	44	0	0	0	0	64	119	0	38	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	44	0	0	0	0	64	119	0	38	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	44	0	0	0	0	64	119	0	38	0	0	0
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00	0.00
Final Sat.:	647	709	0	0	710	825	676	0	871	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.07	0.00	xxxx	xxxx	0.00	0.08	0.18	xxxx	0.04	xxxx	xxxx	xxxx
Crit Moves:	****					****	****					
Delay/Veh:	8.5	0.0	0.0	0.0	0.0	7.3	9.0	0.0	6.9	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	8.5	0.0	0.0	0.0	0.0	7.3	9.0	0.0	6.9	0.0	0.0	0.0
LOS by Move:	A	*	*	*	*	A	A	*	A	*	*	*
ApproachDel:	8.5			7.3			8.5			xxxxxx		
Delay Adj:	1.00			1.00			1.00			xxxxx		
ApprAdjDel:	8.5			7.3			8.5			xxxxxx		
LOS by Appr:	A			A			A			*		
AllWayAvgQ:	0.1	0.0	0.0	0.0	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.0

Note: Queue reported is the number of cars per lane.

Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #1005 Stars and Stripes Drive / Avenue C

****

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Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	1 0	1 0	0	0 0	1 0	1	1 0	0 0	1	0 0	0 0	0
Initial Vol:	44	0	0	0	0	64	119	0	38	0	0	0

Major Street Volume: 157
Minor Approach Volume: 64
Minor Approach Volume Threshold: 1170

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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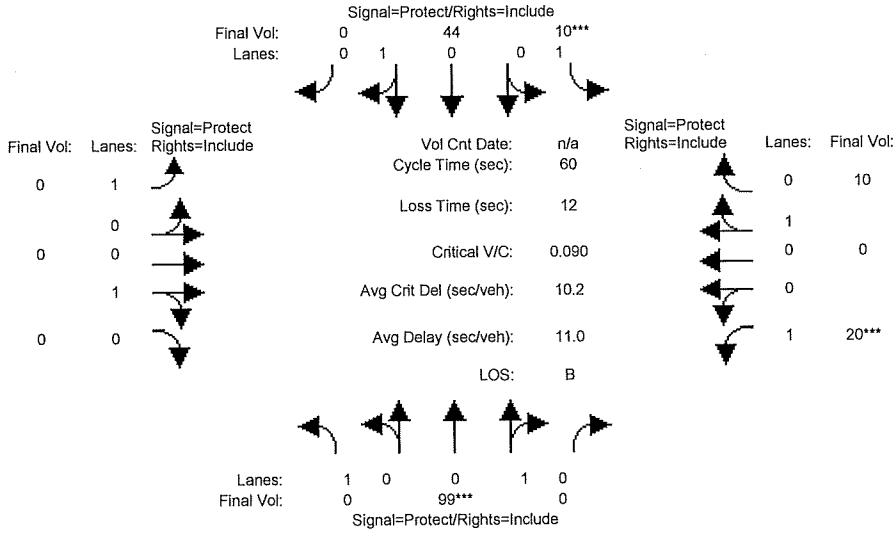
Santa Clara City Place
Phase 1 DAP Traffic Analysis January 2020
Background Conditions

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background Plus Project PM

Intersection #1006: Avenue C / Station Road



Street Name:	Avenue C						Station Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	0	0	0	10	0	0	0	0	0	20	0	10
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	10	0	0	0	0	0	20	0	10
Added Vol:	0	99	0	0	44	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	99	0	10	44	0	0	0	0	20	0	10
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	99	0	10	44	0	0	0	0	20	0	10
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	99	0	10	44	0	0	0	0	20	0	10
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	99	0	10	44	0	0	0	0	20	0	10
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.95	0.92	0.92	0.95	0.92	0.92	1.00	0.92	0.92	1.00	0.95
Lanes:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	0.00	1.00
Final Sat.:	1750	1800	0	1750	1800	0	1750	1900	0	1750	0	1800
Capacity Analysis Module:												
Vol/Sat:	0.00	0.06	0.00	0.01	0.02	0.00	0.00	0.00	0.00	0.01	0.00	0.01
Crit Moves:		****		****						****		
Green Time:	0.0	33.9	0.0	7.0	24.1	0.0	0.0	0.0	0.0	7.1	0.0	10.0
Volume/Cap:	0.00	0.10	0.00	0.05	0.06	0.00	0.00	0.00	0.00	0.10	0.00	0.03
Delay/Veh:	0.0	6.0	0.0	23.6	11.1	0.0	0.0	0.0	0.0	23.8	0.0	21.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	6.0	0.0	23.6	11.1	0.0	0.0	0.0	0.0	23.8	0.0	21.0
LOS by Move:	A	A	A	C	B	A	A	A	A	C	A	C
HCM2k95thQ:	0	2	0	0	1	0	0	0	0	1	0	0

Note: Queue reported is the number of cars per lane.

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Attachment C

Getting Trip Generation Right: Eliminating the Bias Against Mixed Use Development, 2013

GETTING TRIP GENERATION RIGHT

Eliminating the Bias Against Mixed Use Development

By Jerry Walters, Brian Bochner, and Reid Ewing

APA

American Planning Association

Making Great Communities Happen

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Photos in document courtesy of Fehr & Peers.

TABLE OF CONTENTS

When planners, developers, or traffic engineers conduct traffic impact analyses for proposed developments, they typically use the trip-generation data and analysis methods published by the Institute of Transportation Engineers (ITE) in its *Trip Generation* report and *Trip Generation Handbook*. However, standard traffic engineering practice does not account for project characteristics such as the mix and balance of land uses, compactness of design, neighborhood connectivity and walkability, infill versus remote location, and the variety of transportation choices offered. This can have significant implications when the project in question is a mixed use development.

The conventional methods used by traffic engineers throughout the U.S. to evaluate traffic impacts fail to account for the benefits of mixed use and other forms of lower-impact development. They exaggerate estimates of impacts and result in excessive development costs, skewed public perceptions, and decision maker resistance. These techniques overlook the full potential for internalizing trips through interaction among on-site activities and the extent to which development with a variety of nearby complementary destinations and high-quality transit access will produce less traffic. These effects can reduce the number of vehicle trips generated to a far greater degree than recognized in standard traffic engineering practice.

The ITE trip-generation data and analysis methods apply primarily to single-use and freestanding sites, which limits their applicability to compact, mixed-use, transit oriented developments (ITE 2004, 2012). The *Handbook* does include an approach based on limited data on mixed use developments, but only from six sites in Florida, not nearly enough to cover today's diverse mixed use developments across the United States.

It is important that planners and developers recognize the implications of using standard ITE trip generation data and methodologies for mixed use developments and use methods that more accurately estimate traffic generated by these projects. Commonly used methods unjustifiably favor types of development that consume greater resources and generate greater impacts, shifting our attention away from development forms and locations that stimulate higher levels of social interaction and benefit to established communities.

Researchers have attempted to analyze how a mix of uses in a compact, walkable project design affects trip generation and on-the-ground traffic impacts. In 2011, two major studies introduced methodologies for predicting traffic generation from mixed use development. The researchers on those studies have now collaborated to combine the advantages of both and provide, in this *PAS Memo*, an even more complete and reliable approach to measuring the benefits of such forms of development. Using this new approach, planners conducting trip-generation analysis for mixed use development projects will produce more accurate forecasts of traffic generation, which will allow more appropriate on-site design features and off-site mitigation measures.

The Problem with Conventional Traffic Impact Analysis

Traffic analysis is intended to inform planners, community members, and public officials of the most suitable planning features and infrastructure elements needed to support new development. However, the conventional methods were developed during an era when most new development was single use, stand alone, highway oriented, and suburban. Standard practices ascribe similar levels of impact to mixed-use, integrated, transit-oriented, and infill development, and consequently overlook the benefits of — and impose unreasonable obstacles to — appropriate planning and approval of such "smart growth" forms.

The standard analytic process used for planning, design, and impact analysis does not account for the degree to which well-designed mixed use development places shops, restaurants, offices, and residences in close proximity to one another, shortening internal trips between them and making more trips conducive to walking, biking, or riding transit. Such reductions in traffic and vehicle miles traveled reduce fuel consumption, greenhouse-gas and other emissions, and exposure of residents to passing traffic and the related threats to comfort, health, and safety. Reduced vehicular travel can also lessen the need to construct new or wider streets and highways, allowing communities to economize on infrastructure. Mixed use developments (MXD) also create opportunities for shared parking, which can reduce the number of spaces needed in parking lot and garage construction.

Traffic-Reducing Attributes of Mixed Use Development

Many of the attributes of lower-impact development can reduce traffic generation compared with conventional single-use suburban development forms:

Diverse land uses and activities can fill basic needs nearby, thereby reducing automobile travel. They allow for linkage of trips in multipurpose trip chains, with a single auto trip to an activity center followed by several short trips on foot. Mixed use sites also create the opportunity for shared parking, which in turn encourages multipurpose trips and reduces the tendency to make separate automobile trips from one destination to the next.

Higher densities and intensities of development provide opportunities for residents, employees, and visitors to circulate among larger numbers of businesses and activities by walking, bicycling, or making short trips by automobile. Higher concentrations of land use also support higher quality and higher-frequency transit service, offering tenants and visitors a viable alternative to driving. High land values and cost to provide parking also leads to higher parking prices, a disincentive to driving versus other available modes of travel.

