



RED HILL AVENUE SPECIFIC PLAN DRAFT PROGRAM ENVIRONMENTAL IMPACT REPORT

Volume I



RED HILL AVENUE SPECIFIC PLAN

DRAFT ENVIRONMENTAL IMPACT REPORT SCH NO. 2017041031

VOLUME I

Prepared for

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1 EXECUTIVE SUMMARY

1.1 Introduction

The Environmental Impact Report (EIR) process, as defined by the California Environmental Quality Act (CEQA), requires the preparation of an objective, full-disclosure document in order to (1) inform agency decision-makers and the general public of the direct and indirect potentially significant environmental effects of a proposed action; (2) identify feasible or potentially feasible mitigation measures to reduce or eliminate potentially significant adverse impacts; and (3) identify and evaluate reasonable alternatives to the proposed project. In accordance with Section 15168 of the State CEQA Guidelines (Title 14 of the *California Code of Regulations [CCR]*), this is a Program EIR that addresses the potential environmental impacts associated with the implementation of the proposed project, known as the Red Hill Avenue Specific Plan.

1.2 Specific Plan Project Location

The City of Tustin (City) is in central Orange County, bordered by the cities of Irvine and Santa Ana to the south; the City of Orange and unincorporated County of Orange areas to the north; and on the east by the City of Irvine and unincorporated County of Orange territory (see Exhibit 3-1, *Regional Vicinity Map*, in Section 3.0, *Project Description*). Two major regional freeways: Interstate 5 (I-5) and State Route 55 (SR-55), transect the City. Tustin's southern boundary is approximately two miles north of Orange County's John Wayne Airport. The Red Hill Avenue Specific Plan area (Specific Plan area) is in central Tustin, east of Old Town Tustin, and southwest of the Tustin Ranch development (see Exhibit 3-2, *Specific Plan Area*).

The approximately 43.11-acre Specific Plan area, inclusive of approximately 7.32 acres of roadway rights-of-way, extends along Red Hill Avenue to Bryan Avenue to the northeast, and generally Walnut Avenue to the southwest. I-5 bisects the Specific Plan area creating the northern and southern portions of the Specific Plan area. Existing uses include commercial, retail shopping centers, professional office, residential, motels, and an institutional use, and vacant land.

1.3 Specific Plan Project Summary

The project evaluated in this Program EIR is the Red Hill Avenue Specific Plan (Specific Plan or Project). The Specific Plan provides planning policies and regulations that connect the City of Tustin General Plan policies with project-level development within the Specific Plan area. The Specific Plan provides long- and short-term goals and objectives, a land use plan, regulatory standards, Design Criteria, and administration and implementation programs. The Specific Plan's proposes 325,000 additional square feet of non-residential development and 500 additional residential dwelling units.

The Specific Plan seeks to facilitate compatible land uses in an integrated mixed-use environment with appropriate connections to existing parks, sensitivity to nearby single-family homes, and through the use of thematic elements to create a cohesive environment in the Specific Plan area. The Specific Plan would facilitate high-quality land uses by providing development incentives for the revitalization of vacant or underperforming properties.

The Specific Plan would encourage improving the public realm in the Specific Plan area with an enhanced streetscape that would balance vehicular needs with landscaped parkways, street trees, landscaped medians, and cohesive street furniture; pedestrian-scaled streets where pedestrians feel secure; the extension of bicycle paths from the existing community; cohesive entry and wayfinding signage throughout the Specific Plan area; safe, improved pedestrian crossings; and opportunities for public art.

Project implementation requires multiple approvals, permits, and/or actions as listed below. The Tustin City Council will be responsible for certification of the Final EIR as set forth in the CEQA Guidelines § 15090 based on the standards for adequacy for an EIR (CEQA Guidelines § 15151). Certification of the Final EIR would precede consideration of discretionary actions by the City:

- **Red Hill Avenue Specific Plan:** Adoption of the Specific Plan by Ordinance.
- **General Plan Amendment:** An amendment to the General Plan to provide consistency between the Specific Plan and the General Plan. The amendments to the General Plan would include an update to the Land Use Map to show the boundaries of the Specific Plan and an update to the General Plan Land Use Element, and other related conforming amendments to the General Plan, as required.
- **Zoning Map Amendment:** A zoning map amendment to change the Specific Plan area to a designation of “Red Hill Avenue Specific Plan” (SP-13).

Subsequent activities would be examined in light of the Final Program EIR to determine whether additional CEQA documentation would be required pursuant to the requirements of Section 21166 of CEQA (Public Resources Code [PRC] § 21166) and Sections 15162 and 15168 of the CEQA Guidelines (14 CCR) for subsequent approvals including, but not limited to the following: Design Review; Variances/Modifications; Sign Programs; Residential Allocation Reservations (RARs); Conditional Use Permits; and Tentative Parcel or Tract Maps.

The Final Program EIR would also provide environmental information to responsible agencies, trustee agencies, and other public agencies which may be required to grant approvals and permits or coordinate with the City of Tustin as a part of Specific Plan implementation.

1.4 Specific Plan Alternatives

Section 15126.6(a) of the State CEQA Guidelines requires that “an EIR describe a range of reasonable alternatives to the Project, or to the location of the Project, which would feasibly attain most of the basic objectives of the Project but would avoid or substantially lessen any of the significant effects of the Project, and evaluate the comparative merits of the alternatives.”

Section 6.0, *Alternatives*, evaluates two alternatives to the proposed Specific Plan Project and evaluates the comparative merits of each alternative. Potential environmental impacts associated with each alternative evaluated in Section 6.0 are compared to the impacts of the Specific Plan. The alternatives are Alternative A: General Plan/No Specific Plan and Alternative B: Reduced Development. The alternatives were developed to avoid or minimize impacts associated with the implementation of the proposed Specific Plan Project.

Alternative A: General Plan/No Specific Plan. As required by CEQA Guidelines Section 15126.6(e), the No Project Alternative describes buildout of the proposed Specific Plan area consistent with the General Plan land use designations for the properties. A Specific Plan would not be implemented. The area currently has approximately 296,446 square feet of non-residential uses and 21 dwelling units. The General Plan estimated maximum buildout for the Specific Plan area is 913,724 square feet of non-residential development with no additional residential units. When compared to the Specific Plan, the General Plan represents an increase of 292,278 square feet of non-residential uses but would not provide for any residential development.

Alternative B: Reduced Development. Alternative B would reduce the amount of new development; it assumes up to 284 additional dwelling units and up to 241,237 square feet of additional non-residential development. This development assumption is based on a lower floor area ratio (FAR) and reduction in the number of dwelling units. When compared to the Specific Plan, Alternative B reduces the number of additional dwelling units by 216 units (a reduction of approximately 43 percent) and reduces the amount of non-residential uses by 83,763 square feet (a reduction of approximately 26 percent). This development would occur within the same Specific Plan area footprint.

1.5 Summary of Effects with No Impact

Throughout preparation of the EIR, CEQA Guidelines Appendix G was used to determine the impact categories that would require evaluation to determine the potentially significant environmental effects of the Project. The following includes a discussion of the impact categories where the Project would have “no impact” and a summary discussion of why this determination was reached. There is no further evaluation of these Environmental Checklist questions in the Program EIR.

Aesthetics and Visual Resources

The State CEQA Guidelines ask for an evaluation of the following: “Would the project substantially damage scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings, within a State scenic highway?”

There are no rock outcroppings or any other scenic resources within the Specific Plan area. There are ornamental trees located in landscaped areas, but the trees are not considered scenic resources. Additionally, there are no State scenic highways adjacent to or in the vicinity of the Specific Plan area. The Specific Plan area is not within a State scenic highway, nor is the Specific Plan area visible from any officially designated or eligible scenic highway. For these reasons, no impacts would occur and this checklist question is not addressed in the Program EIR.

Agriculture and Forest Resources

The State CEQA Guidelines ask for an evaluation of the following:

- “Would the project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?”
- “Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract?”
- “Would the project conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?”
- “Would the project result in the loss of forest land or conversion of forest land to non-forest use?”
- “Would the project involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?”

The Specific Plan area does not contain Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. No portion of the Specific Plan area is covered by a Williamson Act Contract. Additionally, the area does not include forest resources, including timberlands, and is not zoned for agriculture. For these reasons, no impacts would occur and these checklist questions are not addressed in the EIR.

Biological Resources

The State CEQA Guidelines ask for an evaluation of the following:

- “Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife (CDFG) or U.S. Fish and Wildlife Service (USFWS)?”¹
- “Would the project have a substantial adverse effect on any riparian habitat or other special-status natural community identified in local or regional plans, policies, regulations, or by the CDFG or USFWS?”
- “Would the project have a substantial adverse effect on Federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?”

¹ CDFG: California Fish and Game; USFWS: U.S. Fish and Wildlife Service

- “Would the project interfere substantially with the movement of any native or migratory fish or wildlife species; inhibit established native resident or migratory fish or wildlife corridors; or impede the use of native wildlife nursery sites?”
- “Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?”

The Specific Plan area is a developed area within the City. The area does not include sensitive habitat or protected wildlife species. It does not contain riparian habitat or any water resources (e.g., streams, creeks, channels, vernal pools). Therefore, no impacts to riparian habitat would result from Project implementation. Additionally, the Specific Plan area does not contain waters, including wetland waters, that are subject to Federal jurisdiction under Section 404 of the Clean Water Act. The Project would be implemented consistent with the Specific Plan and the City’s Master Tree Plan (Tustin City Code Section 7309). All applicable policies would be enforced as a part of future development within the Specific Plan area. For these reasons, no impacts would occur and these checklist questions are not addressed in the Program EIR.

Geology and Soils

The State CEQA Guidelines ask for an evaluation of the following: “Would the project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?”

Development within the Specific Plan area would not require the use of septic tanks or assume the use of alternative wastewater disposal systems. For this reason, no impact would occur and this checklist question is not addressed in the Program EIR.

Hazards and Hazardous Material

The State CEQA Guidelines ask for an evaluation of the following:

- “Would the project 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?”
- “For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?”
- “For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?”

Implementation of the Specific Plan would not expose people or structures to a risk of loss, injury or death involving wildland fires. The Specific Plan area is in a developed urban area and it is not adjacent to any wildland areas.

There are no private airstrips located immediately adjacent to or near the Specific Plan area. While the City’s southern boundary is approximately two miles north of Orange County’s John Wayne Airport, the Specific Plan area is approximately four miles northeast of Orange County’s John Wayne Airport. Because

the Specific Plan area is not located within two miles of a private or public airport and is not located within the John Wayne Airport, Airport Environs Land Use Plan (AELUP), no impacts would occur. For these reasons, these checklist questions are not addressed in the Program EIR.

Hydrology and Water Quality

The State CEQA Guidelines ask for an evaluation of the following:

- “Would the project 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?”
- “Would the project place within a 100-year flood hazard area structures which would impede or redirect flood flows?”
- “Would the project 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?”

The Federal Emergency Management District (FEMA) Flood Insurance Rate Maps (FIRM) applicable to the Specific Plan area (FIRM Numbers 06059C0277J and 06059C0281J) show that the Specific Plan is located within Flood Zone X. FEMA defines Zone X as areas of minimal flood hazard and is outside of the 100-year and 500-year flood zones. Therefore, no impact would occur. For these reasons, no impact would occur and these checklist questions are not addressed in the Program EIR.

- “Would the project be subject to inundation by seiche, tsunami, or mudflow?”

The Specific Plan area is located approximately ten miles from the Pacific Ocean and is approximately 100 feet above mean sea level (Google Earth, 2017). The California Geological Survey notes that the Specific Plan area is not within an area at risk of tsunami inundation (CGS, 2017). It is also unlikely that the Specific Plan area could be affected by a seiche, which occurs in large bodies of water such as a lake because there are no large water bodies proximate to the Specific Plan area. Peters Canyon Reservoir is the nearest body of water and is approximately 5.5 miles northeast of the Specific Plan area. Lastly, the Specific Plan area is flat and in a developed area; no inundation by mudflow would be expected. For these reasons, no impact would occur and this checklist question is not addressed in the Program EIR.

Land Use and Planning

The State CEQA Guidelines ask for an evaluation of the following: “Would the project physically divide an established community?”

The Specific Plan area is developed and contains commercial, retail shopping centers, professional office, residential, and motel uses, and an institutional use. There are also vacant parcels within the Specific Plan area. Land uses adjacent to but outside of the Specific Plan area are characterized by a mix of attached single-family and multi-family units, parks, and public schools. The Specific Plan’s goal is to promote revitalization of the area by adding a mix of land uses. The Project would not introduce new roadways or infrastructure that would bisect or transect the existing uses. The allowable massing and heights of the future developments would not create significant visual barriers or separations. Therefore, the proposed Specific Plan would not divide an established area but rather would better connect the community by

establishing a pedestrian-friendly urban environment. For these reasons, this checklist question is not addressed in the Program EIR.

The State CEQA Guidelines ask for an evaluation of the following: “Would the project conflict with any applicable habitat conservation plan or natural community conservation plan?”

The City is enrolled as a participating jurisdiction in the County of Orange Central-Coastal Natural Community Conservation Planning (NCCP)/Habitat Conservation Plan (HCP) Program. The 208,000-acre area includes the central portion of Orange County, from the coastline inland to Riverside County. However, the City is not located within the 37,378-acre NCCP/HCP Habitat Reserve System, and there are no survey requirements for the area pursuant to the NCCP (County of Orange, 1996). The Specific Plan would not impede or hinder the goals for the plan or the establishment of a habitat preserve. For these reasons, no impact would occur and the topic of habitat conservation plans is not addressed in the Program EIR.

Mineral Resources

The State CEQA Guidelines ask for an evaluation of the following: “Would the project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the State or result in the loss of availability of a locally-important mineral resources recovery site delineated on a local general plan, specific plan, or other land use plan?”

The California Geological Survey (California Geological Survey, 2012) does not identify any known or available mineral resources on or adjacent to the Specific Plan area. For this reason, no impact would occur and this topic is not addressed in the Program EIR.

Noise

The State CEQA Guidelines ask for an evaluation of the following: “Would the project be located within an airport land use compatibility plan or where such a plan has not been adopted, within two miles of a public airport or public use airport, exposing people residing or working in the project area to excessive noise levels?”

There are no private airstrips located immediately adjacent to or near the Specific Plan area. While the City’s southern boundary is approximately two miles north of Orange County’s John Wayne Airport, the Specific Plan area is approximately four miles northeast of Orange County’s John Wayne Airport. Because the Specific Plan area is not located within two miles of a private or public airport and is not located within the John Wayne Airport (AELUP, no impacts would occur. For these reasons, these checklist questions are not addressed in the Program EIR.