Walkable urban design and interconnected streets generally reduce the perceived and real separation among destinations, encourage walking and cycling, and reduce the circuitousness and length of each trip.

Short distances to transit help make transit a viable alternative to the automobile and can create activity centers with sufficient street life, amenities, and walking connections where needs and entertainment can be accomplished without independent car trips.

Accessibility to complementary destinations outside the development reduces distances between jobs and housing, services and entertainment, and recreation, often making automobile travel unnecessary. Placed at infill locations, complementary new development that satisfies local needs can also reduce trip making by residents, employees, and shoppers in the surrounding community.

Socio-demographic compatibility can further reduce auto traffic to the extent that developments are designed to attract and accommodate residents with low auto ownership (through, for example, parking supply limits), low travel needs (based on, for example, family size,

fewer employed residents, lower income, or age range), or close affiliation with other project elements or surrounding land uses (linked, or simply compatible, jobs and residents).

Scale of development affects feasibility for communities and employers to provide travel demand options and management services that can shift traveler modes from the auto to alternative modes of travel. Residents and businesses that self-select into such sites and settings are also often more amenable to travelling less or using alternatives to the automobile. Transportation demand management (TDM) programs are both more likely to be available and more likely to be successful in compact, central, transit-supported settings.

The danger of using traditional traffic-generation data based on single-use facilities is that it misrepresents the true traffic generation impacts of mixed use development. The consequences of miscalculating the benefits of mixed-use development may include unreasonable development cost, exaggerated impacts and mitigation responsibilities, skewed public perceptions, and decision maker resistance. This penalizes mixed use development proposals, often tipping the balance in favor of projects that offer fewer benefits and ultimately generate higher impacts. Denying "smart" forms of development does not reduce the overall market demand for housing and business, so the building disallowed ends up in other locations within the region, often in less accessible locations, at lower densities, and in less-mixed use configurations. The end result can be more traffic and higher regional vehicle-miles traveled than had the smart-growth development been approved.

Understandably, communities and public reviewers want to minimize the risk of unmitigated impacts. However, doing so through the application of overly conservative project evaluation criteria undermines the pursuit of other community values, such as vibrant neighborhoods with integrated development and activities that minimize the need to travel and the impacts produced by excessive unnecessary use of the automobile.

Conservative traffic-generation estimates have supply-side impacts, affecting design and cost of streets and parking. Within constrained sites, over design of traffic elements can limit the space available for revenue-producing land uses and increase other development costs. Development fee programs also rely heavily on traffic-generation estimates from the ITE *Trip Generation Manual*; this can lead to setting excessively high fee rates on mixed use development. Unquestioning use of the ITE data can unreasonably jeopardize a MXD project's approval, financial feasibility, and design quality.

Mixed use sites can take many forms, but all offer a diversity of uses in walkable settings. Oakland City Center BART (left); RiverPlace, Portland, Oregon (opposite page).

of walking and biking and allows for shared parking.

Design: connectivity, walkability. Good design improves connectivity, encourages walking and biking, and reduces travel distance.

New Research Evidence for Mixed Use Development Trip Generation

Several hundred studies over the past 20 years have confirmed that the built environment affects travel generation (Ewing and Cervero 2010). Development features associated with reduced trip rates include a series of "D" variables: density, diversity of uses, design of urban environment, distance from transit, destination accessibility, development scale, demographics of inhabitants, and demand management. In the past three years, research has examined more directly the relative influence of each factor and their interactions and has sought to corroborate the research results through field verification. Organizations such as the U.S. Environmental Protection Agency and the National Academy of Sciences Transportation Research Board have sponsored several of the more reputable studies on the subject.

The Eight "D" Variables

The most advanced research has confirmed that trip rate reductions are quantifiably associated with the attributes of mixed use development, defined in terms of these characteristics of urban development patterns:

Density: dwellings, jobs per acre. Higher densities shorten trip lengths, allow for more walking and biking, and support quality transit.

Diversity: mix of housing, jobs, retail. A diverse neighborhood allows for easier trip linking and shortens distances between trips. It also promotes higher levels

Destinations: regional accessibility. Destination accessibility links travel purposes, shortens trips, and offers transportation options.

Distance to Transit: rail proximity. Close proximity to transit encourages its use, along with trip-linking and walking, and often creates accessible walking environments.

Development Scale: residents, jobs. Appropriate development scale provides critical mass, increases local opportunities, and supports transit investment.

Demographics: household size, income. Mixed use development allows self-selection by households into settings with their preferred activities and travel modes, allows businesses to locate convenient to clients, and supports a socioeconomic "fit" among residents, businesses, and activities.

Demand Management: pricing, incentives. Demand management ties incentives to the urban environment and allows alignment of auto disincentives with available alternate modes. It takes advantage of critical mass of travel resulting from density, diversity, and design.

A growing body of evidence indicates that these factors, individually or together, quantifiably explain the number of vehicle trips and vehicle-miles traveled for a development project and for a region as a whole. Each of the D factors influences traffic generation through a variety of mechanisms. There are also important interactions, both synergistic and mutually dampening, among the D factors that call for sophisticated techniques when quantifying the travel generation effects of different combinations proposed in any project or plan.

The Evidence that Conventional Methods Overstate MXD Impacts

Empirical evidence and research provides evidence that mixed-use, infill, and transit-oriented developments generate fewer external vehicle trips than equivalent stand-alone uses. A nationwide study sponsored by the U.S. EPA (Ewing et al. 2011) found statistical correlation between the D factors and increased trip internalization and increased walking and transit use. It further demonstrated, for 27 mixed-use development sites across the U.S., that:

1. On average, the sites' land uses would generate 49 percent more traffic if they were distributed among single-use sites in suburban settings, the situations to which the ITE *Trip Generation Manual* would apply.

2. The ITE *Handbook*, the current state-of-practice resource for estimating mixed use trip generation, would overestimate peak hour traffic by an average of 35 percent.

Atlantic Station offers residential units alongside walkable office and commercial space.

The following examples from recent studies demonstrate the degree by which such developments reduce traffic generation relative to what would be presumed under conventional traffic analysis methods.

Atlantic Station in Atlanta is a major mixed-use infill development located on a 138-acre former brownfield site in midtown Atlanta, connected by nonstop shuttle service to a MARTA metro rail station about a half-mile away. At the time it was studied, the development included 798 mid- and high-rise residential units, 550,600 square feet of office space, 434,500 square feet of retail space, a 101-room hotel, a restaurant, and a cinema.

For Atlantic Station, the "internal capture rate" (proportion of generated trips that remain internal to the site) is 15 percent in the morning peak hour and about 40 percent of evening peak-hour. Of the trips entering and leaving the site, between 5 and 7 percent use transit and another 5 to 7 percent walk or bicycle.

According to standard ITE trip-generation rates, were the Atlantic Station development elements located at single-use suburban sites, they would generate 37 percent more weekday traffic and 69 percent more PM peak traffic than actually counted at the centrally located, mixed use site.

RiverPlace in Portland is an award-winning mixed use waterfront development on a former brownfield within easy walking distance of downtown Portland, Oregon. Adjacent to the Tom McCall Waterfront Park, the site contains 700 residential units (condominiums and apartments), 40,000 square feet of office space, 26,500 square feet of small retail shops and restaurants, a 300-room hotel, and a marina, cinema, and athletic club. The waterfront walking environment conveniently links all of the activities within the development site and connects the site to the Portland central business district. Transit is also available at the site; the Portland Streetcar connects RiverPlace to downtown Portland and the greater Portland area.

RiverPlace (left) offers a mix of residential, office, and commercial uses on Portland's waterfront. Photo courtesy Fehr & Peers. Bay Street's walkable urban village (below) is designed on a Main Street theme.

RiverPlace's internal capture rate is 36 percent. For internal and external trips combined, 40 percent are by walking and 5 percent by transit. These statistics are significantly higher than the regional averages of 15 percent of trips taken by walking and 2 percent by transit.

Bay Street in Emeryville is a vibrant, thriving recent redevelopment project in Emeryville, California, just outside San Francisco. The previously heavy-industrial area within and around Bay Street has undergone dramatic revitalization in the past two decades, and it now includes the headquarters of Pixar Studios and other businesses. Bay Street itself is a one-million-square-foot walkable urban village designed on a Main Street theme. It contains a major theater complex, hotel, and 382,000 square feet of fashionable retail shops (including an Apple Store) with 381 apartment units and offices above. The site is within walking distance of a Capitol Corridor commuter rail station and within a shuttle bus ride of BART metro rail.

Bay Street's daily traffic generation is about 41 percent less than the combined total that would be generated by similarly sized suburban shopping centers, theater complexes, residential uses, and office developments based on standard ITE trip rates for stand-alone land uses. It also generates 36 percent less daily traffic than would be estimated by traffic engineers applying the ITE *Handbook* and conventional analysis methods. In the PM peak hour, Bay Street traffic generation is 46 percent lower than would be generated by the same land uses scattered on individual suburban sites, and 41 percent lower than would be estimated by standard ITE traffic analysis.

New Models for Mixed Use Development Traffic Analysis

To address the shortcomings in conventional analysis methods, the National Cooperative Highway Research Program (NCHRP) and the U.S. EPA recently conducted significant research studies to improve quantification of the trip-reducing effects of mixed use development. Each study took a different approach: NCHRP undertook extensive visitor surveys and traffic counts at Atlantic Station and two mixed-use developments in Texas (Bochner et al. 2011), while EPA sponsored a nationwide study of more than 260 mixed use developments across the U.S. using regional travel survey data and verification traffic counts at a subset of the sites (Ewing et al. 2011). Using different analysis methods, each study developed a recommended approach to discounting traffic generation estimates to account for the mix of uses and other development characteristics. Each study represents a major advancement over conventional analysis methods.

NCHRP Report 684

National Cooperative Highway Research Program (NCHRP) Report 684, "Enhancing Internal Trip Capture Estimation for Mixed-Use Developments," analyzed internal-capture relationships of MXD sites and examined the travel interactions among six individual types of land uses: office, retail, restaurant, residential, cinema, and hotel. The study looked at three master-planned developments: Mockingbird Station, a single-block TOD in Dallas; Legacy Town C enter, a multiblock district in suburban Plano, Texas, containing fully integrated and adjacent complementary uses; and Atlantic Station (see above). It compared the survey results to those found in prior ITE studies at three Florida sites, Boca del Mar, Country Isles, and Village Commons, all containing a variety of land uses, though in single-use pods.

Based on traveler and vehicle counts and interviews, the study ascertained interactions among the six land-use types of interest and compared them with site characteristics. It then examined the percentage of visitors to each land-use type who also visited each of the other uses during the same trip. The study considered site context factors and described percentage reductions in sitewide traffic generation that might result from the availability of transit service and other factors.

Researchers then performed verification tests by comparing the analysis results to those available from ITE for three earlier studies at Florida mixed use sites. The validation confirmed that the estimated values were a reasonable match for actual counted traffic. The product of the study is a series of tables and spreadsheets that balance and apply the discovered use-to-use visitation percentages to the land uses within the project site under study. The interaction percentages are then used to discount ITE trip-generation rates and to reduce what would otherwise represent the number of trips entering and leaving the entire site.

EPA MXD

The U.S. EPA–sponsored 2011 report, "Traffic Generated by Mixed-Use Developments — A Six-Region Study Using Consistent Built Environmental Measures," investigated trip generation, mode choice, and trip length for trips produced and attracted by mixed use developments. Researchers selected six regions — Atlanta, Boston, Houston, Portland, Sacramento, and Seattle — to represent a wide range of urban scale, form, and climatic conditions. Regional travel survey data with geographic coordinates and parcel-level detail available for these areas allowed researchers to isolate trips to, from, and within MXDs and relate travel choices to fine-grained characteristics of these developments.

In each region, researchers worked with local planners and traffic engineers to identify a total of 239 MXDs that met the ITE definition of multi-use development. The MXDs ranged from compact infill sites near regional cores to low-rise freeway-oriented developments. They varied in size, population and employment densities, mixes of jobs and housing, presence or absence of transit, and locations within their regions. In total, the MXD sample for the six regions provided survey data on almost 36,000 trips.

The analysis found that one or more variables in each of seven D categories (see above) were statistically significant predictors of internal capture, external walking, external transit use, and external private vehicle trip length. Specifically, an MXD's external traffic generation was related to population and employment within the site (density); the relative balance of jobs and housing within the site and the amount of employment within 1 mile of the site (diversity); the density of intersections within the site as a measure of street connectivity (design); the presence of bus stops within a quarter mile or the presence of a rail station (distance from transit); employment within a mile of site boundaries and percentage of regional employment within 20 minutes by car, 30 minutes by car, and 30 minutes by transit (destination accessibility); the gross acreage of the development (development scale); and the average number of household members as well as

household vehicle ownership per capita(demographics). The accuracy of the EPA MXD method was verified through traffic generation comparisons at 27 mixed-use sites across the U.S.

The EPA MXD product is a series of equations and instructions captured in a spreadsheet workbook. The methodology calculates the percentage reductions in ITE trip generation resulting from the national statistical analysis of seven D effects on internal trip capture, walking, and transit use. The spreadsheets produce reduced estimates of traffic generation on a daily basis and for peak traffic hours.

Combining the Approaches

The NCHRP 684 method and EPA MXD method each derive from different research approaches and produce different methods of analyzing trip generation at mixed use developments. They focus on overlapping but not identical aspects of mixed-use development sites and their contexts and offer respective strengths and weaknesses in terms of factors considered and ease of application. Selecting which method to employ under different circumstances requires both a comparison of their capabilities as well as professional judgment of their respective strengths and weaknesses.

Report 684 includes a refined assessment of on-site land-use categories, specifically recognizing the roles of restaurants, theaters, and hotels within the site land-use mix, along with an adjustment to account for the spatial separations among individual land uses within the development site. It is directly useful for the evaluation of proposed development sites that are similar to the one or more of the three surveyed in Atlanta and Texas for the report. However, it is not responsive to factors such as regional location, transit availability, density of development, walkability factors, and the socio-demographic profile of site residents and businesses.

In contrast, the EPA MXD method accounts directly and quantitatively for these factors. However, while it accounts for the balances of retail, office, and residential development, it does not explicitly differentiate subcategories such as restaurants, theaters, and hotels. Furthermore, it requires the analyst to account for off-site development, including employment within a one-mile radius of the MXD and the number of jobs available within 30 minutes of the site.

To develop a method that captures the best of both sets of research findings, the authors of the two original studies decided to collaborate on an integrated method that recognizes the full array of on-site and context characteristics that contribute to traffic reduction and, through a focus on empirical verification, achieves greater accuracy than either method individually.

In developing the integrated approach, we compared the performances of the methods to actual traffic counts at a diverse group of mixed use developments in a variety of settings. The 27 verification sites were successful mixed-use development, exhibiting moderate to high levels of activity in terms of business sales, occupied residential units, property value, and household income, with average or above-average person trips, at the time of the survey. They included those studied for NCHRP 684, the sites used as the basis for the ITE *Trip Generation Handbook*, and others surveyed by Fehr & Peers, transportation consultants. Six of the 27 sites were located in Florida, and three were located in Atlanta and Texas. Three of these nine were nationally known examples of smart growth or transit-oriented development: Atlantic Station, Mockingbird Station, and Celebration, Florida. Six sites were located in San Diego County and were designated by local planners and traffic engineers in 2009 as representing a wide range of examples of smart growth trip generators in that region. The 12 remaining sites were MXD developments located elsewhere in California and in Utah, ranging from TOD sites (commuter rail and ferry) to conventional suburban freeway-oriented mixed use sites.

A New Approach: The MXD+ Method

The new analytical approach, the MXD+ method, combines the strengths of NCHRP 684 and EPA MXD. The authors sought to (1) address the fact that each method has strengths relative to the other, (2) create a method that is more accurate than either of the individual methods alone, and (3) reduce confusion among practitioners on which is the most appropriate method.

The proposed MXD+ method incorporates the underlying data sources and logic that the two methods share. It offers the ability to assess the effects of spatial separation of uses and recognition of more specific land-use categories and to consider the dynamic influences of local development context, regional accessibility, transit availability, development density and walkability factors, and the characteristics of residents.

To develop the preferred method, the authors experimented with different methods of integrating the two methods and arrived at a direct calibration approach. The appropriate combination of the results of the two individual methods was determined through regression analysis to identify the proportions that provided the best correlation with the traffic counted at the 27 validation sites. Table 1 presents results from the regression analysis, listing the proportions of the two methods found most effective at matching the traffic generation at the diverse set of mixed use validation sites. Weighting the results of the two individual analyses by the percentages in Table 1 and combining the results produces more accurate estimates of traffic generation and captures the effects of all of the site description variables included in the NCHRP and EPA methods.

TABLE 1 **OPTIMAL BLEND OF NCHRP 684 AND EPA MXD METHODS**

	AM PEAK TRAFFIC	PM PEAK TRAFFIC	AVERAGE DAILY TRAFFIC
NCHRP 684	10.1%	36.5%	n/a
EPA MXD	89.9%	63.5%	100%

The step-by-step method is as follows:

1. Apply the full EPA MXD methodology to predict external traffic generation as influenced by site development scale, density, accessibility, walkability and transit availability, resident demographics, and general mix of uses.

2. Apply the full NCHRP 684 method to capture the effects of detailed land-use categories, including hotel, theater, and restaurant, and the spatial separation of uses within small and medium sites.

3. Combine the results of the two methods in terms of percentages of trips remaining internal to the development site, using proportioning factors presented in the table above.

4. Apply adjustments to account for off-site walking and transit travel using the EPA MXD method.

5. Discount standard ITE traffic-generation rates by the percentages of internalization produced in step 3 and the percentage of walk and transit travel in step 4 to obtain the estimate of site- generated traffic.