Population, Housing, and Employment

The State CEQA Guidelines asks for an evaluation of the following two issues:

- “Would the project displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?”

- “Would the project displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?”

The implementation of the Specific Plan would allow for 500 additional dwelling units in a mixed-use environment to the predominately commercial Specific Plan area. There are currently non-conforming uses along Nisson Road with multi-family residential uses located on parcels zoned for commercial uses, and two single-family homes north of Mitchell Avenue on parcels zoned for professional office uses (2 single-family and 19 multi-family units). Existing non-conforming residential can remain unless changes to the structure are proposed. The Specific Plan and Tustin City Code requires that non-conforming uses and structures not be enlarged, expanded or extended, except as expressly stated in Section 4 of the Specific Plan, nor will the existence of a non-conforming use or structure be a determining factor for adding other uses or structures prohibited in the Specific Plan or Tustin City Code. Therefore, implementation of the Specific Plan would not displace substantial numbers of existing housing or people. For these reasons, no impact would occur and this checklist question is not addressed in the Program EIR.

1.6 Summary of Significant Unavoidable Impacts

Section 15126.2(b) of the CEQA Guidelines requires that the EIR describe any significant impacts, including those that can be mitigated but not reduced to less than significant levels. Potential environmental effects resulting from implementation of the Specific Plan and proposed mitigation measures are discussed in detail in Sections 4.1 through 4.14 of this Program EIR. The following environmental impacts were determined to be significant and unavoidable impacts.

Air Quality

Threshold 4.2-1: Implementation of the Specific Plan would incrementally exceed the population growth forecasted in the Southern California Association of Governments (SCAG’s) latest *Regional Transportation Plan/Sustainable Communities Strategy* (RTP/SCS), on which the 2016 Air Quality Management Plan (AQMP) is based. Although the Specific Plan would be consistent with the goals of the RTP/SCS to reduce vehicle miles traveled and associated air pollutant emissions, the buildout of the Specific Plan would exceed population forecasts, on which the AQMP is based. Further, buildout of the Specific Plan would exceed the South Coast Air Quality Management District’s (SCAQMD’s) operational thresholds (refer to discussion under Threshold 4.2-2). Impacts would be significant and unavoidable.

Threshold 4.2-2: Future developments in the Specific Plan area would be anticipated to result in construction emissions and long-term operation-generated emissions. Construction-related air quality impacts would be considered significant and unavoidable due to the potential magnitude of construction that could occur from implementation of the Specific Plan. Implementation of standard conditions and mitigation measures and compliance with energy performance and water efficiency code requirements established under State Title 24 Energy Regulations would reduce criteria air pollutant emissions. However, construction and operational air quality impacts would remain significant and unavoidable. Therefore, the Project’s contribution would be cumulatively considerable.

Greenhouse Gas (GHG) Emissions

Threshold 4.5-1: Annual emissions from implementation of the Specific Plan would total approximately 8.8 MT of CO₂e per service population. Under a worst-case scenario, these emissions would substantially exceed the 4.1 MT CO₂e per year threshold. The Specific Plan would be consistent with the policies and initiatives of State GHG reduction programs as well as the regional RTP/SCS. Development within the Specific Plan area would be constructed in accordance with the California Green Building Standards, which require energy efficiency, water efficiency, and material conservation and resource efficiency. With compliance with State and regional GHG reduction policies and demonstration of fair share reduction of GHG emissions over time, implementation of the Specific Plan would not conflict with the State's 2030 GHG reduction goals and would be in compliance with the goals set forth in AB 32. Despite consistency with the policies and initiatives of State GHG reduction programs as well as the regional RTP/SCS, implementation of the Specific Plan would result in a substantial increase of GHG emissions that would exceed the SCAQMD's significance criteria; therefore, impacts would be significant and unavoidable. The Specific's Plan cumulative contribution of GHG emissions would exceed SCAQMD's 4.1 MT CO₂e per year threshold, and the Specific Plan's cumulative GHG impacts would also be cumulatively considerable and potential impacts are considered significant and unavoidable.

Traffic and Transportation

Threshold 4.13-1: Under the Long-Range Future Conditions scenario, the Red Hill Avenue at the I-5 southbound ramps would operate at a deficient level of services in the evening peak hour. Implementation of MM 4.13-1 would mitigate the Project's impact to a level considered less than significant. However, the City cannot impose mitigation on or mandate the implementation of mitigation in another jurisdiction, in this case, Caltrans. Therefore, if the City is unable to reach an agreement with Caltrans that would ensure that Project impacts occurring to a Caltrans facility would be mitigated concurrent with or preceding the impact, for purposes of this Program EIR, the impacts to be mitigated by the improvements would remain significant and unavoidable.

1.7 Summary of Environmental Impacts and Mitigation

Table 1-1 provides a summary of the potential environmental effects of the Project, the Mitigation Program recommended to ensure that Project impacts are mitigated to the extent feasible, and the expected status of effects following the implementation of the Mitigation Program. The Mitigation Program is comprised of Standard Conditions and Requirements (SCs) and Mitigation Measures (MMs). The Mitigation Program will serve to prevent, reduce, and/or fully mitigate potential environmental impacts. The more detailed evaluation of these issues, as well as the full text of the Mitigation Program, is presented in EIR Sections 4.1 through 4.14.

Where a measure applies to more than one topic, it is presented (either summarized or full text) in the primary section to which it applies, and is then cross-referenced. The mitigation measures identify who is responsible, when the action would be implemented, and who would be the approving authority. The Mitigation Monitoring and Reporting Program would be developed using the full text of the Mitigation Program.

Table 1-1. Summary of Significant Impacts and Mitigation Program			
Thresholds Applied	Environmental Impacts/ Level of Significance Before Mitigation	Summary of Mitigation Program: Standard Conditions and Mitigation Measures	Level of Significance After Mitigation
Aesthetics			
Threshold 4.1-1 Have a substantial adverse effect on a scenic vista.	There are no scenic vistas within the Specific Plan area or viewed from the Specific Plan area. Implementation of the Specific Plan Project would have no impact on scenic vistas. No Impact.	No mitigation is required.	No Impact
Threshold 4.1-2 Substantially degrade the existing visual character or quality of the site and its surroundings.	Implementation of the Specific Plan would alter the existing visual character with the goal of improving it. With compliance with the Specific Plan Design Criteria and Land Use Regulations, the City's General Plan, and the Tustin City Code, impacts to visual resources would be less than significant. Less than Significant.	No mitigation is required.	Less than Significant
Threshold 4.1-3 Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.	Future development within the Specific Plan area would introduce new sources of lighting. Compliance with the land use regulations and the Design Criteria of the Specific Plan, the General Plan, and the Tustin City Code would preclude significant impacts. Less than Significant.	No mitigation is required.	Less than Significant
Air Quality			
Threshold 4.2-1 Conflict with or obstruct implementation of the applicable air quality plan.	Implementation of the Specific Plan would incrementally exceed population growth forecasted in the Regional Transportation Plan/Sustainable Communities Strategy on which the 2016 Air Quality Management Plan (AQMP) is based, as well as exceed South Coast Air Quality Management District (SCAQMD) operational thresholds. Significant and Unavoidable.	The Mitigation Program identified below is applicable.	Significant and Unavoidable

Table 1-1. Summary of Significant Impacts and Mitigation Program			
Thresholds Applied	Environmental Impacts/ Level of Significance Before Mitigation	Summary of Mitigation Program: Standard Conditions and Mitigation Measures	Level of Significance After Mitigation
<p>Threshold 4.2-2 Violate any air quality standard or contribute substantially to an existing or projected air quality violation.</p>	<p>Construction-related emissions would be considered significant and unavoidable due to the potential magnitude of construction that could occur from implementation of the Specific Plan. Operational emissions would exceed the SCAQMD's NOx thresholds with implementation of MMs 4.2-1 through 4.2-4. Significant and Unavoidable.</p>	<p>Standard Conditions and Requirements</p> <p>SC 4.2-1: Dust Control. During construction of future development within the Specific Plan area, project applicants shall require all construction contractors to comply with South Coast Air Quality Management District's (SCAQMD's) Rules 402 and 403 to minimize short-term emissions of dust and particulates. (Please refer to Section 4.2 for the full text of this Standard Condition)</p> <p>SC 4.2-2: Architectural Coatings. Architectural coatings shall be selected so that the VOC content of the coatings is compliant with SCAQMD Rule 1113. This requirement shall be included as notes on the contractor specifications.</p> <p>Mitigation Measures</p> <p>MM 4.2-1: Electric Vehicle (EV) Charging Stations. Prior to the issuance of building permits, the City's Building Official shall confirm that project plans and specifications designate that vehicle parking spaces developed within the Specific Plan area shall be EV ready to encourage EV use and appropriately size electrical panels to accommodate future expanded EV use.</p> <p>MM 4.2-2: Prior to the issuance of occupancy permits, the City's Building Official shall confirm that future commercial uses within the Specific Plan area include Codes, Covenants, and</p>	<p>Significant and Unavoidable</p>

Thresholds Applied	Environmental Impacts/ Level of Significance Before Mitigation	Summary of Mitigation Program: Standard Conditions and Mitigation Measures	Level of Significance After Mitigation
		<p>Restrictions (CC&Rs) that provide for a voluntary vanpool/shuttle and employee ridesharing programs for which all employees shall be eligible to participate. The voluntary ride sharing program could be achieved through a multi-faceted approach, such as designating a certain percentage of parking spaces for ride-sharing vehicles, designating adequate passenger loading and unloading and waiting areas for ridesharing vehicles, and/or providing a web site or message board for coordinating rides. This measure is not applicable to residential uses.</p> <p>MM 4.2-3: Operational Emissions Reductions. Prior to the issuance of building permits, the City’s Planning Official shall confirm that project plans and specifications consider and mitigate the impacts on regional air quality and GHG emissions when reviewing proposals for new development. Impacts shall be evaluated in accordance with SCAQMD recommended methodologies and procedures. (Please refer to Section 4.2 for the full text of this Mitigation Measure)</p> <p>MM 4.2-4: Toxic Air Contaminants/Health Risk Assessment. A project-specific Health Risk Assessment shall be conducted for future residential development proposed within 500 feet of the Interstate 5 right-of-way, pursuant to the recommendations set forth in the CARB <i>Air Quality and Land Use Handbook</i>. The Health Risk</p>	

Table 1-1. Summary of Significant Impacts and Mitigation Program			
Thresholds Applied	Environmental Impacts/ Level of Significance Before Mitigation	Summary of Mitigation Program: Standard Conditions and Mitigation Measures	Level of Significance After Mitigation
		<p>Assessment shall evaluate a project per the following SCAQMD thresholds:</p> <ul style="list-style-type: none"> ▪ <i>Cancer Risk:</i> Emit carcinogenic or toxic contaminants that exceed the maximum individual cancer risk of 10 in one million. ▪ <i>Non-Cancer Risk:</i> Emit toxic contaminants that exceed the maximum hazard quotient of one in one million. <p>Please refer to Section 4.2 for the full text of this Mitigation Measure)</p>	
<p>Threshold 4.2-3 Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is in nonattainment under an applicable NAAQS or CAAQS (including releasing emissions that exceed quantitative thresholds for ozone precursors).</p>	<p>The Specific Plan Project would contribute to an exceedance in overall operational related emissions that may exceed SCAQMD recommended significance thresholds. Significant and Unavoidable.</p>	<p>Mitigation Measures MM 4.2-1 through MM 4.2-4 are applicable.</p>	<p>Significant and Unavoidable</p>
<p>Threshold 4.2-4 Expose sensitive receptors to substantial pollutant concentrations.</p>	<p>Implementation of the Specific Plan would potentially expose sensitive receptors to substantial pollutant concentrations. This impact would be mitigated with MM 4.2-4. Less than Significant with Mitigation.</p>	<p>Mitigation Measures MM 4.2-4 is applicable.</p>	<p>Less than Significant with Mitigation</p>
<p>Threshold 4.2-5 Create objectionable odors affecting a substantial number of people.</p>	<p>Proposed land uses are not considered uses associated with odor complaints by SCAQMD. Less than Significant.</p>	<p>No mitigation is required.</p>	<p>Less than Significant</p>

Table 1-1. Summary of Significant Impacts and Mitigation Program			
Thresholds Applied	Environmental Impacts/ Level of Significance Before Mitigation	Summary of Mitigation Program: Standard Conditions and Mitigation Measures	Level of Significance After Mitigation
Cultural Resources and Tribal Cultural Resources			
Threshold 4.3-1 Cause a substantial adverse change in the significance of a historical resource, as defined in CEQA Guidelines Section 15064.53.	Implementation of the Red Hill Avenue Specific Plan would not cause significant adverse effects to historic resources. Less than Significant.	No mitigation is required.	Less than Significant
Threshold 4.3-2 Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5.	Implementation of the Red Hill Avenue Specific Plan would potentially impact unknown archaeological resources; MM 4.3-1 is applicable. Less than Significant with Mitigation.	Mitigation Measures MM 4.3-1: If unknown cultural resources are discovered during the development of any project within the Red Hill Avenue Specific Plan area, all activity within 50 feet of the area of discovery shall cease and the City shall be immediately notified. The archeologist shall be contacted to flag the area in the field and determine if the archaeological deposits meet the CEQA definition of historical (State CEQA Guidelines § 15064.5(a)) and/or unique archaeological resource (Public Resources Code §21083.2(g)). Please refer to Section 4.3 for the full text of this Mitigation Measure)	Less than Significant with Mitigation
Threshold 4.3-3 Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.	Implementation of the Red Hill Avenue Specific Plan would potentially have direct impacts on paleontological resources. This impact would be mitigated to a level considered less than significant with implementation of MM 4.3-2. Less than Significant with Mitigation.	Mitigation Measures MM 4.3-2: Prior to issuance of any grading or building permits for any development projects under the Red Hill Avenue Specific Plan, the Applicant shall provide a letter to the City of Tustin Community Development Department, or designee, from a paleontologist selected from the roll of qualified paleontologists maintained by the County, stating that the Applicant has	Less than Significant with Mitigation