TABLE 2 COMPARISON OF THREE PRINCIPAL METHODS IN TERMS OF PROJECT CHARACTERISTICS CONSIDERED	EPA MXD METHOD	NCHRP 684 METHOD	MXD+ METHOD
Project Characteristics Considered			
Density of Development	♦		♦
Diversity of Uses: Jobs/Housing	♦	♦	♦
Diversity of Uses: Housing/Retail		♦	♦
Diversity of Uses: Jobs/Services		♦	♦
Diversity of Uses: Entertainment, Hotel		♦	♦
Design: Connectivity, Walkability	♦	♦	♦
Design: Separation Among Uses		♦	♦
Destination Accessibility by Transit	♦		♦
Destination Accessibility by Walk/Bike	♦		♦
Distance from Transit Stop	♦		♦
Development Scale	♦		♦
Distance from Transit Stop	♦		♦
Development Scale	♦		♦
Demographic Profile	♦		♦
Data Needs (beyond Project Site Plan)			
Average Residents per Dwelling Unit	♦		♦
Average Autos Owned per Dwelling Unit	♦		♦
Nearby (1/4 mi) Bus Stops and Rail Stations	♦		♦
Jobs Within 1 Mile of Site	♦		♦
Jobs Within 30-Minute Transit Trip	♦		♦
Regional Employment	♦		♦
Located in CBD or TOD?	♦		♦
Site Development by Classification		♦	♦
Vehicle Occupancy Estimate		♦	
Mode Split Estimate		♦	

As Table 2 indicates, the MXD+ method improves traffic generation estimates by considering the full array of 12 site development and context characteristics shown to influence internal capture and mode share, while the individual methods consider only 5 to 8 factors each. Effects considered in MXD+ that are not included in the NCHRP 684 method include household size and auto ownership, site proximity to bus and rail stops, and accessibility to local and regional jobs. Effects considered in the NCHRP 684 method that do not appear in the EPA MXD method include specific land uses and proximity of interacting land uses to each other.

Table 3 presents the statistical performance of the MXD+ integrated method with the individual performance of the individual NCHRP 684 and EPA MXD methods. We compared the ability of each of the available methods to replicate the amount of traffic generated at the 27 validation sites in terms of statistical measures including percent root mean squared error, a metric used in the transportation field to evaluate model accuracy, and the coefficient of determination (or "R-squared"), which measures the ability of the analysis method to account for the variations in traffic generation among the 27 survey sites. For daily traffic generation, MXD+ is equivalent to the EPA MXD method, as the NCHRP 684 method does not address daily analysis. For peak hour traffic generation, MXD+ performs notably better than either of the individual methods.

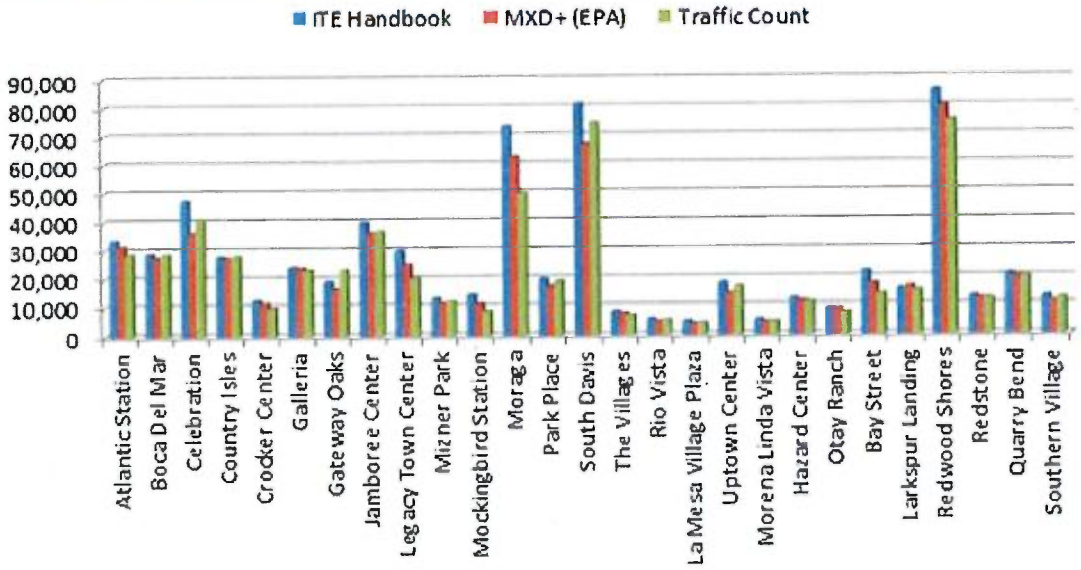
TABLE 3 COMPARISON OF THREE PRINCIPAL METHODS IN TERMS OF PERFORMANCE AT VALIDATION SITES

	EPA MXD METHOD	NCHRP 684 METHOD	MXD+ METHOD
Daily Traffic Generation			
R-squared	96%	89%*	**96%**
Average Error	2%	16%*	**2%**
Root Mean Square Error	17%	27%	**17%**
AM Peak Traffic Generation			
R-squared	97%	93%*	**97%**
Average Error	12%	30%	**12%**
Root Mean Square Error	21%	33%	**21%**
PM Peak Traffic Generation			
R-squared	95%	81%	**97%**
Average Error	8%	18%	**4%**
Root Mean Square Error	18%	36%	**15%**

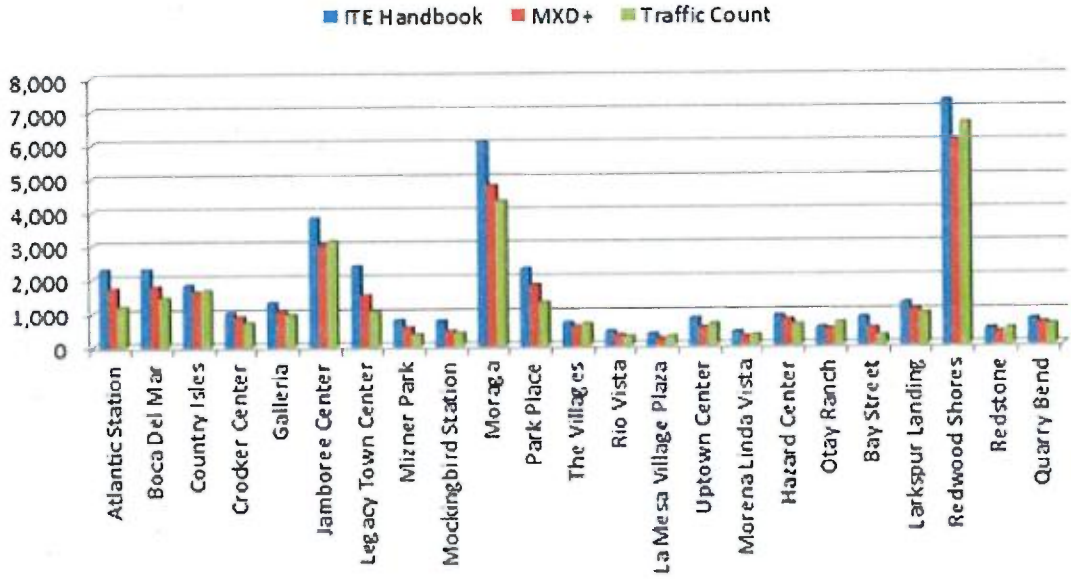
** ITE Handbook internalization statistics (NCHRP 684 method does not address daily trip generation)*

The graphs on the following page compare the performance of the MXD+ method to the ITE *Handbook* method at replicating traffic generation at the diverse group of mixed-use validation sites. Compared with the ITE *Handbook*, MXD+ method more accurately matches the amount of daily traffic actually counted at 20 of the 27 survey sites. In the AM peak hour, it is more accurate than the ITE Handbook at 21 of the 24 sites for which counts were available, and in the PM peak hour, MXD+ is more accurate than the ITE *Handbook* method at 23 of 25 sites.

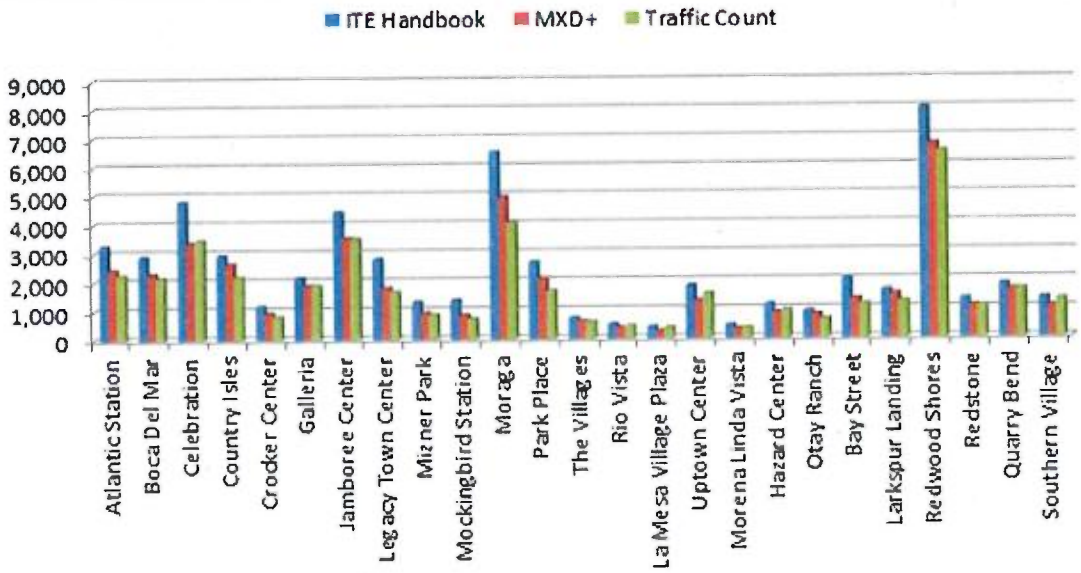
DAILY TRAFFIC GENERATION COMPARISON OF ITE HANDBOOK & MXD+ METHODS



AM PEAK HOUR TRAFFIC GENERATION COMPARISON OF ITE HANDBOOK & MXD+ METHODS



PM PEAK HOUR TRAFFIC GENERATION COMPARISON OF ITE HANDBOOK & MXD+ METHODS



The MXD+ method explains 97 percent of the variation in trip generation among mixed-use developments, compared with 65 percent for the ITE *Handbook* method. On average, the *Handbook* overestimates AM peak traffic generation by 49 percent, compared with 12 percent for MXD+. For the PM peak hour, the ITE *Handbook* overestimates actual traffic by 35 percent. The MXD+ method reduces this to 4 percent, remaining slightly conservative and unlikely to understate impacts.