Thresholds Applied	Environmental Impacts/ Level of Significance Before Mitigation	Summary of Mitigation Program: Standard Conditions and Mitigation Measures	Level of Significance After Mitigation
		<p>retained this individual and that the paleontologist shall provide on-call services in the event resources are discovered. The paleontologist shall be present at the pre-grading conference to establish procedures for paleontological resource surveillance. If paleontological resources are discovered during of any development project within the Red Hill Avenue Specific Plan area, ground-disturbing activity within 50 feet of the area of the discovery shall cease.</p> <p>If the find is determined by paleontologists to require further treatment, the area of discovery will be protected from disturbance while qualified paleontologists and appropriate officials, in consultation with a recognized museum repository (e.g., National History Museum of Los Angeles County), determine an appropriate treatment plan.</p>	
<p>Threshold 4.3-4 Disturb any human remains, including those interred outside of formal cemeteries.</p>	<p>Future development under the Red Hill Avenue Specific Plan would be required to comply with SC 4.3-1 which establishes procedures to be implemented should human remains be discovered. Less than Significant Impact.</p>	<p>Standard Conditions and Requirements SC 4.3-1. California Health and Safety Code Section 7050.5, CEQA Section 15064.5, and Public Resources Code Section 5097.98 mandate the process to be followed in the event of an accidental discovery of any human remains in a location other than a dedicated cemetery. California Health and Safety Code Section 7050.5 requires that in the event that human remains are discovered within the Specific Plan area, disturbance of the site shall be halted until the</p>	<p>Less than Significant</p>

Table 1-1. Summary of Significant Impacts and Mitigation Program			
Thresholds Applied	Environmental Impacts/ Level of Significance Before Mitigation	Summary of Mitigation Program: Standard Conditions and Mitigation Measures	Level of Significance After Mitigation
		coroner has conducted an investigation into the circumstances, manner and cause of death, and the recommendations concerning the treatment and disposition of the human remains have been made to the person responsible for the excavation, or to his or her authorized representative, in the manner provided in Section 5097.98 of the Public Resources Code. If the coroner determines that the remains are not subject to his or her authority and if the coroner recognizes or has reason to believe the human remains to be those of a Native American, he or she shall contact, by telephone within 24 hours, the Native American Heritage Commission.	
<p>Threshold 4.3-5 Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is: a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k).</p>	<p>Implementation of the Red Hill Avenue Specific Plan would potentially have direct impacts on tribal cultural resources; MM 4.3-1 is applicable. Less than Significant with Mitigation.</p>	<p>Mitigation Measures MM 4.3-1 is applicable.</p>	<p>Less than Significant with Mitigation</p>

Table 1-1. Summary of Significant Impacts and Mitigation Program			
Thresholds Applied	Environmental Impacts/ Level of Significance Before Mitigation	Summary of Mitigation Program: Standard Conditions and Mitigation Measures	Level of Significance After Mitigation
<p>Threshold 4.3-6 Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is: b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.</p>			
Geology and Soils			
<p>Threshold 4.4-1 Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death from rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake</p>	<p>The Project would not result in any significant impacts in relation to a rupture of a known earthquake fault as delineated on the most recent Alquist-Priolo Earthquake Fault Map. No Impact.</p>	<p>No mitigation is required.</p>	<p>No Impact</p>

Table 1-1. Summary of Significant Impacts and Mitigation Program			
Thresholds Applied	Environmental Impacts/ Level of Significance Before Mitigation	Summary of Mitigation Program: Standard Conditions and Mitigation Measures	Level of Significance After Mitigation
Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault.			
<p>Threshold 4.4-2 Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking.</p>	<p>The Specific Plan area is in a seismically active area and strong ground shaking due to regional seismic activity is anticipated. Structures are subject to seismic design parameters that would appropriately address seismic building standards. Impacts associated with seismic shaking would be mitigated to a level considered less than significant with implementation of SC 4.4-1 and SC 4.4-2. Less than Significant.</p>	<p>Standard Conditions and Requirements</p> <p>SC 4.4-1: Projects are required to comply with Tustin City Code, Chapter 9, Grading and Excavation. Prior to the issuance of any grading permits, the grading plans shall be accompanied by geological and soils engineering reports and shall incorporate all information as required by the City. Grading plans shall indicate all areas of grading. Grading plans shall provide for temporary erosion control on all graded sites scheduled to remain unimproved for more than 30 days.</p> <p>SC 4.4-2: A specific geotechnical survey shall be prepared by a certified geotechnical engineer to confirm/refine engineering design parameters regarding site preparation, grading, and foundation design, to assure design criteria are responsive to specific development site soils and potential effects of differential settlements resulting from ground shaking, as well as effects of subsidence, lateral spreading, and collapse potential. All geotechnical recommendations shall be noted on individual site development plans and implemented prior to issuance of an occupancy permit.</p>	<p>Less than Significant</p>

Table 1-1. Summary of Significant Impacts and Mitigation Program			
Thresholds Applied	Environmental Impacts/ Level of Significance Before Mitigation	Summary of Mitigation Program: Standard Conditions and Mitigation Measures	Level of Significance After Mitigation
		Project-specific geotechnical measures shall be developed, as needed, based on the design-level geotechnical report and depicted on plans prepared by the geotechnical engineer of record or on plan sheets included within final grading plans, and subject to the approval by the City of Tustin Building Division and/or the Public Works Department.	
Threshold 4.4-3 Expose people or structures to potential substantial adverse effects including the risk of loss, injury, or death from seismic-related ground failure, including liquefaction.	The Specific Plan area is in a seismically active area and considered susceptible to seismic-induced liquefaction. Development projects would be required to comply with the provisions of SC 4.4-1 and SC 4.4-2. Impacts associated with liquefaction would be less than significant. Less than Significant.	Standard Conditions and Requirements SC 4.4-1 and SC 4.4-2 are applicable.	Less than Significant
Threshold 4.4-4 Expose people or structures to potential substantial adverse effects including the risk of loss, injury, or death from landslides.	The Specific Plan area is relatively level and landslides are not anticipated. No impacts would occur in this regard. No Impact.	No mitigation is required.	No Impact
Threshold 4.4-5 Result in substantial soil erosion or the loss of topsoil.	Grading activities would increase the potential for soil erosion. SC 4.4-3 is applicable. With the incorporation of construction Best Management Practices (BMPs) (see Section 4.7, <i>Hydrology and Water Quality</i>), impacts on soil erosion and soil loss would be less than significant. Upon completion of projects, soil erosion and the loss of soil would be minimized by factors including but not limited to the use of engineered grading,	Standard Conditions and Requirements SC 4.4-3: Future developments shall limit grading to the minimum area necessary for construction. Final grading plans shall include best management practices (BMPs) to limit on-site and off-site erosion and a water plan to treat disturbed areas during construction and reduce dust. The plans shall be submitted to the City of Tustin Building Division and/or the Public Works	Less than Significant

Table 1-1. Summary of Significant Impacts and Mitigation Program			
Thresholds Applied	Environmental Impacts/ Level of Significance Before Mitigation	Summary of Mitigation Program: Standard Conditions and Mitigation Measures	Level of Significance After Mitigation
	surface and subsurface drainage improvements, and landscaping. Less than Significant.	Department for review and approval prior to the issuance of a grading permit. See Section 4.4.7, <i>Hydrology and Water Quality</i> . SC 4.7-1 and SC 4.7-2 are applicable.	
Threshold 4.4-6 Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the Project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse.	The Specific Plan area is in a seismically active area and considered susceptible to limited amounts of seismic-induced liquefaction. SC 4.4-1 and SC 4.4-2 are required to preclude significant impacts associated with seismic shaking. The potential for landslides, lateral spreading, and subsidence are considered less than significant. Less than Significant.	Standard Conditions and Requirements SC 4.4-1 and SC 4.4-2 are applicable.	Less than Significant
Threshold 4.4-7 Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property	On-site soils within the Specific Plan area would be evaluated on a project-by-project basis. Compliance with SCs 4.4-1 and 4.4-2 would preclude impacts associated with expansive soils. Less than Significant.	Standard Conditions and Requirements SC 4.4-1 and SC 4.4-2 are applicable.	Less than Significant
Greenhouse Gas Emissions			
Threshold 4.5-1 Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.	Despite consistency with the policies and initiatives of State GHG reduction programs as well as the regional RTP/SCS, implementation of the Specific Plan would result in a substantial increase of GHG emissions that would exceed the SCAQMD's significance criteria. Significant and Unavoidable Impact.	Refer to Mitigation Program for Section 4.2, <i>Air Quality</i> .	Significant and Unavoidable
Threshold 4.5-2 Conflict with an applicable plan, policy, or regulation adopted for the	Implementation of the Specific Plan would not interfere with the implementation of SCAG's 2016-2040 RTP/SCS, or the California Air Resources Board's (CARB's) Scoping Plan	No mitigation is required.	Less than Significant

Table 1-1. Summary of Significant Impacts and Mitigation Program			
Thresholds Applied	Environmental Impacts/ Level of Significance Before Mitigation	Summary of Mitigation Program: Standard Conditions and Mitigation Measures	Level of Significance After Mitigation
purpose of reducing the emissions of greenhouse gases.	consistent with Assembly Bill 32. Less than Significant.		
Hazards and Hazardous Materials			
<p>Threshold 4.6-1 Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.</p> <p>Threshold 4.6-2 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.</p>	Implementation of the Specific Plan could potentially create a hazard to the public or the environment through exposure to contaminated soil or groundwater from a previous hazardous material incident at a property within the Specific Plan area. MM 4.6-1 is applicable. Less than Significant with Mitigation.	<p>Mitigation Measures</p> <p>MM 4.6-1: Prior to issuance of grading permits, a human health risk evaluation shall be prepared by a qualified environmental professional in consultation with Orange County Health Care Agency, Environmental Health Division (OCHCA-EH) for any individual site application proposed on a site with a current or former hazardous materially regulated facility to determine if there is a contamination risk to the proposed land use. Remedial activities, if necessary, may be required, in consultation with OCHCA-EH.</p>	Less Than Significant with Mitigation
<p>Threshold 4.6-3 Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.</p>	The Specific Plan does not propose any industrial uses, which could potentially generate hazardous emissions or involve the handling of hazardous materials, substances, or waste in significant quantities that would have an impact to surrounding schools. Less than Significant.	No mitigation is required.	Less than Significant
<p>Threshold 4.6-4 Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment.</p>	The Specific Plan could potentially create a hazard to the public or the environment from a hazardous material site within the Specific Plan. MM 4.6-1 is applicable. Less than Significant with Mitigation.	<p>Mitigation Measures</p> <p>MM 4.6-1 is applicable.</p>	Less than Significant with Mitigation

Table 1-1. Summary of Significant Impacts and Mitigation Program			
Thresholds Applied	Environmental Impacts/ Level of Significance Before Mitigation	Summary of Mitigation Program: Standard Conditions and Mitigation Measures	Level of Significance After Mitigation
<p>Threshold 4.6-5 Impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan.</p>	<p>Implementation of the Specific Plan would not impair or physically interfere with an adopted emergency response or evacuation plan, including the City of Tustin Emergency Operations Plan. Less than Significant.</p>		<p>Less than Significant</p>
Hydrology and Water Quality			
<p>Threshold 4.7-1 Violate any water quality standards or waste discharge requirements.</p> <p>Threshold 4.7-6 Substantially degrade water quality.</p>	<p>Implementation of the Specific Plan would have the potential to adversely impact water quality in downstream receiving waters through discharge of runoff that contains various pollutants of concern. Compliance with the WQMP and NPDES permit would provide for the protection of surface water quality by avoiding and/or minimizing pollutant runoff into surface waters. Therefore, Specific Plan impacts to water quality would be less than significant. Less than Significant.</p>	<p>Standard Conditions and Requirements</p> <p>SC 4.7-1: Prior to the issuance of grading permits for any development projects under the Red Hill Avenue Specific Plan that would disturb more than one acre, the project applicant shall submit to the Department of Public Works an approved copy of the Storm Water Pollution Prevention Plan (SWPPP) and Notice of Intent (NOI) to comply with the General Permit for Construction Activities, confirming to the Current National Pollutant Discharge Elimination System (NPDES) requirements. The SWPPP shall be made part of the construction program. This SWPPP shall detail measures and practices that would be in effect during construction to minimize the individual project's impact on water quality and stormwater runoff volumes. The plan shall incorporate all necessary Best Management Practices (BMPs) and other City requirements to eliminate polluted runoff until all construction work for the future development is completed. The SWPPP shall include treatment and disposal of all dewatering operation flows and for nuisance flows during construction.</p>	<p>Less than Significant</p>

Table 1-1. Summary of Significant Impacts and Mitigation Program			
Thresholds Applied	Environmental Impacts/ Level of Significance Before Mitigation	Summary of Mitigation Program: Standard Conditions and Mitigation Measures	Level of Significance After Mitigation
		SC 4.7-2: Prior to issuance of grading permits for any development projects under the Red Hill Avenue Specific Plan, the project applicant shall prepare and submit a Water Quality Management Plan (WQMP) for the project, subject to the approval of the Department of Public Works. The WQMP shall include appropriate BMPs and low impact development (LID) techniques to ensure project runoff is adequately treated.	
Threshold 4.7-2 Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a new 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 planned uses for which permits have been granted).	Implementation of the Specific Plan would not significantly change the amount of impervious surfaces in the Specific Plan area and therefore, not interfere with groundwater recharge. The Project would not deplete groundwater supplies or interfere with groundwater recharge. Less than Significant.	No mitigation is required.	Less than Significant
Threshold 4.7-3 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 which would result in a substantial erosion or siltation on- or off-site.	Storm drainage can be provided to development sites within the Specific Plan area without significantly impacting infrastructure in the City. Less than Significant with Mitigation.	Standard Conditions and Requirements SC 4.7-1 is applicable. SC 4.7-2 is applicable. SC 4.7-3: Projects within the Specific Plan area would be subject to conditions imposed by the City of Tustin Community Development Department and the Public Works Department in	Less than Significant with Mitigation

Table 1-1. Summary of Significant Impacts and Mitigation Program			
Thresholds Applied	Environmental Impacts/ Level of Significance Before Mitigation	Summary of Mitigation Program: Standard Conditions and Mitigation Measures	Level of Significance After Mitigation
<p>Threshold 4.7-4 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 which would result in flooding on- or off-site.</p> <p>Threshold 4.7-5 Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff</p>		<p>accordance with Section 4902 (Control of Urban Runoff) of the Tustin City Code which requires the project applicant to provide all drainage facilities necessary for the removal of surface water from a site and to protect off-site properties from a project’s water runoff. The storm drain system must be designed in accordance with the standards of the Orange County Flood Division.</p> <p>Mitigation Measures</p> <p>MM 4.7-1: Prior to issuance of any grading or building permits for any development projects under the Red Hill Avenue Specific Plan, the project applicant shall prepare and submit to the Department of Public Works a hydrology and hydraulics analysis demonstrating that the existing condition flow rates are not exceeded by the proposed project flow rates.</p> <p>MM 4.7-2: Prior to issuance of any grading or buildings permits for any development projects under the Red Hill Avenue Specific Plan that do not have a direct connection to the City’s existing storm drain system, shall provide to the Department of Public Works hydraulic analyses of the downstream storm drain system that demonstrate no significant impacts to the City storm drain infrastructure.</p>	