By combining and refining the two most advanced methodologies for estimating traffic generation for mixed-use development, the MXD+ method provides transportation planners and engineers a more accurate single approach that accounts for the most important factors that distinguish lower impact development from other forms. Doing so advances development planning and impact assessment beyond the practices that have, to date, unreasonably discouraged mixed-use development.

Recommendations for Planners

We recommend that planners adopt the latest methods for evaluating traffic generation of mixed use and other forms of smart growth, including infill and transit-oriented development. The MXD methods developed under the U.S. EPA multiregional study and the NCHRP 684 study on enhancing trip-capture estimation each represent substantial advances to the conventional practices previously available through ITE. Combining the two new methods, as described above, improves upon both individual methods. Tools for all three approaches are available for use through the references and resources listed below.

Traffic engineers are beginning to take notice of the new methods, but we expect that natural sluggishness in adopting new practices will continue to impose unfair penalties on mixed use and other forms of lower-impact development. We recommend activism on the part of all planners, development reviewers, and impact analysts on behalf of the more accurate MXD methods.

Immediate adoption of the improved methods will allow planners to account for a project's regional location, transit availability, density of development, walkability factors, and the characteristics of residents and businesses and on-site adjacencies of land uses including residential, office, retail, restaurants, theaters, and hotels. Accounting for these factors through the MXD+ method will achieve the highest levels of accuracy possible in estimating traffic impacts of mixed use development.

We recommend applying and promoting the MXD+ method for day-to-day project planning and performance-based site-plan refinement, impact analysis, and discretionary review. Doing so will eliminate what is presently a systematic bias in traffic analysis that favors single-use, isolated, suburban-style development.

Conclusion

Standard traffic engineering practices are blind to the primary benefits of smart growth. A plan's development density, scale, design, accessibility, transit proximity, demographics, and mix of uses all affect traffic generation in ways unseen to prescribed methods. The Institute of Transportation Engineers (ITE) *Trip Generation Manual* and *Handbook* overestimate peak traffic generation for mixed-use development by an average of 35 percent. For conventional suburban stand-alone development, ITE rates portray the average for such sites; so hedging mixed-use analysis toward more conservative assumptions creates a systematic bias in favor of single-use suburban development.

ITE overestimation of traffic impacts reduces the likelihood of approval of mixed use and related forms of smart growth such as infill, compact, and transit-oriented development. Such overestimation escalates development costs, skews public perception, heightens community resistance, and favors isolated single-use development.

The methods of evaluating mixed use development described in this report represent a substantial improvement over conventional traffic-estimation methods. They improve accuracy and virtually eliminate overestimation bias, and they are supported by the substantial evidence of surveys and traffic counts at 266 mixed use sites across the U.S. The MXD+ analysis method explains 97 percent of the variation in trip generation among mixed use sites and all but eliminates the ITE systematic overestimation of traffic. We hope planners and other professionals will take advantage of the available spreadsheet tools listed below to help even the playing field between conventional development patterns and more sustainable, walkable, livable places.

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Additional Resources

Description, documentation, and spreadsheet tools for the NCHRP 684 method, Enhancing Internal Trip Capture Estimation for Mixed-Use Developments may be found at www.trb.org/Main/Blurbs/165014.aspx.

Description, documentation, and spreadsheet tools for the EPA MXD Trip Generation Tool for Mixed-Use Developments may be found at www.epa.gov/smartgrowth/mxd_tripgeneration.html.

Quick-response analysis tools for applying the EPA MXD method, the combined EPA /NCHRP method MXD+, and MXD in conjunction with analysis of vehicle-miles traveled, GHG emissions, and shared parking, Plan+, may be found at http://asap.fehrandpeers.com/tools/.

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Model Inputs

Input Variable	Input Value	Source
MXD specific inputs		
Project Area (Acres)	14	GIS
Intersections per Square Mile	68	EPA Smart Location Database (2013) - 2010 Scenario
Employment within 1 mile of Project Site	35430	custom
Share of regional employment within a 30 minute trip by transit	3	custom
Surrounding Household Size	2.74	ACS 2012 (5-year) - All Housing Types
Surrounding Vehicle Ownership	1.95	ACS 2012 (5-year) - All Housing Types
Site Household Size	2.40	custom
Site Vehicle Ownership	1.50	custom
Average Vehicle Occupancy (HBW Trips)	1.0	NCHRP 758
Average Vehicle Occupancy (HBO Trips)	1.0	NCHRP 758
Average Vehicle Occupancy (NHB Trips)	1.0	NCHRP 758

Model Outputs (Vehicle Trips)

Land Use	Units[1]	ITE Code	Quantity	Daily	AM Peak Hour			PM Peak Hour		
					In	Out	Total	In	Out	Total
Net New Uses										
(220) - Apartment (Adj Streets, 7-9A, 4-6P)	Dwelling Units	220[2]	200	1336	20	82	102	83	45	128
(310) - Hotel (Adj Streets, 7-9A, 4-6P)	Rooms	310[3]	480	3923	150	104	254	147	141	288
(820) - Shopping Center (Adj Streets, 7-9A, 4-6P)	1000 sq ft leasable area	820[4]	21.4	2493	38	23	61	102	111	213
(931) - Quality Restaurant (Adj Streets, 7-9A, 4-6P)	1000 sq ft gross floor area	931[5]	23.4	2105	10	9	19	117	58	175
(930) - Fast Casual Restaurant (Adj Streets, 7-9A, 4-6P)	1000 Sq. Ft. FLA	930[6]	6.2	1954	9	4	13	48	40	88
Reductions										
Internal Capture				-364	-11	-11	-22	-82	-66	-148
External Walk, Bike, and Transit				-2,570	-72	-70	-142	-110	-87	-197
Total Reductions				-2,934	-83	-81	-164	-192	-153	-345
Net New Project Trips				8,877	144	141	285	305	242	547

1. DU = dweling units. KSF = 1000 square feet
2. ITE Trip Generation land use category (220) - Apartment (Adj Streets, 7-9A, 4-6P)
   - Daily: T = 6.06(X) + 123.56
   - AM Peak Hour: T = 0.49(X) + 3.73 (20% in, 80% out)
   - PM Peak Hour: T = 0.55(X) + 17.65 (65% in, 35% out)
3. ITE Trip Generation land use category (310) - Hotel (Adj Streets, 7-9A, 4-6P)
   - Daily: T = 8.95(X) + -373.16
   - AM Peak Hour: T = 0.53(X) (59% in, 41% out)
   - PM Peak Hour: T = 0.60(X) (51% in, 49% out)
4. ITE Trip Generation land use category (820) - Shopping Center (Adj Streets, 7-9A, 4-6P)
   - Daily: Ln(T) = 0.65 * ln(X) + 5.83
   - AM Peak Hour: Ln(T) = 0.61 * ln(X) + 2.24 (62% in, 38% out)
   - PM Peak Hour: Ln(T) = 0.67 * ln(X) + 3.31 (48% in, 52% out)
5. ITE Trip Generation land use category (931) - Quality Restaurant (Adj Streets, 7-9A, 4-6P)
   - Daily: T = 89.95(X)
   - AM Peak Hour: T = 0.81(X) (55.00000000000001% in, 45% out)
   - PM Peak Hour: T = 7.49(X) (67% in, 33% out)
6. ITE Trip Generation land use category (930) - Fast Casual Restaurant (Adj Streets, 7-9A, 4-6P)
   - Daily: T = 315.17(X)
   - AM Peak Hour: T = 2.07(X)
   - PM Peak Hour: T = 14.13(X)
7. Reductions based on application of MXD+ model:
   - Total Reductions: Daily = 24.8%, AM Peak Hour = 36.6%, PM Peak Hour = 38.7%
   - Internal Capture: Daily = 3.1%, AM Peak Hour = 4.9%, PM Peak Hour = 16.6%
   - External Walk, Bike, and Transit: Daily = 21.7%, AM Peak Hour = 31.7%, PM Peak Hour = 22.1%
8. Sources:
   - *ITE Trip Generation Manual*, 9th and 10th Edition
   - Fehr and Peers
9. Person Trips:
   - Person Trips derived using the following average vehicle occupancy rates, applied to ITE Vehicle Trip Generation:
   - HBW AVO:1
   - HBO AVO:1
   - NHW AVO:1

Attachment D
Transportation Tables

Table 1: Recent Counts

North/South	East/West	AM Peak Hour																Grand Total
		Northbound				Southbound				Eastbound				Westbound				
		Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	*Total*	
Patrick Henry Drive	Tasman Drive	38	28	2	68	4	19	46	69	91	195	105	391	14	751	42	*807*	1335
Old Ironsides Drive	Tasman Drive	12	6	8	26	11	11	11	33	23	167	12	202	11	885	100	*996*	1257
Great America Parkway	Tasman Drive																	
Great America Parkway	Tasman Drive	326	594	160	1080	56	542	47	645	27	137	33	197	335	615	147	*1097*	3019
Calle Del Sol	Tasman Drive	0	0	0	0	99	0	124	223	34	255	0	289	0	1137	225	*1362*	1874
Lick Mill Boulevard	Tasman Drive	287	28	335	650	3	16	7	26	21	311	66	398	132	943	22	*1097*	2171
Great America Parkway	Great America Way	36	347	63	446	192	1054	68	1314	2	3	9	14	175	57	194	*426*	2200
Great America Parkway	Old Mountain View-Alviso Rd	36	347	63	446	192	1054	68	1314	2	3	9	14	175	57	194	*426*	2200
Great America Parkway	Bunker Hill Lane	112	562	169	843	107	576	135	818	14	7	17	38	33	11	40	*84*	1783
Great America Parkway	Old Glory Lane	22	1127	2	1151	22	835	16	873	0	0	5	5	2	0	2	*4*	2033
Great America Parkway	Mission College Boulevard																	
Great America Parkway	Mission College Boulevard	470	1152	353	1975	142	678	120	940	119	89	103	311	468	271	300	*1039*	4265
Great America Parkway	US 101 NB Ramps	0	1702	104	1806	0	1083	0	1083	0	0	0	0	406	0	902	*1308*	4197

Table 2A: Counted Volumes used in the City Place Santa Clara EIR

North/South	East/West	AM Peak Hour																Grand Total
		Northbound				Southbound				Eastbound				Westbound				
		Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	*Total*	
Patrick Henry Drive	Tasman Drive	61	70	3	134	3	10	10	23	0	371	151	522	0	306	23	*329*	1008
Old Ironsides Drive	Tasman Drive	11	22	5	38	16	13	11	40	84	278	22	384	29	322	97	*448*	910
Great America Parkway	Tasman Drive	231	842	373	1446	82	584	59	725	104	246	63	413	370	561	268	*1199*	3783
Great America Parkway	Tasman Drive	231	842	373	1446	82	584	59	725	104	246	63	413	370	561	268	*1199*	3783
Calle Del Sol	Tasman Drive	0	0	0	0	122	0	131	253	40	244	0	284	0	844	165	*1009*	1546
Lick Mill Boulevard	Tasman Drive	295	37	369	701	2	3	2	7	19	512	61	592	96	693	23	*812*	2112
Great America Parkway	Great America Way	41	442	37	520	169	1294	40	1503	3	4	0	7	100	9	147	*256*	2286
Great America Parkway	Old Mountain View-Alviso Rd	216	381	67	664	22	914	455	1391	90	8	22	120	11	2	4	*17*	2192
Great America Parkway	Bunker Hill Lane	187	628	345	1160	163	601	177	941	14	13	22	49	62	5	18	*85*	2235
Great America Parkway	Old Glory Lane	45	1051	5	1101	14	866	18	898	3	0	5	8	3	0	7	*10*	2017
Great America Parkway	Mission College Boulevard	347	1316	234	1897	198	545	87	830	59	92	16	167	435	196	341	*972*	3866
Great America Parkway	Mission College Boulevard	347	1316	234	1897	198	545	87	830	59	92	16	167	435	196	341	*972*	3866
Great America Parkway	US 101 NB Ramps	0	1878	172	2050	0	772	275	1047	0	0	0	0	335	0	967	*1302*	4399

Table 2B: Difference between Recent Counts and Counted Volumes used in the City Place Santa Clara EIR

North/South	East/West	AM Peak Hour																Grand Total
		Northbound				Southbound				Eastbound				Westbound				
		Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	*Total*	
Patrick Henry Drive	Tasman Drive	23	42	1	66	-1	-9	-36	-46	-91	176	46	131	-14	-445	-19	*-478*	-327
Old Ironsides Drive	Tasman Drive	-1	16	-3	12	5	2	0	7	61	111	10	182	18	-563	-3	*-548*	-347
Great America Parkway	Tasman Drive																	
Great America Parkway	Tasman Drive	-95	248	213	366	26	42	12	80	77	109	30	216	35	-54	121	*102*	764
Calle Del Sol	Tasman Drive	0	0	0	0	23	0	7	30	6	-11	0	-5	0	-293	-60	*-353*	-328
Lick Mill Boulevard	Tasman Drive	8	9	34	51	-1	-13	-5	-19	-2	201	-5	194	-36	-250	1	*-285*	-59
Great America Parkway	Great America Way	5	95	-26	74	-23	240	-28	189	1	1	-9	-7	-75	-48	-47	*-170*	86
Great America Parkway	Old Mountain View-Alviso Rd	180	34	4	218	-170	-140	387	77	88	5	13	106	-164	-55	-190	*-409*	-8
Great America Parkway	Bunker Hill Lane	75	66	176	317	56	25	42	123	0	6	5	11	29	-6	-22	*1*	452
Great America Parkway	Old Glory Lane	23	-76	3	-50	-8	31	2	25	3	0	0	3	1	0	5	*6*	-16
Great America Parkway	Mission College Boulevard																	
Great America Parkway	Mission College Boulevard	-123	164	-119	-78	56	-133	-33	-110	-60	3	-87	-144	-33	-75	41	*-67*	-399
Great America Parkway	US 101 NB Ramps	0	176	68	244	0	-311	275	-36	0	0	0	0	-71	0	65	*-6*	202

Note: Difference is calculated as Recent Counts (from Table 1) - Counted Volumes from the City Place Santa Clara EIR (from Table 2A). A negative value indicates the City Place counts are less than recent counts.

Table 2C: Percent Difference between Recent Counts and Counted Volumes used in the City Place Santa Clara EIR (Only showing for turn movements greater than 150 vehicles)

North/South	East/West	AM Peak Hour																Grand Total
		Northbound				Southbound				Eastbound				Westbound				
		Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	*Total*	
Patrick Henry Drive	Tasman Drive										47%	30%	25%		-145%		*-145%*	-32%
Old Ironsides Drive	Tasman Drive										40%		47%		-175%		*-122%*	-38%
Great America Parkway	Tasman Drive																	
Great America Parkway	Tasman Drive	-41%	29%	57%	25%		7%		11%		44%		52%	9%	-10%	45%	*9%*	20%
Calle Del Sol	Tasman Drive								12%		-5%		-2%		-35%	-36%	*-35%*	-21%
Lick Mill Boulevard	Tasman Drive	3%		9%	7%						39%		33%		-36%		*-35%*	-3%
Great America Parkway	Great America Way		21%		14%	-14%	19%		13%								*-66%*	4%
Great America Parkway	Old Mountain View-Alviso Rd	83%	9%		33%		-15%	85%	6%									0%
Great America Parkway	Bunker Hill Lane	40%	11%	51%	27%	34%	4%	24%	13%									20%
Great America Parkway	Old Glory Lane		-7%		-5%		4%		3%									-1%
Great America Parkway	Mission College Boulevard																	
Great America Parkway	Mission College Boulevard	-35%	12%	-51%	-4%	28%	-24%		-13%				-86%	-8%	-38%	12%	*-7%*	-10%
Great America Parkway	US 101 NB Ramps		9%	40%	12%		-40%	100%	-3%					-21%		7%	*0%*	5%

Note: Percent Difference is calculated as Difference between Recent Counts and Counted Volumes from the City Place Santa Clara EIR (from Table 2B) divided by Counted Volume in City Place EIR (from Table 2A).