Table 1-1. Summary of Significant Impacts and Mitigation Program			
Thresholds Applied	Environmental Impacts/ Level of Significance Before Mitigation	Summary of Mitigation Program: Standard Conditions and Mitigation Measures	Level of Significance After Mitigation
Land Use and Planning			
<p>Threshold 4.8-1 Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the Project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect.</p>	<p>Implementation of the Specific Plan would not conflict with applicable land use policies and no mitigation is required. Less than Significant.</p>	<p>No mitigation is required.</p>	<p>Less than Significant</p>
Noise			
<p>Threshold 4.9-1 Expose persons to or generate, noise levels in excess of standards established in the local general plan or noise ordinance or applicable standards of other agencies.</p> <p>Threshold 4.9-3 Result in a substantial temporary or periodic increase in ambient noise levels in the Project vicinity above levels existing without the project.</p>	<p>Construction noise that complies with the required construction hours is exempt from the City’s noise standards. SC 4.9-1 and MM 4.9-1 would ensure that construction noise would be reduced to a less than significant level. Stationary noise resulting from implementation of the Specific Plan would be less than significant. Buildout of the Specific Plan would not result in a roadway noise impact. Less than Significant with Mitigation.</p>	<p>Standard Conditions and Requirements</p> <p>SC 4.9-1: To ensure compliance with Tustin City Code, grading and construction plans shall include a note indicating that loud noise generating project construction activities (as defined in Section 4616(2) and Section 4617(e) of the Tustin City Code) shall take place between the hours of 7:00 AM and 6:00 PM on weekdays and from 9:00 AM to 5:00 PM on Saturdays. Loud, noise generating construction activities are prohibited outside of these hours and on Sundays and City observed Federal holidays.</p> <p>Mitigation Measures</p> <p>MM 4.9-1: Construction Noise. Prior to approval of grading plans, the City of Tustin Building Division shall ensure that plans include Best Management Practices to minimize construction</p>	<p>Less than Significant with Mitigation</p>

Table 1-1. Summary of Significant Impacts and Mitigation Program			
Thresholds Applied	Environmental Impacts/ Level of Significance Before Mitigation	Summary of Mitigation Program: Standard Conditions and Mitigation Measures	Level of Significance After Mitigation
		noise. (Please refer to Section 4.9 for the full text of this Mitigation Measure)	
Threshold 4.9-2 Expose persons to, or generate, excessive ground-borne vibration or groundborne noise levels.	Vibrations related to construction of individual projects within the Specific Plan area would be potentially significant. MM 4.9-2 would minimize and avoid vibration impacts related to pile-driving. Construction vibration impacts would be less than significant with mitigation. Less than Significant Impact with Mitigation.	Mitigation Measures MM 4.9-2: Construction Vibration. The following measures shall be implemented by applicants for development within the Red Hill Avenue Specific Plan area to reduce construction vibration at nearby receptors: <ul style="list-style-type: none"> a. Avoid impact pile-driving where possible. b. In areas where project construction is anticipated to include pile drivers in close proximity to schools or historic structures, conduct site-specific vibration studies to determine the area of impact and to present appropriate vibration reduction techniques... (Please refer to Section 4.9 for the full text of this Mitigation Measure) 	Less Than Significant with Mitigation
Threshold 4.9-4 Result in a substantial permanent increase in ambient noise levels in the Project vicinity above levels existing without the Project.	Implementation of the Specific Plan would not result in a substantial permanent increase in ambient noise levels in the Specific Plan area. Less than Significant.	No mitigation is required.	Less than Significant
Population and Housing			
Threshold 4.10-1 Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for	The Specific Plan’s population, housing, and employment growth are within overall SCAG projections for the City of Tustin. Less than Significant.	No mitigation is required.	Less than Significant

Table 1-1. Summary of Significant Impacts and Mitigation Program			
Thresholds Applied	Environmental Impacts/ Level of Significance Before Mitigation	Summary of Mitigation Program: Standard Conditions and Mitigation Measures	Level of Significance After Mitigation
example, through extension of roads or other infrastructure).			
Public Services			
Threshold 4.11-1 Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which would cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for fire protection.	Development within the Specific Plan area can be adequately served by the OCFA. Less than Significant.	Standard Conditions and Requirements SC 4.11-1: Prior to the issuance of any grading or building permits for any development project under the Red Hill Avenue Specific Plan, the applicant shall submit a Fire Master Plan to the Orange County Fire Authority for review. Approval shall be obtained prior to the issuance of grading or building permits.	Less than Significant
Threshold 4.11-2 Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which would cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for police protection.	The Specific Plan can be served by the Tustin Police Department without adverse effects on police services. Less than Significant.	No mitigation is required.	Less than Significant
Threshold 4.11-3 Result in substantial adverse physical impacts associated with the provision	Compliance with mandated fee program would preclude significant impacts to the Tustin Unified School District. Less than Significant.	Standard Conditions and Requirements SC 4.11-1: Pursuant to Section 65995 of the California Government Code, prior to the	Less than Significant

Table 1-1. Summary of Significant Impacts and Mitigation Program			
Thresholds Applied	Environmental Impacts/ Level of Significance Before Mitigation	Summary of Mitigation Program: Standard Conditions and Mitigation Measures	Level of Significance After Mitigation
of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which would cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for public school facilities.		<p>issuance of building permits for any development projects under the Red Hill Avenue Specific Plan, the project applicant shall pay developer fees to the Tustin Unified School District; payment of the adopted fees would provide full and complete mitigation of school impacts.</p> <p>SC 4.11-4: New development under the Red Hill Avenue Specific Plan shall be subject to the same General Obligation bond tax rate as already applied to other properties within the Tustin Unified School District for Measure G (approved in 2008) based upon the assessed value of the residential and commercial uses.</p>	
<p>Threshold 4.11-4 Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which would cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for library services.</p>	<p>The new residents generated by implementation of the Specific Plan would nominally increase the demand on library services. The Tustin Library would continue to meet the County’s standard for library size with buildout of the Specific Plan and impacts would be less than significant. Less than Significant.</p>	<p>No mitigation is required.</p>	<p>Less than Significant</p>

Table 1-1. Summary of Significant Impacts and Mitigation Program			
Thresholds Applied	Environmental Impacts/ Level of Significance Before Mitigation	Summary of Mitigation Program: Standard Conditions and Mitigation Measures	Level of Significance After Mitigation
Recreation			
<p>Threshold 4.12-1 Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated.</p> <p>Threshold 4.12-2 Include recreational facilities or requires the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.</p>	<p>Applicable developments within the Specific Plan area would be required to comply with applicable City requirements and MM 4.12-1 for the provision of parklands. Less than Significant with Mitigation.</p>	<p>Standard Conditions and Requirements</p> <p>SC 4.12-1: Prior to the approval of the final map for subdivisions under the Red Hill Avenue Specific Plan, applicants shall comply with the City of Tustin Subdivision Code (Article 9, Chapter 3, Part 3, Section 9331 of the Tustin City Code). Developers may dedicate land or pay a fee in lieu or a combination of both. The value of the amount of such fee shall be based upon the fair market value of the amount of land which would otherwise be required for dedication. Dedication of land may be required by the City for a condominium, stock cooperative, or community apartment project which exceeds 50 dwelling units.</p> <p>Mitigation Measures</p> <p>MM 4.12-1: For residential projects not subject to City of Tustin Subdivision Code (Article 9, Chapter 3, Part 3, Section 9331 of the Tustin City Code), applicants shall pay to the City of Tustin a parkland development fee prior to the issuance of building permits. The value of the amount of such fee shall be based upon the fair market value of the amount of land which would otherwise be required for dedication.</p>	<p>Less than Significant with Mitigation</p>

Table 1-1. Summary of Significant Impacts and Mitigation Program			
Thresholds Applied	Environmental Impacts/ Level of Significance Before Mitigation	Summary of Mitigation Program: Standard Conditions and Mitigation Measures	Level of Significance After Mitigation
Transportation and Traffic			
<p>Threshold 4.13-1 Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit.</p>	<p>Intersections: Implementation of the Specific Plan would have significant impacts to the level of service of one intersection within the traffic study area. MM 4.13-1 is applicable. However, the City of Tustin cannot impose mitigation on California Department of Transportation' facilities. Therefore, for purposes of this Program EIR, the impact to be mitigated by the improvements would be significant and unavoidable. Significant and Unavoidable.</p> <p>Roadway Segments. With implementation of the Specific Plan, roadway segments would continue to operate at acceptable levels of service. Less than Significant.</p>	<p>Mitigation Measures MM 4.13-1: Red Hill Avenue at Interstate 5 Southbound Ramps: Re-stripe the eastbound approach (the off-ramp) to convert from a shared left-through lane and one dedicated right-turn lane to one dedicated left-turn lane and a shared left-through-right lane. This improvement would provide additional capacity for the heavy eastbound left-turn volume. With this improvement, the intersection would operate at Level of Service D or better during both peak hours. The California Department of Transportation' (Caltrans) approval and cooperation would be required to implement this improvement.</p>	<p>Intersections: Significant and Unavoidable</p> <p>Roadway Segments: Less than Significant</p>
<p>Threshold 4.13-2 Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads and highways.</p>	<p>Based on CMP criteria, the Specific Plan Project would not impact any CMP facilities. No Impact.</p>	<p>No mitigation is required.</p>	<p>No Impact</p>
<p>Threshold 4.13-3 Result in a change in air traffic patterns, including either an increase</p>	<p>The Specific Plan area is located approximately four miles northeast of John Wayne Airport. As such, no impacts would occur to air traffic patterns. No Impact.</p>	<p>No mitigation is required.</p>	<p>No Impact</p>

Table 1-1. Summary of Significant Impacts and Mitigation Program			
Thresholds Applied	Environmental Impacts/ Level of Significance Before Mitigation	Summary of Mitigation Program: Standard Conditions and Mitigation Measures	Level of Significance After Mitigation
in traffic levels or a change in location that results in substantial safety risks.			
Threshold 4.13-4 Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).	Implementation of the Specific Plan would not result in any significant impacts related to design features or incompatible uses with compliance with applicable Tustin City Code standards and the design review process for individual development projects under the Specific Plan. Less than Significant.	No mitigation is required.	Less than Significant
Threshold 4.13-5 Result in inadequate emergency access.	Implementation of the Specific Plan would not result in any significant impacts related to circulation or access, and therefore would not significantly impact emergency access. Less than Significant.	No mitigation is required.	Less than Significant
Threshold 4.13-6 Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.	The Specific Plan would comply with all applicable policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities. Less than Significant.	No mitigation is required.	Less than Significant
Utilities			
Threshold 4.14-1 Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board. Threshold 4.14-2 Require or result in the construction of new water or wastewater treatment facilities or expansion of	Although implementation of the Specific Plan Project would increase generation of wastewater, flows would not exceed the established wastewater treatment requirements. Anticipated wastewater generation may require the construction of water and sewer pipeline facilities within the Specific Plan area. The Project would result in less than significant	No mitigation is required.	Less than Significant

Table 1-1. Summary of Significant Impacts and Mitigation Program			
Thresholds Applied	Environmental Impacts/ Level of Significance Before Mitigation	Summary of Mitigation Program: Standard Conditions and Mitigation Measures	Level of Significance After Mitigation
<p>existing facilities, the construction of which could cause significant environmental effects.</p> <p>Threshold 4.14-5 Result in a determination by the wastewater treatment provider which serves or may serve the Project that it has adequate capacity to serve the Project’s projected demand in addition to the provider’s existing commitments.</p>	<p>impacts to wastewater facilities. Less than Significant.</p>		
<p>Threshold 4.14-2 Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.</p> <p>Threshold 4.14-4 Have sufficient water supplies available to serve the Project from existing entitlements and resources, or are new or expanded entitlements needed.</p>	<p>Water services can be provided to the Specific Plan area without significantly impacting existing and planned development within the EOCWD service area. Less than Significant.</p>	<p>Standard Conditions and Requirements</p> <p>SC 4.14-1: Future development within the Specific Plan area would comply with Article 4, Chapter 10, Section 4952 of the Tustin City Code which seeks to reduce water consumption through (1) permanent water conservation requirements during non-shortage conditions and (2) four levels of water supply shortage response actions to be implemented within the City during times of declared water shortage. The program would prevent waste or unreasonable use of water; maximize the efficient use of water; and ensure a reliable and sustainable minimum supply of water for public health, safety, and welfare.</p> <p>SC 4.14-2: Future development within the Specific Plan area would comply with Article 9, Chapter 7, Section 9704 of the Tustin City Code which establishes procedures and standards for</p>	<p>Less than Significant</p>

Table 1-1. Summary of Significant Impacts and Mitigation Program			
Thresholds Applied	Environmental Impacts/ Level of Significance Before Mitigation	Summary of Mitigation Program: Standard Conditions and Mitigation Measures	Level of Significance After Mitigation
		the design, installation, and maintenance of water-efficient landscapes in conjunction with new construction projects within the City to promote the conservation and efficient use of water and to prevent the waste of available water resources.	
<p>Threshold 4.14-3 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.</p>	Storm drainage can be provided to development sites within the Specific Plan area without significantly impacting City infrastructure. Less than Significant With Mitigation.	<p>Standard Conditions and Requirements SCs 4.7-1, 4.7-2, and 4.7-3 are applicable.</p> <p>Mitigation Measures MM 4.7-1 and MM 4.7-2 are applicable.</p>	Less than Significant with Mitigation
<p>Threshold 4.14-6 Be served by a landfill with sufficient permitted capacity to accommodate the Project’s solid waste disposal needs.</p> <p>Threshold 4.14-7 Comply with Federal, State, and local statutes and regulations related to solid waste.</p>	Solid waste services can be provided to development within the Specific Plan area without significantly impacting County landfills. Less than Significant.	<p>Standard Conditions and Requirements SC 4.14-3 Applicants shall prepare and obtain approval of a Construction and Demolition Waste Management Plan (CDWMD) for a project. The CWMP shall list the types and weights or volumes of solid waste materials expected to be generated from construction. The CDWMP shall include options to divert from landfill disposal, nonhazardous materials for reuse or recycling by a minimum of 65 percent of total weight or volume (or requirements in place at the time of project entitlement).</p>	Less than Significant

Table 1-1. Summary of Significant Impacts and Mitigation Program			
Thresholds Applied	Environmental Impacts/ Level of Significance Before Mitigation	Summary of Mitigation Program: Standard Conditions and Mitigation Measures	Level of Significance After Mitigation
<p>Energy Threshold Increase demand for energy that requires expanded supplies or the construction of new infrastructure or expansion of existing facilities, the construction of which could cause significant environmental effects.</p> <p>Energy Threshold Result in an inefficient, wasteful and unnecessary consumption of energy.</p>	<p>There are existing electrical and natural gas facilities within and adjacent to the Specific Plan area to serve the Project. Utility providers can serve buildout of the Specific Plan without adversely affecting their ability to continue serving the area. There would be less than significant impacts to additional demand for electric and natural gas services and infrastructure with implementation of the Specific Plan. Less than Significant.</p>	<p>No mitigation is required.</p>	<p>Less than Significant</p>

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2 INTRODUCTION

The City of Tustin (City) is the lead agency under the CEQA, and has determined that a Program EIR is required to assess the potential environmental impacts associated with the Red Hill Avenue Specific Plan Project (State Clearinghouse No. 2017041031) (Specific Plan or Project). This Program EIR has been prepared in accordance with CEQA (California Public Resources Code [PRC] § 21000 et seq.); CEQA Guidelines (California Code of Regulations [CCR], Title 14, § 15000 et seq.); and the rules, regulations, and procedures for implementation of CEQA, as adopted by the City. An EIR is the most comprehensive form of environmental documentation identified in CEQA and the CEQA Guidelines, and provides the information needed to assess the environmental consequences of a proposed project to the extent feasible. EIRs are intended to provide an objective, factually supported, full-disclosure analysis of the environmental consequences associated with a project that may have the potential to result in significant adverse environmental impacts.