Table 3A: 2020 Volumes used in the City Place Santa Clara EIR

North/South	East/West	AM Peak Hour																Grand Total
		Northbound				Southbound				Eastbound				Westbound				
		Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	*Total*	
Patrick Henry Drive	Tasman Drive	170	70	10	250	10	10	10	30	0	850	370	1220	30	640	30	*700*	**2200**
Old Ironsides Drive	Tasman Drive	20	30	10	60	30	20	20	70	90	610	180	880	390	680	120	*1190*	**2200**
Great America Parkway	Tasman Drive	250	1300	480	2030	100	1070	220	1390	120	360	290	770	520	1100	350	*1970*	**6160**
Great America Parkway	Tasman Drive	250	1300	480	2030	100	1070	220	1390	120	360	290	770	520	1100	350	*1970*	**6160**
Calle Del Sol	Tasman Drive	0	0	0	0	130	0	140	270	50	470	0	520	0	1620	240	*1860*	**2650**
Lick Mill Boulevard	Tasman Drive	340	40	370	750	10	10	10	30	20	730	70	820	140	1510	30	*1680*	**3280**
Great America Parkway	Great America Way	220	580	160	960	300	1960	220	2480	30	10	30	70	150	10	200	*360*	**3870**
Great America Parkway	Old Mountain View-Alviso Rd	250	810	150	1210	100	1580	460	2140	90	10	30	130	30	10	20	*60*	**3540**
Great America Parkway	Bunker Hill Lane	200	1170	350	1720	170	1350	180	1700	20	20	30	70	70	10	20	*100*	**3590**
Great America Parkway	Old Glory Lane	450	1540	10	2000	20	1600	110	1730	130	0	160	290	10	0	10	*20*	**4040**
Great America Parkway	Mission College Boulevard	570	2010	270	2850	220	1200	190	1610	60	100	30	190	530	200	680	*1410*	**6060**
Great America Parkway	Mission College Boulevard	570	2010	270	2850	220	1200	190	1610	60	100	30	190	530	200	680	*1410*	**6060**
Great America Parkway	US 101 NB Ramps	0	2470	290	2760	0	1460	350	1810	0	0	0	0	820	0	1310	*2130*	**6700**

Table 3B: Difference between 2020 Volumes and Counted Volumes used in the City Place Santa Clara EIR

North/South	East/West	AM Peak Hour																Grand Total
		Northbound				Southbound				Eastbound				Westbound				
		Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	*Total*	
Patrick Henry Drive	Tasman Drive	132	42	8	182	6	-9	-36	-39	-91	655	265	829	16	-111	-12	*-107*	**865**
Old Ironsides Drive	Tasman Drive	8	24	2	34	19	9	9	37	67	443	168	678	379	-205	20	*194*	**943**
Great America Parkway	Tasman Drive																	
Great America Parkway	Tasman Drive	-76	706	320	950	44	528	173	745	93	223	257	573	185	485	203	*873*	**3141**
Calle Del Sol	Tasman Drive	0	0	0	0	31	0	16	47	16	215	0	231	0	483	15	*498*	**776**
Lick Mill Boulevard	Tasman Drive	53	12	35	100	7	-6	3	4	-1	419	4	422	8	567	8	*583*	**1109**
Great America Parkway	Great America Way	184	233	97	514	108	906	152	1166	28	7	21	56	-25	-47	6	*-66*	**1670**
Great America Parkway	Old Mountain View-Alviso Rd	214	463	87	764	-92	526	392	826	88	7	21	116	-145	-47	-174	*-366*	**1340**
Great America Parkway	Bunker Hill Lane	88	608	181	877	63	774	45	882	6	13	13	32	37	-1	-20	*16*	**1807**
Great America Parkway	Old Glory Lane	428	413	8	849	-2	765	94	857	130	0	155	285	8	0	8	*16*	**2007**
Great America Parkway	Mission College Boulevard																	
Great America Parkway	Mission College Boulevard	100	858	-83	875	78	522	70	670	-59	11	-73	-121	62	-71	380	*371*	**1795**
Great America Parkway	US 101 NB Ramps	0	768	186	954	0	377	350	727	0	0	0	0	414	0	408	*822*	**2503**

Note: Difference is calculated as 2020 Volumes (from Table 3A) - Counted Volumes from the City Place Santa Clara EIR (from Table 2A). A negative value indicates the City Place counts are less than recent counts.

Table 3C: Percent Difference between 2020 Volumes and Counted Volumes used in the City Place Santa Clara EIR (Only showing for turn movements greater than 150 vehicles)

North/South	East/West	AM Peak Hour																Grand Total
		Northbound				Southbound				Eastbound				Westbound				
		Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	*Total*	
Patrick Henry Drive	Tasman Drive	78%			73%						77%	72%	68%		-17%		*-15%*	**39%**
Old Ironsides Drive	Tasman Drive										73%	93%	77%	97%	-30%		*16%*	**43%**
Great America Parkway	Tasman Drive																	
Great America Parkway	Tasman Drive	-30%	54%	67%	47%		49%	79%	54%		62%	89%	74%	36%	44%	58%	*44%*	**51%**
Calle Del Sol	Tasman Drive								17%		46%		44%		30%	6%	*27%*	**29%**
Lick Mill Boulevard	Tasman Drive	16%		9%	13%						57%		51%		38%		*35%*	**34%**
Great America Parkway	Great America Way	84%	40%	61%	54%	36%	46%	69%	47%							3%	*-18%*	**43%**
Great America Parkway	Old Mountain View-Alviso Rd	86%	57%		63%		33%	85%	39%									**38%**
Great America Parkway	Bunker Hill Lane	44%	52%	52%	51%	37%	57%	25%	52%									**50%**
Great America Parkway	Old Glory Lane	95%	27%		42%		48%		50%			97%	98%					**50%**
Great America Parkway	Mission College Boulevard																	
Great America Parkway	Mission College Boulevard	18%	43%	-31%	31%	35%	44%	37%	42%				-64%	12%	-36%	56%	*26%*	**30%**
Great America Parkway	US 101 NB Ramps		31%	64%	35%		26%	100%	40%					50%		31%	*39%*	**37%**

Note: Percent Difference is calculated as Difference between 2020 Volumes and Counted Volumes from the City Place Santa Clara EIR (from Table 3B) divided by Counted Volume in City Place EIR (from Table 2A).

Table 4: Recent Counts

North/South	East/West	PM Peak Hour																Grand Total
		Northbound				Southbound				Eastbound				Westbound				
		Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	
Patrick Henry Drive	Tasman Drive	58	28	11	97	14	76	197	287	99	740	332	1171	32	374	17	423	1978
Old Ironsides Drive	Tasman Drive	11	18	36	65	39	94	25	158	20	682	24	726	11	314	9	334	1283
Great America Parkway	Tasman Drive	84	618	536	1238	377	924	50	1351	27	635	52	714	270	223	57	550	3853
Great America Parkway	Tasman Drive																	
Calle Del Sol	Tasman Drive	0	0	0	0	166	0	67	233	90	1146	0	1236	0	427	170	597	2066
Lick Mill Boulevard	Tasman Drive	62	4	243	309	29	24	15	68	4	1088	388	1480	237	567	6	810	2667
Great America Parkway	Great America Way	21	1010	460	1491	99	554	7	660	60	82	23	165	76	9	169	254	2570
Great America Parkway	Old Mountain View-Alviso Rd	21	1010	460	1491	99	554	7	660	60	82	23	165	76	9	169	254	2570
Great America Parkway	Bunker Hill Lane	22	651	40	713	32	759	30	821	236	19	235	490	174	21	71	266	2290
Great America Parkway	Old Glory Lane	13	1171	0	1184	8	1224	4	1236	45	0	101	146	2	0	2	4	2570
Great America Parkway	Mission College Boulevard	271	1002	377	1650	368	1625	142	2135	170	459	100	729	445	125	146	716	5230
Great America Parkway	Mission College Boulevard																	
Great America Parkway	US 101 NB Ramps																	

Table 5A: Counted Volumes used in the City Place Santa Clara EIR

North/South	East/West	PM Peak Hour																Grand Total
		Northbound				Southbound				Eastbound				Westbound				
		Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	
Patrick Henry Drive	Tasman Drive	61	18	12	91	20	40	104	164	0	718	137	855	1	447	16	464	1574
Old Ironsides Drive	Tasman Drive	20	16	29	65	71	71	32	174	18	730	12	760	40	388	13	441	1440
Great America Parkway	Tasman Drive	104	543	458	1105	333	919	70	1322	61	701	137	899	460	369	116	945	4271
Great America Parkway	Tasman Drive	104	543	458	1105	333	919	70	1322	61	701	137	899	460	369	116	945	4271
Calle Del Sol	Tasman Drive	0	0	0	0	262	0	67	329	131	1103	0	1234	0	550	229	779	2342
Lick Mill Boulevard	Tasman Drive	71	1	181	253	20	41	8	69	6	1074	468	1548	287	841	24	1152	3022
Great America Parkway	Great America Way	16	977	225	1218	182	670	7	859	32	20	7	59	55	3	120	178	2314
Great America Parkway	Old Mountain View-Alviso Rd	69	774	13	856	25	667	100	792	428	13	169	610	62	5	6	73	2331
Great America Parkway	Bunker Hill Lane	48	551	43	642	43	812	30	885	132	11	203	346	302	22	103	427	2300
Great America Parkway	Old Glory Lane	24	1010	4	1038	15	1248	3	1266	19	0	102	121	2	0	9	11	2436
Great America Parkway	Mission College Boulevard	585	763	396	1744	344	1633	132	2109	183	273	269	725	919	265	178	1362	5940
Great America Parkway	Mission College Boulevard	585	763	396	1744	344	1633	132	2109	183	273	269	725	919	265	178	1362	5940
Great America Parkway	US 101 NB Ramps	0	1048	189	1237	0	2220	739	2959	0	0	0	0	381	0	670	1051	5247

Table 5B: Difference between Recent Counts and Counted Volumes used in the City Place Santa Clara EIR