Approval of the Specific Plan requires a General Plan Amendment that includes an update to the Land Use Map and an update to the General Plan Land Use Element and other related conforming amendments to General Plan, as required; a Zoning Map Amendment to designate the Specific Plan area “Red Hill Avenue Specific Plan (SP-13)”; and adoption of the Specific Plan. For more detailed information regarding the Project, refer to Section 3.0, *Project Description*.

2.1 Purpose of this Program Environmental Impact Report

In accordance with Section 15121 of the CEQA Guidelines, an EIR is a public informational document used in the planning and decision-making process to inform public agency decision-makers and the public generally of the significant environmental effects of a project, identify possible ways to minimize the significant effects of a project, and describe reasonable alternatives to a project. This program-level EIR analyzes the potential environmental impacts associated with the implementation of the Red Hill Avenue Specific Plan Project (Specific Plan Project or Project). The City of Tustin Planning Commission and City Council will consider the information in the Program EIR, including the public comments and staff responses to those comments, during the public hearing process. As a legislative action, the final decision would be made by the City Council, who may approve, conditionally approve, or deny the Specific Plan Project.

Sections 15120 through 15132 of the CEQA Guidelines generally describe the content of an EIR; however, CEQA does not contain specific, detailed, quantified standards for the content of environmental documents. Section 15151 of the CEQA Guidelines states:

An EIR should be prepared with a sufficient degree of analysis to provide decision makers with information that enables them to make a decision that intelligently takes account of environmental consequences. An evaluation of the environmental effects of a proposed project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in light of what is reasonably feasible. Disagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among the experts. The courts have not looked for perfection but for adequacy, and a good faith effort at full disclosure.

The purpose of an EIR is to identify:

- The significant potential impacts of a project on the environment and indicate the manner in which those significant impacts can be avoided or mitigated;
- Any unavoidable adverse impacts that cannot be mitigated; and
- Reasonable and feasible alternatives to a project that would eliminate any significant adverse environmental impacts or reduce the impacts to a less than significant level.

An EIR also discloses potential growth-inducing impacts; impacts found not to be significant; and significant cumulative impacts of a project when taken into consideration with past, present, and reasonably anticipated future projects.

CEQA requires an EIR to reflect the independent judgment of the Lead Agency. A Draft EIR is circulated to responsible and trustee agencies with resources affected by a project, and to interested agencies, groups and individuals. Reviewers of a Draft EIR are requested to focus on the sufficiency of the document in identifying and analyzing the possible impacts on the environment and ways in which the significant effects of the Specific Plan Project might be avoided or mitigated.

2.2 Type of Environmental Impact Report

This EIR is being prepared as a Program EIR in accordance with Section 15168 of the CEQA Guidelines, which states the following:

- (a) *General. A program EIR is an EIR, which may be prepared on a series of actions that can be characterized as one large project and are related either:*
 - (1) *Geographically,*
 - (2) *As logical parts in the chain of contemplated actions,*
 - (3) *In connection with issuance of rules, regulations, plans, or other general criteria to govern the conduct of a continuing program, or*
 - (4) *As individual activities carried out under the same authorizing statutory or regulatory authority and having generally similar environmental effects which can be mitigated in similar ways.*
- (b) *Advantages. Use of a Program EIR can provide the following advantages. The Program EIR can:*
 - (1) *Provide an occasion for a more exhaustive consideration of effects and alternatives than would be practical in an EIR on an individual action,*
 - (2) *Ensure consideration of cumulative impacts that might be slighted in a case-by-case analysis,*
 - (3) *Avoid duplicative reconsideration of basic policy considerations,*

- (4) *Allow the Lead Agency to consider broad policy alternatives and program-wide mitigation measures at an early time when the agency has greater flexibility to deal with basic problems or cumulative impacts, and*
 - (5) *Allow reduction in paperwork.*
- (c) *Use with Later Activities. Subsequent activities in the program must be examined in the light of the Program EIR to determine whether an additional environmental document must be prepared.*
- (1) *If a later activity would have effects that were not examined in the program EIR, a new Initial Study would need to be prepared leading to either an EIR or a Negative Declaration.*
 - (2) *If the agency finds that pursuant to Section 15162, no new effects could occur or no new mitigation measures would be required, the agency can approve the activity as being within the scope of the project covered by the program EIR, and no new environmental document would be required.*
 - (3) *An agency shall incorporate feasible mitigation measures and alternatives developed in the program EIR into subsequent actions in the program.*
 - (4) *Where the subsequent activities involve site-specific operations, the agency should use a written checklist or similar device to document the evaluation of the site and the activity to determine whether the environmental effects of the operation were covered in the program EIR.*
 - (5) *A program EIR will be most helpful in dealing with subsequent activities if it deals with the effects of the program as specifically and comprehensively as possible. With a good and detailed analysis of the program, many subsequent activities could be found to be within the scope of the project described in the program EIR, and no further environmental documents would be required.*

Therefore, this Program EIR is intended to serve as the primary environmental document for all entitlements associated with the Specific Plan, including all discretionary approvals requested or required to implement the Project. The City of Tustin, as Lead Agency, can approve subsequent actions without additional environmental documentation unless otherwise required by Section 21166 of the CEQA Statutes and Section 15162 of the CEQA Guidelines. Section 21166 of the CEQA Statutes states that:

When an environmental impact report has been prepared for a project pursuant to this division, no subsequent or supplemental environmental impact report shall be required by the lead agency or by any responsible agency, unless one or more of the following events occurs:

- (a) *Substantial changes are proposed in the project which will require major revisions of the environmental impact report.*

- (b) *Substantial changes occur with respect to the circumstances under which the project is being undertaken which will require major revisions in the environmental impact report.*
- (c) *New information, which was not known and could not have been known at the time the environmental impact report was certified as complete, becomes available.*

2.3 Review of an Environmental Impact Report

The City has the principal responsibility for processing and approving the Specific Plan Project, along with other public agencies with direct interest in the Project (e.g., responsible and trustee agencies), may use this Program EIR in their decision-making or permitting processes and will consider the information in this Program EIR in combination with other information that may be presented during the CEQA process. In addition, this Program EIR provides the analysis in support of the Mitigation Program that will, if the Specific Plan Project is approved, be made conditions of the Project and implemented through the CEQA-mandated Mitigation Monitoring and Reporting Program (MMRP).

In accordance with CEQA, public agencies are required to make appropriate findings for each potentially significant environmental impact identified in an EIR if it decides to approve a project. If an EIR identifies significant environmental impacts that cannot be mitigated to a less than significant level through the adoption of mitigation measures or alternatives, the Lead Agency (and responsible agencies using this CEQA document for their respective permits or approvals) must decide whether the benefits of the proposed project outweigh any identified significant environmental effects that cannot be mitigated to below a threshold of significance. If the agency decides that the overriding considerations, including project benefits, outweigh the unavoidable impacts, then the agency (Lead Agency or responsible agency) is required to adopt a Statement of Overriding Considerations, which states the reasons that support its actions.

The Lead Agency's actions involved in the implementation of the proposed Specific Plan Project are described in Section 3.0, *Project Description*. Other agencies that may have discretionary approval over the Project, or components thereof, including responsible and trustee agencies, are also described in the Project Description.

2.4 Scope of the Program Environmental Impact Report

CEQA requires lead agencies to solicit and consider input from other interested agencies, citizen groups, and individual members of the public. CEQA also requires a project to be monitored after it has been approved to ensure that mitigation measures are carried out. CEQA requires the Lead Agency to provide the public with a full disclosure of the expected environmental consequences of a proposed project and with an opportunity to provide comments.

The following process was used to obtain input regarding the Specific Plan, and in accordance with CEQA, the Program EIR:

Throughout the development of the proposed Red Hill Avenue Specific Plan, the City of Tustin engaged with and collected input from community residents and stakeholders through various community outreach activities.

On July 21, 2016, the City held the first Community Workshop. Workshop attendees learned about the planning process, Specific Plan goals and objectives, and the overall Project. Workshop attendees also participated in an interactive exercise to identify treasures, challenges, and visions for the Specific Plan area. Participants had the opportunity to provide their thoughts, concerns, and visions for the future of their neighborhood.

On December 1, 2016, the City held a second Community Workshop. Attendees learned about the planning process, and the Specific Plan goals and objectives, and received a summary of the first Community Workshop and the Specific Plan Project. Community residents and stakeholders had the opportunity to participate in hands-on and interactive exercises to help develop a future vision for the Red Hill Avenue Specific Plan area. Input from workshop participants were gathered and covered the following topics: Specific Plan boundaries; future land uses and activities; transportation and circulation improvements; and streetscape, public amenities, and urban design improvements.

On February 20, 2018, the City is schedule to hold a Community/Joint City Council and Planning Commission Workshop to present the Specific Plan including proposed standards and regulations.

2.4.1 NOTICE OF PREPARATION (NOP)

Pursuant to Section 15082 of the CEQA Guidelines, the City prepared and circulated a Notice of Preparation (NOP) to affected agencies and interested parties for a 30-day public review period beginning on April 7, 2017. Table 2-1, *Summary of Written Comments on Notice of Preparation*, summarizes the comments received from agencies/persons during the NOP process and provides a reference, as applicable, to the section(s) of this Program EIR where the issues are addressed. The NOP and all comment letters are provided in Appendix A of this EIR.

Table 2-1: Summary of Written Comments on Notice of Preparation	
Commenter	Summary of Comment and Where Addressed
Federal Agencies	
No Federal agencies submitted comments in response to the NOP.	
State Agencies	
State of California Native American Heritage Commission (letter dated April 13, 2017)	<ul style="list-style-type: none"> – Follow procedures to comply with Assembly Bill (AB) 52 and Senate Bill (SB) 18 requirements; contact all tribes traditionally and culturally affiliated with geographic area <i>See EIR Section 4.3, Cultural Resources and Tribal Cultural Resources</i>
California Department of Transportation (Caltrans) District 12 (letter dated May 8, 2017)	<ul style="list-style-type: none"> – Analyze impacts to the I-5 northbound and southbound on and off ramps – Obtain encroachment permits as required for work within the State right-of-way – Provide a vicinity map of proposed land use changes with square footages of land uses – Recommends bikeways throughout area that connects to existing facilities, and recommends including supporting facilities such as bike storage, signals, crossings, and delineation – Consider improvements to existing or planned transit stops and create access to multi-modal transportation options in the vicinity <i>See EIR Section 3.0, Project Description, and Section 4.13, Traffic and Transportation</i>
Local Agencies, Special Districts	
Southern California Association of Governments (SCAG) (letter dated May 8, 2017)	<ul style="list-style-type: none"> – Address Project consistency with SCAG Regional Transportation Plan (RTP) and the Sustainable Communities Strategy (SCS) goals. – Send environmental documentation to SCAG’s office to determine consistency with regional plans, including the RTP and the SCS <i>See EIR Section 4.8, Land Use and Planning</i>
City of Irvine (letter dated April 26, 2017)	<ul style="list-style-type: none"> – Include the following intersections in traffic analysis: Redhill Ave. from Irvine Blvd. to MacArthur Blvd.; Irvine Blvd. at Newport Ave., Browning Ave., and Tustin Ranch Rd.; Bryan Ave at Newport Ave., Browning Ave., and Tustin Ranch Rd. – Identify increase in trips from existing to proposed land uses – Coordinate with Senior Transportation Analyst to use most recent ITAM model for baseline and buildout conditions <i>See EIR Section 4.13, Traffic and Transportation</i>
Irvine Ranch Water District (IRWD) (letter dated May 8, 2017)	<ul style="list-style-type: none"> – The Project area is adjacent to IRWD’s boundary area. As such, future developers must coordinate with IRWD to develop technical memorandum or Sub-Area Master Plan addendum to identify impacts to potable, recycled, and sewer systems. <i>Please Note: The Specific Plan area is not within the service area for IRWD and is therefore not addressed in this Program EIR.</i>
Orange County Public Works (letter dated May 5, 2017)	<ul style="list-style-type: none"> – Address the potential for increased runoff and recommend appropriate mitigation measures – Analyze potential impacts on downstream segments of the Orange County Flood Control District El Modena-Irvine Channel and the Santa Ana-Santa Fe Channel