North/South	East/West	PM Peak Hour																Grand Total
		Northbound				Southbound				Eastbound				Westbound				
		Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	
Patrick Henry Drive	Tasman Drive	3	-10	1	-6	6	-36	-93	-123	-99	-22	-195	-316	-31	73	-1	41	-404
Old Ironsides Drive	Tasman Drive	9	-2	-7	0	32	-23	7	16	-2	48	-12	34	29	74	4	107	157
Great America Parkway	Tasman Drive	20	-75	-78	-133	-44	-5	20	-29	34	66	85	185	190	146	59	395	418
Great America Parkway	Tasman Drive																	
Calle Del Sol	Tasman Drive	0	.0	0	0	96	0	0	96	41	-43	0	-2	0	123	59	182	276
Lick Mill Boulevard	Tasman Drive	9	-3	-62	-56	-9	17	-7	1	2	-14	80	68	50	274	18	342	355
Great America Parkway	Great America Way	-5	-33	-235	-273	83	116	0	199	-28	-62	-16	-106	-21	-6	-49	-76	-256
Great America Parkway	Old Mountain View-Alviso Rd	48	-236	-447	-635	-74	113	93	132	368	-69	146	445	-14	-4	-163	-181	-239
Great America Parkway	Bunker Hill Lane	26	-100	3	-71	11	53	0	64	-104	-8	-32	-144	128	1	32	161	10
Great America Parkway	Old Glory Lane	11	-161	4	-146	7	24	-1	30	-26	0	1	-25	0	0	7	7	-134
Great America Parkway	Mission College Boulevard	314	-239	19	94	-24	8	-10	-26	13	-186	169	-4	474	140	32	646	710
Great America Parkway	Mission College Boulevard																	
Great America Parkway	US 101 NB Ramps																	

Note: Difference is calculated as Recent Counts (from Table 4) - Counted Volumes from the City Place Santa Clara EIR (from Table 5A). A negative value indicates the City Place counts are less than recent counts.

Table 5C: Percent Difference between Recent Counts and Counted Volumes used in the City Place Santa Clara EIR (Only showing for turn movements greater than 150 vehicles)

North/South	East/West	PM Peak Hour																Grand Total
		Northbound				Southbound				Eastbound				Westbound				
		Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	
Patrick Henry Drive	Tasman Drive								-75%		-3%		-37%		16%		9%	-26%
Old Ironsides Drive	Tasman Drive								9%		7%		4%		19%		24%	11%
Great America Parkway	Tasman Drive		-14%	-17%	-12%	-13%	-1%		-2%		9%		21%	41%	40%		42%	10%
Great America Parkway	Tasman Drive																	
Calle Del Sol	Tasman Drive					37%			29%		-4%		0%		22%	26%	23%	12%
Lick Mill Boulevard	Tasman Drive			-34%	-22%						-1%	17%	4%	17%	33%		30%	12%
Great America Parkway	Great America Way		-3%	-104%	-22%	46%	17%		23%								-43%	-11%
Great America Parkway	Old Mountain View-Alviso Rd		-30%		-74%		17%		17%	86%		86%	73%					-10%
Great America Parkway	Bunker Hill Lane		-18%		-11%		7%		7%			-16%	-42%	42%			38%	0%
Great America Parkway	Old Glory Lane		-16%		-14%		2%		2%									-6%
Great America Parkway	Mission College Boulevard	54%	-31%	5%	5%	-7%	0%		-1%	7%	-68%	63%	-1%	52%	53%	18%	47%	12%
Great America Parkway	Mission College Boulevard																	
Great America Parkway	US 101 NB Ramps																	

Note: Percent Difference is calculated as Difference between Recent Counts and Counted Volumes from the City Place Santa Clara EIR (from Table 5B) divided by Counted Volume in City Place EIR (from Table 5A).

Table 6A: 2020 Volumes used in the City Place Santa Clara EIR

North/South	East/West	PM Peak Hour																Grand Total
		Northbound				Southbound				Eastbound				Westbound				
		Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	
Patrick Henry Drive	Tasman Drive	150	20	20	190	20	50	110	180	0	1080	410	1490	120	1030	20	1170	**3030**
Old Ironsides Drive	Tasman Drive	150	20	290	460	90	80	40	210	30	1050	20	1100	50	960	30	1040	**2810**
Great America Parkway	Tasman Drive	180	1220	610	2010	380	1380	210	1970	160	1010	170	1340	630	710	160	1500	**6820**
Great America Parkway	Tasman Drive	180	1220	610	2010	380	1380	210	1970	160	1010	170	1340	630	710	160	1500	**6820**
Calle Del Sol	Tasman Drive	0	0	0	0	360	0	80	440	140	1560	0	1700	0	790	290	1080	**3220**
Lick Mill Boulevard	Tasman Drive	90	10	270	370	20	50	10	80	10	1480	620	2110	350	1120	30	1500	**4060**
Great America Parkway	Great America Way	50	1900	290	2240	230	960	40	1230	190	20	170	380	180	10	240	430	**4280**
Great America Parkway	Old Mountain View-Alviso Rd	80	1620	30	1730	40	1190	100	1330	510	20	170	700	130	10	80	220	**3980**
Great America Parkway	Bunker Hill Lane	50	1340	50	1440	50	1400	30	1480	140	20	270	430	310	30	110	450	**3800**
Great America Parkway	Old Glory Lane	320	1840	10	2170	40	1970	30	2040	110	0	560	670	10	0	10	20	**4900**
Great America Parkway	Mission College Boulevard	590	1600	530	2720	550	2870	160	3580	270	280	270	820	1070	270	290	1630	**8750**
Great America Parkway	Mission College Boulevard	590	1600	530	2720	550	2870	160	3580	270	280	270	820	1070	270	290	1630	**8750**
Great America Parkway	US 101 NB Ramps	0	1800	570	2370	0	3310	1070	4380	0	0	0	0	590	0	890	1480	**8230**

Table 6B: Difference between 2020 Volumes and Counted Volumes used in the City Place Santa Clara EIR

North/South	East/West	PM Peak Hour																Grand Total
		Northbound				Southbound				Eastbound				Westbound				
		Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	
Patrick Henry Drive	Tasman Drive	92	-8	9	93	6	-26	-87	-107	-99	340	78	319	88	656	3	747	**1052**
Old Ironsides Drive	Tasman Drive	139	2	254	395	51	-14	15	52	10	368	-4	374	39	646	21	706	**1527**
Great America Parkway	Tasman Drive	96	602	74	772	3	456	160	619	133	375	118	626	360	487	103	950	**2967**
Great America Parkway	Tasman Drive																	
Calle Del Sol	Tasman Drive	0	0	0	0	194	0	13	207	50	414	0	464	0	363	120	483	**1154**
Lick Mill Boulevard	Tasman Drive	28	6	27	61	-9	26	-5	12	6	392	232	630	113	553	24	690	**1393**
Great America Parkway	Great America Way	29	890	-170	749	131	406	33	570	130	-62	147	215	104	1	71	176	**1710**
Great America Parkway	Old Mountain View-Alviso Rd	59	610	-430	239	-59	636	93	670	450	-62	147	535	54	1	-89	-34	**1410**
Great America Parkway	Bunker Hill Lane	28	689	10	727	18	641	0	659	-96	1	35	-60	136	9	39	184	**1510**
Great America Parkway	Old Glory Lane	307	669	10	986	32	746	26	804	65	0	459	524	8	0	8	16	**2330**
Great America Parkway	Mission College Boulevard	319	598	153	1070	182	1245	18	1445	100	-179	170	91	625	145	144	914	**3520**
Great America Parkway	Mission College Boulevard																	
Great America Parkway	US 101 NB Ramps																	

Note: Difference is calculated as 2020 Volumes (from Table 6A) - Counted Volumes from the City Place Santa Clara EIR (from Table 5A). A negative value indicates the City Place counts are less than recent counts.

Table 6C: Percent Difference between 2020 Volumes and Counted Volumes used in the City Place Santa Clara EIR (Only showing for turn movements greater than 150 vehicles)

North/South	East/West	PM Peak Hour																Grand Total
		Northbound				Southbound				Eastbound				Westbound				
		Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	
Patrick Henry Drive	Tasman Drive				49%				-59%		31%	19%	21%		64%		64%	35%
Old Ironsides Drive	Tasman Drive			88%	86%				25%		35%		34%		67%		68%	54%
Great America Parkway	Tasman Drive	53%	49%	12%	38%	1%	33%	76%	31%	83%	37%	69%	47%	57%	69%	64%	63%	44%
Great America Parkway	Tasman Drive																	
Calle Del Sol	Tasman Drive					54%			47%		27%		27%		46%	41%	45%	36%
Lick Mill Boulevard	Tasman Drive			10%	16%						26%	37%	30%	32%	49%		46%	34%
Great America Parkway	Great America Way		47%	-59%	33%	57%	42%		46%	68%		86%	57%	58%		30%	41%	40%
Great America Parkway	Old Mountain View-Alviso Rd		38%		14%		53%		50%	88%		86%	76%				-15%	35%
Great America Parkway	Bunker Hill Lane		51%		50%		46%		45%			13%	-14%	44%			41%	40%
Great America Parkway	Old Glory Lane	96%	36%		45%		38%		39%			82%	78%					48%
Great America Parkway	Mission College Boulevard	54%	37%	29%	39%	33%	43%	11%	40%	37%	-64%	63%	11%	58%	54%	50%	56%	40%
Great America Parkway	Mission College Boulevard																	
Great America Parkway	US 101 NB Ramps																	

Note: Percent Difference is calculated as Difference between 2020 Volumes and Counted Volumes from the City Place Santa Clara EIR (from Table 6B) divided by Counted Volume in City Place EIR (from Table 5A).