Table 2-1: Summary of Written Comments on Notice of Preparation	
Commenter	Summary of Comment and Where Addressed
	<ul style="list-style-type: none"> – Hydrology/Hydraulics analyses should be based on the Orange County Hydrology Manual (OCHM), Addendum No. 1, and the Orange County Flood Control Design Manual. – Ensure City review of hydrology/hydraulics analyses and adequate flood protection measures <p><i>See EIR Section 4.7, Hydrology and Water Quality</i></p>
Metropolitan Water District of Southern California (MWD) (letter dated May 8, 2017)	<ul style="list-style-type: none"> – MWD’s East Orange County Feeder 2 pipeline parallels the Specific Plan area, and therefore maintenance of its right of way and unobstructed access to its facilities is necessary. Future developments are to provide design plans for review and approval. <p><i>Please Note: The East Orange County Feeder 2 pipeline is outside of the boundaries of the Specific Plan area and would not be affected by the Project and is therefore not addressed in the Program EIR.</i></p>
Orange County Transportation Authority (letter dated May 8, 2017)	<ul style="list-style-type: none"> – Employ measures to reduce transit service disruptions and keep OCTA updated with any potential disruptions street closures – Encourage bikeway connectivity in the Project area along Newport Avenue or Red Hill Avenue, consistent with the OC Foothills Bikeways Strategy <p><i>See EIR Section 4.13, Traffic and Transportation. Note: Newport Avenue is west of the Specific Plan area.</i></p>
Orange County Health Care Agency, Environmental Health Division (OCHCA-EH) (letter dated May 4, 2017)	<ul style="list-style-type: none"> – Coordinate with OCHCA-EH regarding advance permitting if removal of USTs becomes required relative to future developments – Any LUST associated with future development proposals or IC cases must be reevaluated by an environmental professional <p><i>See EIR Section 4.6, Hazards and Hazardous Materials</i></p>
Orange County Sanitation District (OCS D) (letter dated May 3, 2017)	<ul style="list-style-type: none"> – No impacts would occur to treatment plan; there is adequate capacity in the Regional Collection System – Prior to approval of future development projects, OCS D would re-evaluate the hydraulic capacity. <p><i>See EIR Section 4.14, Utilities and Service Systems</i></p>
South Coast Air Quality Management District (SCAQMD) (letter dated April 28, 2017)	<ul style="list-style-type: none"> – Identify air quality impacts associated with reasonably foreseeable development (construction and operations) – Prepare a mobile source health risk assessment if the project generates/ attracts traffic, particularly heavy-duty diesel-fueled vehicles. Address toxic air contaminants from equipment use – Identify feasible mitigation – Identify project alternatives – Transmit Program EIR to SCAQMD including modeling data <p><i>See EIR Section 4.2, Air Quality</i></p>
Interested Parties	
Irvine Asset Group, LLC (letter dated May 2, 2017)	<ul style="list-style-type: none"> – Ensure that analysis includes the proposed Irvine Assets Group’s project at Red Hill and San Juan in the Redhill Avenue Specific Plan area. <p><i>Please Note: The Program EIR does not evaluate proposed project-level development projects. Should the City certify the Program EIR and approve the Specific Plan Project, site-specific development proposals would be evaluated for consistency with the Specific Plan and Specific Plan Program EIR.</i></p>

2.4.2 SCOPING MEETING

Pursuant to Section 21083.9 of the CEQA Statute, the Lead Agency is required to conduct at least one scoping meeting for all projects of statewide, regional, or area-wide significance. A scoping meeting is for jurisdictional agencies and interested persons or groups to provide comments regarding but not limited to the range of actions, alternatives, and environmental effects to be analyzed. The City of Tustin hosted a scoping meeting at 3:00 PM on April 20, 2017, at the Clifton C. Miller Community Center, 300 Centennial Way, Tustin, California 92780.

2.4.3 ISSUES TO BE RESOLVED

Section 15123(b)(3) of the CEQA Guidelines requires that an EIR identify issues to be resolved, which includes the choices among alternatives and whether or how to mitigate significant impacts. The major issues to be resolved regarding the Specific Plan Project include decisions by the Lead Agency as to whether:

- The Program EIR adequately describes the environmental impacts of the Specific Plan Project,
- The recommended Mitigation Program should be adopted or modified, or
- Additional mitigation measures need to be applied.

2.4.4 FORMAT AND CONTENT

This Program EIR addresses the potential environmental effects of the Project and was prepared following input from the public and the responsible and affected agencies, through the EIR scoping process, as discussed previously. The contents of this Draft EIR were established based on the findings in the NOP and public and agency input. Based on the findings of the NOP, a determination was made that an EIR was required to address potentially significant environmental effects on the following resources:

- | | |
|--|---------------------------------|
| ▪ Aesthetics and Visual Resources | ▪ Land Use and Planning |
| ▪ Air Quality | ▪ Noise |
| ▪ Cultural Resources and Tribal Cultural Resources | ▪ Population and Housing |
| ▪ Geology and Soils | ▪ Public Services |
| ▪ Greenhouse Gas Emissions | ▪ Recreation |
| ▪ Hazards and Hazardous Materials | ▪ Traffic and Transportation |
| ▪ Hydrology and Water Quality | ▪ Utilities and Service Systems |

Through the completion of CEQA Guidelines Appendix G, the City has determined that the Project would not require the assessment of certain CEQA Checklist topics (Agricultural and Forestry Resources; Biological Resources, and Mineral Resources). Within the topical areas addressed in the EIR, there are several questions on the CEQA Checklist that are not applicable, and therefore were not addressed. These have been identified in Section 1.5, *Summary of Effects With No Impact*.

2.5 Availability of the Draft EIR

The Draft Program EIR has been distributed to responsible and other affected agencies, surrounding jurisdictions, interested parties, and other parties who requested a copy in accordance with Section 21092 of the CEQA Statutes. The Notice of Completion for the Draft Program EIR has also been distributed as required by CEQA. Reviewers of the Draft Program EIR are given a 45-day review period to prepare written comments on the draft document. During the public review period, this Draft Program EIR (including the technical appendices) is available for review during regular business hours, Monday through Friday, at the City of Tustin Community Development Department located at 300 Centennial Way, Tustin, California. The Draft Program EIR and technical appendices can also be accessed at the City's website at <http://www.tustinca.org/>.

Written comments regarding the Draft Program EIR should be addressed to Erica Demkowicz, AICP, Senior Planner, at the address or email address provided below.

Erica Demkowicz, AICP, Senior Planner
City of Tustin
Community Development Department
300 Centennial Way
Tustin, CA 92780
EDemkowicz@tustinca.org

Upon completion of the public review period, the City will prepare written responses to all significant environmental issues that were raised in written and oral comments on the Draft Program EIR and will provide these responses to commenting agencies and other parties. These environmental comments and their responses will be included in the Final EIR as part of the environmental record for the decision makers to consider prior to consideration of certification of the Program EIR and final action on the Project.

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3 PROJECT DESCRIPTION

3.1 Purpose

The purpose of the Program EIR Project Description is to describe the Red Hill Avenue Specific Plan Project (Specific Plan or Project) to allow for meaningful review by reviewing agencies, decision makers, and interested parties. CEQA Guidelines Section 15124 (14 California Code of Regulations § 15124) requires that the project description for an EIR contain (1) the precise location and boundaries of a project site; (2) a statement of objectives sought by a project including the underlying purpose of the project; (3) a general description of a project's characteristics; and (4) a statement briefly describing the intended uses of the EIR, including a list of the agencies that are expected to use the EIR in their decision making, a list of the permits and other approvals required to implement the project, and a list of related environmental review and consultation requirements required by Federal, State, or local laws, regulations, or policies. An adequate project description need not be exhaustive, but should supply the detail necessary for project evaluation.

3.2 Specific Plan Project Overview

The Red Hill Avenue Specific Plan provides planning policies and regulations that connect General Plan policies with future project-level development within the Specific Plan area. The purpose of the Specific Plan is to guide future change, promote high-quality development, and implement the community's vision for the Specific Plan area. The Specific Plan provides goals and objectives, a land use plan, regulatory standards, Design Criteria, and administration and implementation programs to encourage high-quality development.

As proposed, the Specific Plan would allow for an additional 325,000 square feet of non-residential development and 500 additional dwelling units. The total development in the Specific Plan area anticipated with the buildout potential of the Specific Plan is 521 dwelling units and 621,446 square feet of non-residential development, inclusive of existing and proposed uses.

3.3 Specific Plan Project Location

The City of Tustin is in central Orange County. As depicted in Exhibit 3-1, *Regional Vicinity Map*, Tustin is bordered by the City of Orange and unincorporated County of Orange areas to the north; the City of Irvine to the south and east; unincorporated County areas to the east; and the City of Santa Ana to the west. The City is transected by two major regional freeways: Interstate 5 (I-5) and State Route 55 (SR-55). Its southern boundary is less than two miles north of Orange County's John Wayne Airport.

The proposed Specific Plan area is in central Tustin, east of Old Town Tustin. As depicted on Exhibit 3-2, *Specific Plan Area*, the approximately 43.11-acre Specific Plan area extends along Red Hill Avenue to Bryan Avenue to the northeast, and Walnut Avenue to the southwest. I-5 bisects the Specific Plan area creating the northern and southern portions of the Specific Plan area.

3.4 On-site and Surrounding Land Uses

Existing uses include commercial, neighborhood retail shopping center, professional office, residential, motels, and an institutional use, as well as vacant parcels. Exhibit 3-3, *Existing Land Uses*, depicts the locations and Table 3-1, *Existing Land Uses*, summarizes the characteristics of the land uses. The Specific Plan area contains approximately 296,446 square feet of non-residential uses and 21 dwelling units.

Table 3-1. Existing Land Uses			
Land Use	Acres	Non-Residential (sf)	Dwelling Units (du)
Commercial	2.46	37,159	0
Commercial – Auto	4.0	21,418	0
Commercial – Food	3.16	13,601	0
Shopping Center	16.89	152,118	0
Office	1.22	12,633	0
Motel	2.58	46,322	0
Institutional – Church and associated uses	0.82	11,946	0
Multi-Family Residential	0.68	0	19
Single-Family Residential	0.33	0	2
Vacant	3.65	1,249	0
Total Land Development Area	35.79 ac	296,446 sf	21 du
Total Roadway Rights-of-Way	7.32	0	0
Total with Right-of-Way	43.11 ac	296,446 sf	21 du

sf = square feet; du = dwelling unit; ac (acre)

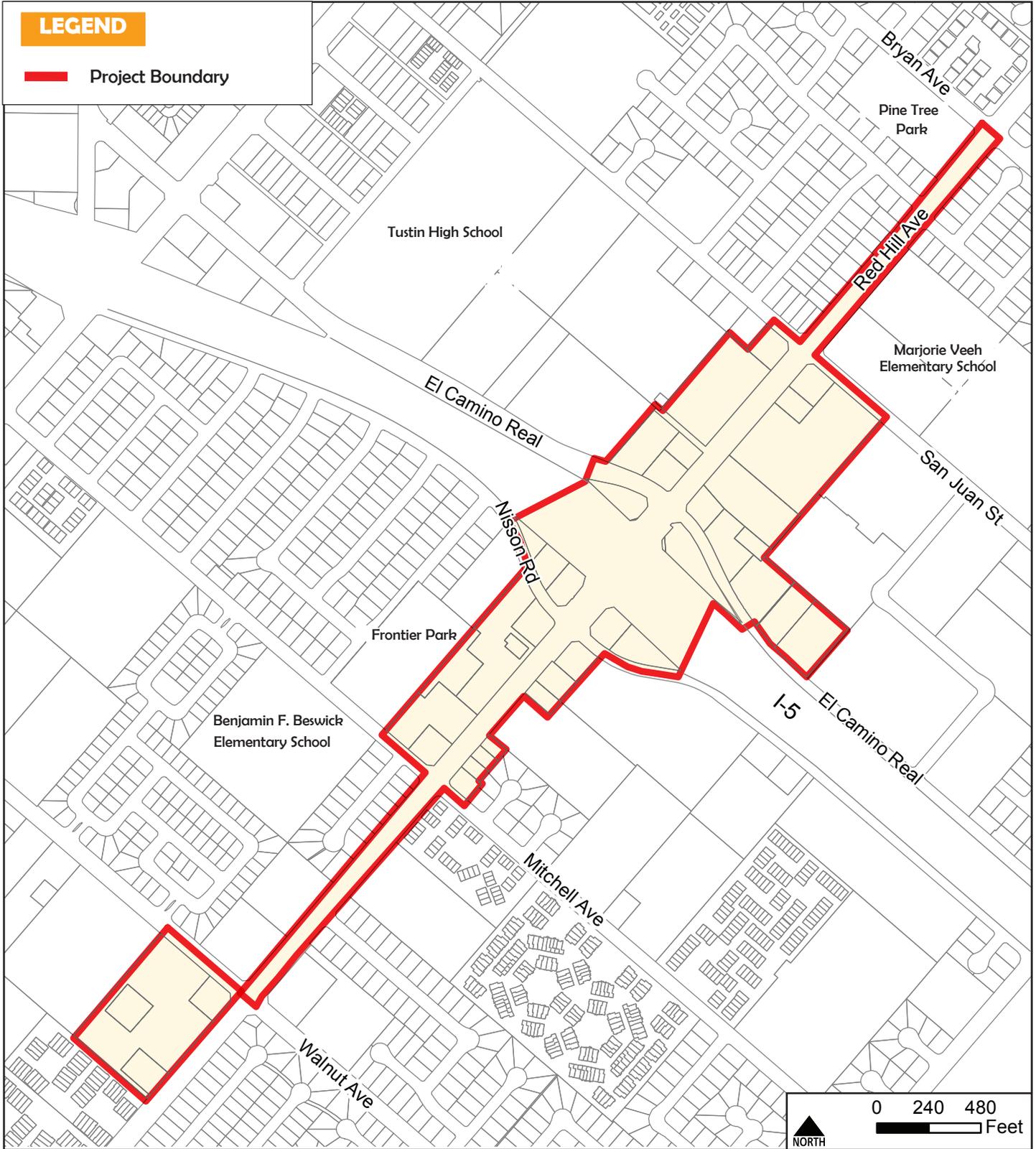
North of I-5, land uses bordering the Specific Plan area include single-family and multi-family residences; Pine Tree Park at the intersection of Bryan Avenue at Red Hill Avenue; and Tustin High School to the west of Red Hill Avenue. Land uses bordering the Specific Plan area south of I-5 include single-family and multi-family residences; Frontier Park and Benjamin F. Beswick Elementary School to the west of the Specific Plan area; and a single-family residence with associated agricultural uses on the northeast corner of Red Hill Avenue at Walnut Avenue. Additional public schools proximate to the Specific Plan area are identified in Section 4.11, *Public Services*, of this Program EIR.

Within the Specific Plan area, Red Hill Avenue is a six-lane divided roadway with three travel lanes in each direction and a center two-way left-turn lane. A raised, landscaped median is present in the segment south of Bryan Avenue and north of Lance Drive. The existing street parkways include sidewalks, with some portions containing trees and other landscaping.

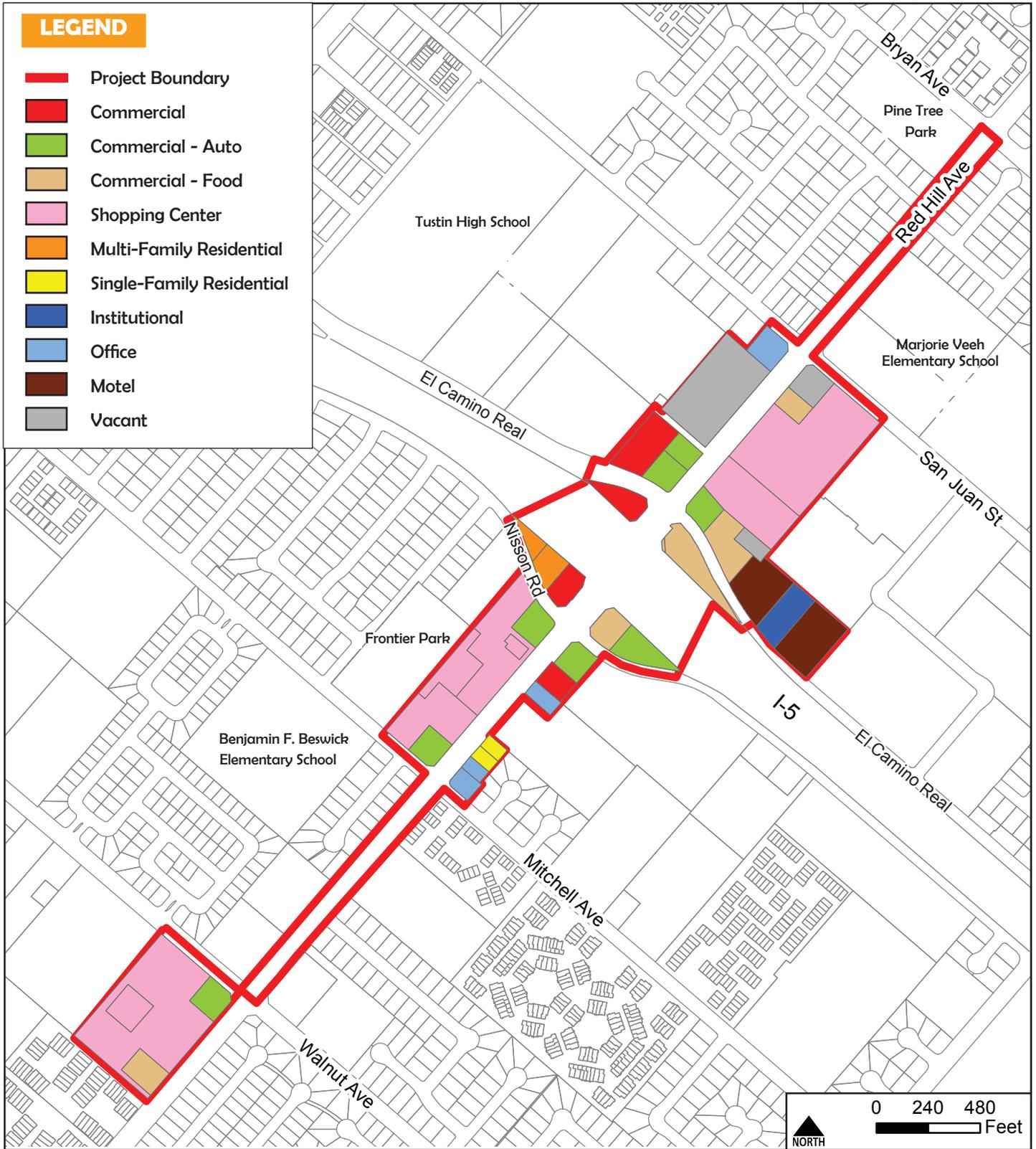


Source: Google Maps, 2017

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3.5 Existing City of Tustin Land Use Designations

3.5.1 GENERAL PLAN DESIGNATIONS

As depicted on Exhibit 3-4, *Existing General Plan Land Use Designations*, the land use designations for the Specific Plan area include a mix of commercial and professional office land use designations. As shown in Table 3-2, *General Plan Land Use Designations*, the Community Commercial (CC) land use designation applies to more than 90 percent of the Specific Plan area. Section 4.8, *Land Use and Planning*, of this Program EIR, addresses the General Plan goals and policies relevant to the Project.

The Community Commercial (CC) designation has a maximum Floor Area Ratio (FAR) of 0.5. The designation is characterized by a variety of retail, professional office, and service-oriented business activities, many of which are highway-oriented and serve a community-wide area and population. Site development standards for the CC designation encourage large projects and provide for adequate setbacks, parking, landscaping, buffering from residential land use areas and other features which will create well designed, efficient, and attractive projects.

Land Use	Acres	Percentage of Specific Plan Area
Community Commercial (CC)	32.1	90%
Planned Community Commercial/Business (PCCB)	2.9	8%
Professional Office (PO)	0.8	2%
Total	35.8	100%

Note: Roadways do not have General Plan or Zoning designations and are therefore not included in the acreage assumptions provided in Table 3-1.

The Professional Office (PO) designation has a maximum FAR of 0.8. The PO designation provides areas of development of primarily professional offices and other supporting uses. Also included are small convenience or service commercial activities intended to meet the needs of the on-site employee population.

The Planned Community Commercial/Business (PCCB) designation has a maximum FAR of 1.5. The PCCB designation allows a mix of commercial and office uses such as hotel/motels, commercial centers, research and development, and professional offices. The designation provides opportunities for a mix of all those activities permitted within the Community Commercial, Professional Office, and Industrial land use designations. To ensure compatibility of land uses permitted within the classification, with the character of surrounding development and within a development area itself; the location, land use type, density, and building intensity standards are specifically governed by Planned Community District provisions or the adoption of a Specific Plan as authorized by the California Government Code. The designation also permits other uses such as residential uses which support the land use designation.

Relationship of the City of Tustin General Plan and the Proposed Specific Plan

The current City of Tustin General Plan was updated in 2013. A specific plan may not be adopted or amended unless the proposed plan or amendment is consistent with the General Plan pursuant to Government Code Section 65454. Section 65359 requires that any specific plan of a city or county that is applicable to the same areas or matters affected by a General Plan Amendment be reviewed and amended as necessary to make a specific plan consistent with a General Plan.

Adoption of the Specific Plan Project requires a General Plan Amendment to update the General Plan Land Use Element Land Use Map to show the boundaries of the Specific Plan area, and to update the General Plan Land Use Element and other related conforming amendments to the General Plan to ensure that the Specific Plan and the General Plan, as amended, are internally consistent.

The Red Hill Avenue Specific Plan is established through the authority granted to the City of Tustin by California Government Code, Title 7, Division 1, Chapter 3, Article 8, Sections 65450 through 65457 (Specific Plans). As expressed in California law, a specific plan may be adopted by ordinance or resolution. This allows jurisdictions to choose whether their specific plan will be policy driven (adopted by resolution) or regulatory in nature (adopted by ordinance). The Red Hill Avenue Specific Plan would be adopted by Ordinance as a regulatory plan.

3.5.2 ZONING DISTRICTS

As shown in Table 3-3, *Existing Zoning Districts*, the Retail Commercial (C1) and Central Commercial (C2) zones apply to 93 percent of the Specific Plan area. Exhibit 3-5, *Existing Zoning Districts*, depicts the zoning designations for properties within the Specific Plan area.

Table 3-3. Existing Zoning Districts		
Land Use	Acres	Percentage of Specific Plan Area
Retail Commercial (C1)	16.51	46%
Central Commercial (C2)	17.0	47%
Commercial General (CG)	1.46	4%
Professional (PR)	0.78	2%
Total	35.8	100%
Note: Roadways do not have General Plan or Zoning designations and are therefore not included in the acreage assumptions provided in Table 3-1.		

Government Code Section 65455 requires that the adoption or amendment of a zoning ordinance be consistent with any applicable specific plan covering the same area. Adoption of the Red Hill Avenue Specific Plan requires a zoning amendment to change the existing zoning designations to “Red Hill Avenue Specific Plan (SP-13)”. The provisions contained in the Red Hill Avenue Specific Plan constitute the primary land use and development standards for the Specific Plan area including procedures for the review and allocation of new residential development. The regulations would be applied in addition to the provisions set forth in the Tustin City Code. Where the Specific Plan is silent, the provisions of the Tustin City Code would prevail.

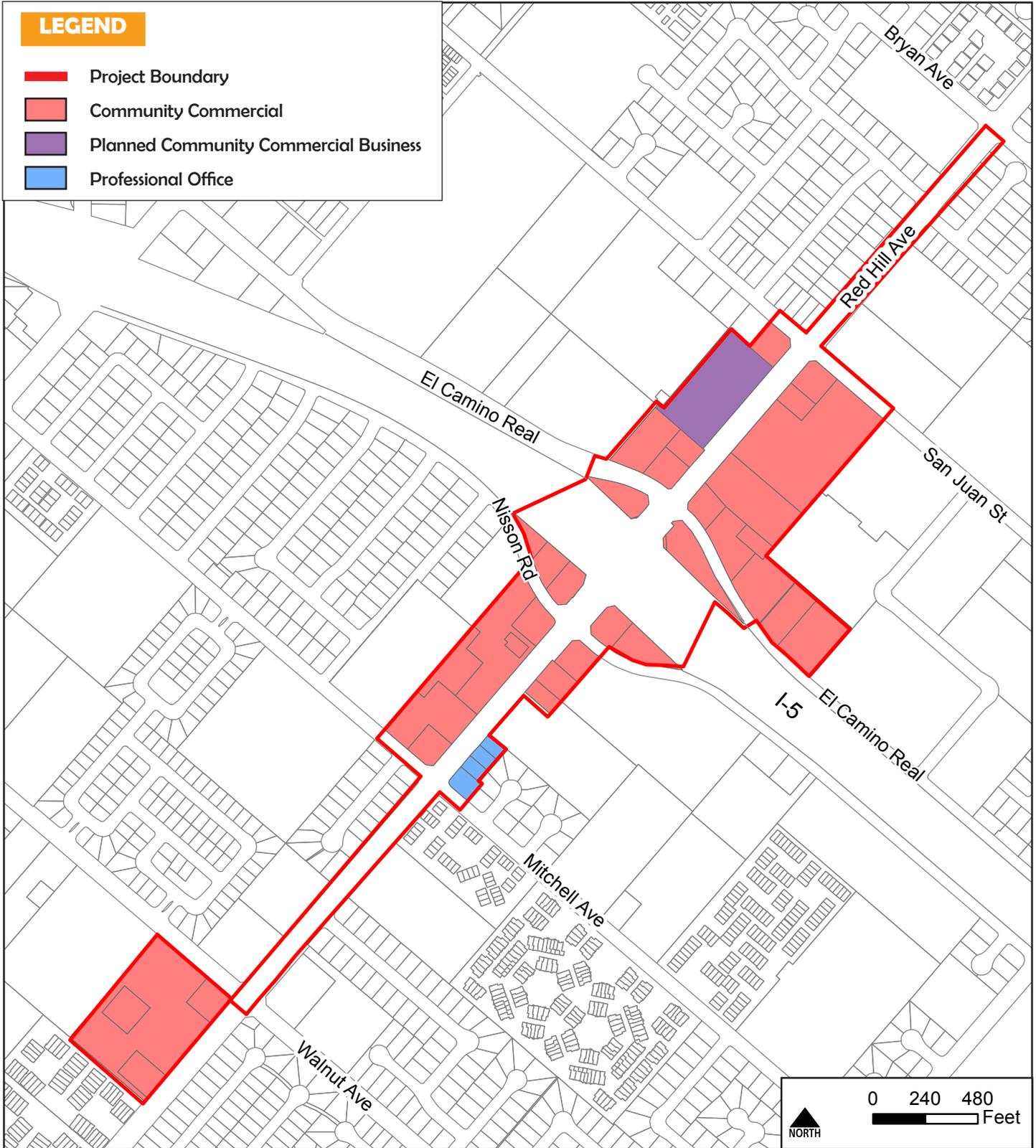
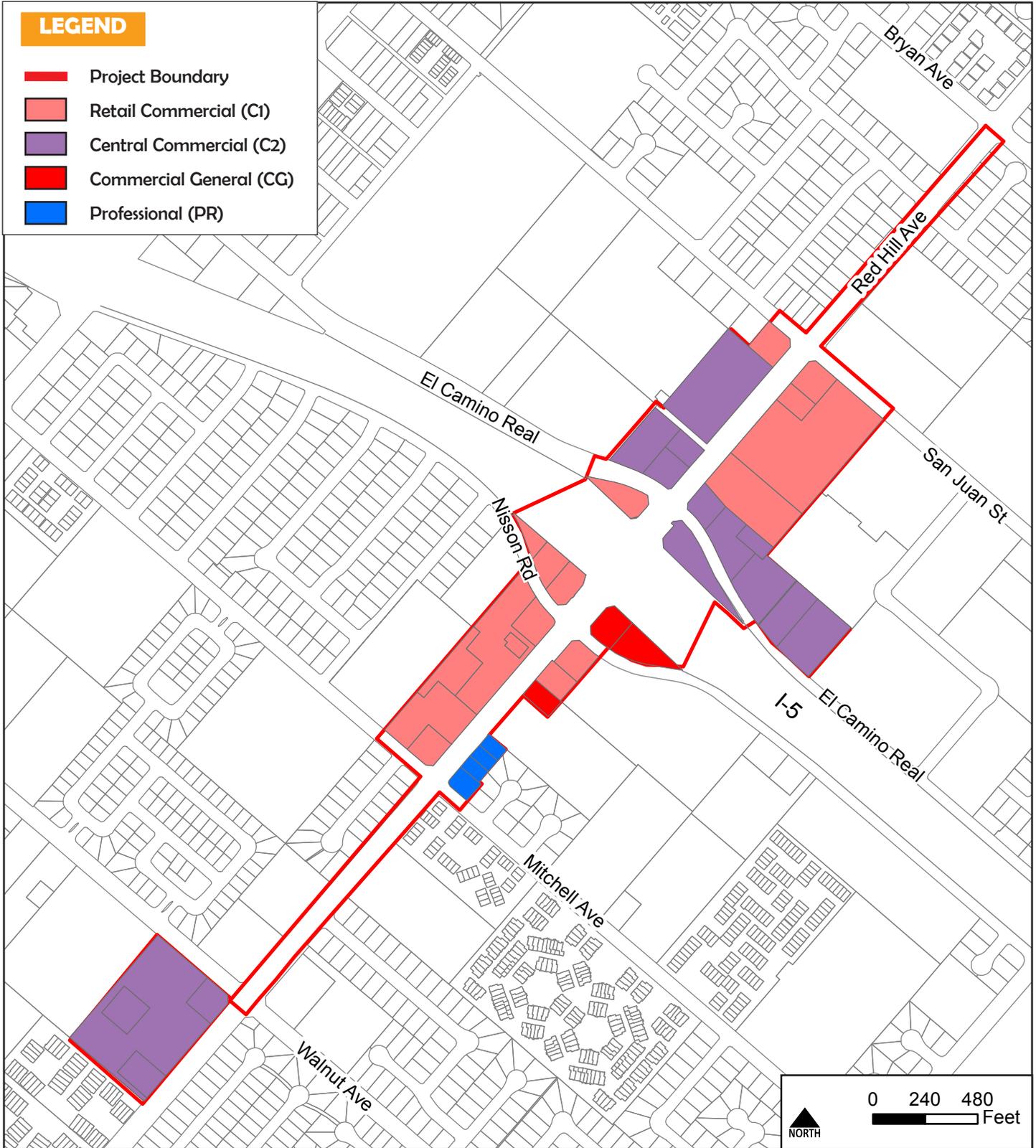


EXHIBIT 3-4: General Plan Land Use Designations
 Red Hill Avenue Specific Plan

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3.6 Specific Plan Goals and Objectives

Section 15124(b) of the State CEQA Guidelines (14 California Code of Regulations [CCR]) requires “A statement of objectives sought by the proposed project. A clearly written statement of objectives would help the Lead Agency develop a reasonable range of alternatives to evaluate in the EIR and would aid the decision makers in preparing findings or a statement of overriding considerations, if necessary. The statement of objectives should include the underlying purpose of the project.” The City has identified the following goals and objectives for the proposed Specific Plan:

The Specific Plan has goals, which are general statements concerning the City’s desired ultimate physical, social and/or economic environment; and objectives, which express the types of actions that are necessary to achieve the stated goals and promote the overall spirit and intent of the Red Hill Avenue Specific Plan.

Goal 1: Enhance streetscape, landscape, and public amenities throughout the Specific Plan area.

- *Objective 1-1:* Establish a streetscape program using landscaping, signage, street furniture, entry statements, and other visual amenities compatible with the character of Tustin to achieve a distinct identity for the area.
- *Objective 1-2:* Develop coordinated gateway design treatments that establish entry statements and a sense of place at key locations within the Specific Plan area.
- *Objective 1-3:* Encourage a “sense of place” within the Specific Plan area through quality site design, architectural design, and public improvements as part of future development.
- *Objective 1-4:* Coordinate a bus shelter and transit stop improvement program to ensure that all bus stops have the appropriate amenities.

Goal 2: Improve visual and functional connections and linkages between Red Hill Avenue, surrounding residential neighborhoods, adjacent public and institutional uses, and Interstate 5.

- *Objective 2-1:* Identify ways to improve and enhance linkages and connections between new development in the Specific Plan area and surrounding neighborhoods.
- *Objective 2-2:* Develop design criteria that encourage optimal building configuration and design, parking strategies, signage, pedestrian amenities, landscaping, and appropriate, timeless architectural styles.

Goal 3: Balance flexible and diverse land uses that foster economic development opportunities and support housing opportunities. Land use in the Specific Plan area will allow for residential opportunities along with neighborhood-serving retail, office, and commercial uses.

- *Objective 3-1:* Establish a land use program that encourages a mix of land uses responsive to market demands and Tustin community priorities.
- *Objective 3-2:* Refine allowable land uses within the area to encourage the desired development envisioned by the Specific Plan.

- *Objective 3-3:* Establish development standards for future land uses that are compatible with the surrounding area and preserve the small town feel and community character.
- *Objective 3-4:* Develop land use standards that focus on retention and enhancement of commercial development, but supports integrated mixed-use development, sidewalk-adjacent development, parking behind building frontages and pedestrian activity.

Goal 4: Streamline processes to support future development in the Specific Plan area.

- *Objective 4-1:* Adopt a program-level environmental clearance document to utilize in subsequent development proposals within the Red Hill Avenue Specific Plan area.
- *Objective 4-2:* Establish a tiered environmental review process for discretionary development application review to streamline the approval process as described in Chapter 1 of the Red Hill Avenue Specific Plan.
- *Objective 4-3:* Establish development incentives such as tailored development standards or streamlined review processes, to encourage new development that fulfills the vision of the Specific Plan.
- *Objective 4-4:* Identify local, State, and Federal funding opportunities that can provide businesses-assistance and offer the City the means to upgrade the area.

Goal 5: Improve pedestrian and bike accessibility and vehicular circulation to minimize potential conflicts between different users and improve mobility throughout the Specific Plan area and connectivity with the greater community.

- *Objective 5-1:* Improve and enhance pedestrian connections and facilities, particularly in areas that contain large, expansive parking lots. At these locations, accessible pedestrian connections from the sidewalk to building entrances should be encouraged.
- *Objective 5-2:* Minimize curb cuts or driveways onto arterial roads and collector streets.
- *Objective 5-3:* Promote and develop a transportation system which includes provisions for public transportation, bikes, and pedestrians.

Goal 6: Implement parking standards that reflect verifiable demand and consider future land uses in the area.

- *Objective 6-1:* Promote the development and maintenance of adequate parking facilities commensurate with parking demand.
- *Objective 6-2:* Monitor parking supply and utilization to identify deficiencies or conflicts with the movement of traffic as new development occurs.

Goal 7: Coordinate existing and future development with infrastructure capacity.

- *Objective 7-1:* Ensure infrastructure capacity within the Specific Plan area meets future demands.

- *Objective 7-2:* Coordinate future land use planning with sustainable transportation and infrastructure planning.

Goal 8: Ensure development within the Specific Plan area is sensitive to and compatible with surrounding land uses.

- *Objective 8-1:* Ensure that the form, scale, and design of new development, including new construction, renovations, or additions, does not negatively impact the existing surrounding uses and structures.
- *Objective 8-2:* Implement “four-sided architecture” principles that consider the aesthetic quality of development from all sides, whether visible from the public right-of-way or not.

3.7 Specific Plan Project Characteristics

The Project evaluated in this Program EIR is the Red Hill Avenue Specific Plan. The proposed Specific Plan is a policy and regulatory document to promote revitalization of the commercial district by providing a mixed-use land use program, Design Criteria and a streetscape program to improve jobs/housing balance, improve aesthetics, and promote mobility. The Red Hill Avenue Specific Plan provides planning regulations and criteria that connect the City of Tustin General Plan policies with future project-level development within the Specific Plan area. The Specific Plan provides goals and objectives, a land use plan, regulatory standards, design criteria, and administrative and implementation programs.

The Specific Plan would facilitate compatible land uses in an integrated mixed-use environment with appropriate connections to existing parks, by limiting intensity near single-family homes, and through the retention of a primarily commercial character in the Specific Plan area. The Specific Plan would encourage high-quality architecture with traditional but contemporary architecture and a high level of architectural detail. It would facilitate high-quality businesses with incentives for the revitalization of vacant or underperforming properties.

The Specific Plan would encourage improving the public realm in the Specific Plan area with an enhanced streetscape that would balance vehicular needs with landscaped parkways, street trees, landscaped median, and cohesive street furniture; pedestrian-scaled streets where pedestrians feel secure; the extension of bike paths from the existing community; cohesive wayfinding signage throughout the Specific Plan area; safe, improved pedestrian crossings; and opportunities for public art.

The Specific Plan’s estimated development potential is 325,000 square feet of additional non-residential development and 500 additional dwelling units. Table 3-4, *Red Hill Avenue Specific Plan Development Estimates*, provides a summary of the proposed land uses and potential for additional development in the Specific Plan area. As previously noted, the total development in the Specific Plan in addition to the existing development is 521 dwelling units and 621,446 square feet of non-residential development.

Location	Acres ^a	Non-Residential (sf)	Dwelling Units (du)
North of I-5	19	175,000	395
South of I-5	17	150,000	105
Total Specific Plan Area	36	325,000	500
Existing Development		296,446	21
Total	36	621,446 sf	521 du

du = dwelling unit; sf= square feet
Notes: Roadways are not assumed in the development areas for non-residential and residential development (Table 3-1). Buildout estimates for the Specific Plan area are in addition to existing development.
a. Numbers are rounded.

Table 3-5, *General Plan and Specific Plan Estimates*, is a summary of the proposed land uses and development potential for the Specific Plan area under the current General Plan compared to the proposed Specific Plan. The existing General Plan estimated maximum buildout based on existing land use designations for the Specific Plan area is 913,724 square feet of non-residential development and no dwelling units. In comparison to the maximum estimated buildout under the General Plan, the Specific Plan would result in reduction of 292,278 fewer square feet of non-residential development and an addition of 500 residential units.

Location	Acres ^b	Existing General Plan		Specific Plan	
		Non-Residential (sf)	Dwelling Units (du)	Non-Residential (sf)	Dwelling Units (du)
North of I-5	19	544,818	0	175,000	395
South of I-5	17	368,906	0	150,000	105
Total Specific Plan^a				325,000	500
Existing Development		296,446	21	296,446	21
Total General Plan	36	913,724	0		
Total Specific Plan + Existing Development	36			621,446	521

du = dwelling unit; sf= square feet
a. Buildout estimates are exclusive of existing development.
b. Exclusive of rights-of-way.

3.7.1 LAND USES

Properties within the Specific Plan area would be classified as Mixed-Use, which provides for the following:

Mixed-Use: This use type provides for a variety of future development opportunities. The focus of the Specific Plan area would continue to be commercial in character with the introduction of housing. The Specific Plan would allow for mixed-use developments with commercial retail and/or office on the ground

floor and residential or office uses on upper floors in a vertical mixed-use configuration; or, commercial/office uses and residential uses in a horizontal mixed-use setting on one development site.

Commercial/Office: Freestanding retail and service commercial and/or office uses are allowed within the mixed-use designation. Free-standing commercial/office uses would likely continue to be the dominant pattern within the Specific Plan area because many parcels are too small to accommodate the parking, common open space, and pedestrian-oriented requirements set forth in the Specific Plan Development Regulations and Design Criteria.

The maximum height for buildings within the Specific Plan area would be four stories. Five stories would be permitted subject to building massing and scale requirements set forth in Chapter 5, Design Criteria, of the Specific Plan. These factors include but are not limited to the provision of varied upper floor setbacks; consistency of design features on all elevations; and a minimum 16-foot ground floor height for commercial uses in a mixed-use setting. In addition, five stories would not be permitted adjacent to existing single family residential uses.

3.7.2 RED HILL AVENUE ROAD IMPROVEMENTS

I-5 bisects the Specific Plan area. The Specific Plan area roadways consist of Red Hill Avenue, which is oriented in the northeast-to-southwest direction; and six roadways that cross Red Hill Avenue in the northwest-to-southeast direction north and south of I-5. They are Bryan Avenue, San Juan Street, El Camino Real, Nissan Road, Mitchell Avenue, and Walnut Avenue. Within the Specific Plan area, these intersections are signalized. As previously addressed, Red Hill Avenue is a six-lane divided roadway with three travel lanes in each direction and a center two-way left-turn lane. A raised, landscaped median is provided in the segment south of Bryan Avenue and north of Lance Drive. The existing street parkways include sidewalks, with some portions containing landscaping and trees.

The primary roadway improvements considered by the Specific Plan are on Red Hill Avenue, as shown in Exhibit 3-6, *Circulation Improvements*. As shown in Exhibit 3-7, *Red Hill Avenue Cross Sections*, the proposed improvements to Red Hill Avenue consist of the addition of on-street bike lanes, reduced lane widths, and construction of landscaped medians where feasible. A consistent streetscape program has also been developed. Proposed Red Hill Avenue cross sections are as follows:

- **Baseline Section (Section A).** This is the minimum cross section for the length of Red Hill Avenue within the Specific Plan area. This section would retain a consistent curb-to-curb width with three thru-lanes (11 feet, 10 feet, 10 feet) in each direction; add an on-street Class II bike lane on both sides of the roadway; and, retains existing turn lanes. The street retains a 42-foot half-width (street to curb face). Medians would be provided, where feasible, as shown on Exhibit 3-8, *Schematic Median Opportunity Areas*. This baseline cross section incorporates a consistent streetscape along the entire reach consisting of a minimum four-foot-wide landscaped parkway and a minimum four-foot-wide sidewalk.
- **Ultimate Section with Flexible Amenity Setback (Section B).** This ultimate cross-section would retain the curb-to-curb width consistent with three thru-lanes (11 feet, 10 feet, 10 feet) in each direction; add an on-street Class II bike lane on both sides of the roadway; and retain existing left

turn lanes, within a 42-foot half width (street to curb face). A minimum 4-foot wide parkway and 14-foot-wide flexible amenity area (total 18-foot-wide Flexible Amenity Setback) would accommodate a required minimum 4-foot-wide sidewalk, and options for outdoor dining, plaza spaces, and/or enhanced landscape. This section assumes a 120-foot-wide right-of-way width and raised, landscaped medians, where feasible.

Both street section options require restriping within the paved width of the street to include the reduced lane widths, turn pockets, and bike lanes. Parking on or adjacent to Red Hill Avenue on private property or within the Flexible Amenity Setback area would be considered by the City on a case-by-case basis as part of a development application. Construction of new, raised medians can be accommodated in limited locations within the Specific Plan area, where they do not conflict with required turning movements. The existing Red Hill Avenue median north of San Juan Street would be modified to provide a longer northbound left-turn. Median locations are shown on Exhibit 3-9, *Potential Median Locations* (also see Exhibit 3-8).

3.7.3 BIKE AND PEDESTRIAN IMPROVEMENTS

A Class II bike lane is an on-street bike lane that uses painted stripes, stencils, and signs to delineate the right-of-way assigned to bicyclists and motorists and provide for more predictable movements by each. Within the Specific Plan area, there is an existing Class II bike lane on both sides of Red Hill Avenue between El Camino Real and Nissan Road. The City's Master Bikeway Plan shows that the entire extent of Red Hill Avenue within the City limits is designated or is a potential Class II bikeway. The proposed circulation components of the Specific Plan include revisions to the roadway cross section for Red Hill Avenue to include a Class II striped on-street bike lane the entire length of the Specific Plan area to promote more multimodal travel opportunities. Enhanced bikeway signage would be introduced to promote bike usage and provide directions on how to connect to other bikeways or key points in the City. Enhanced or decorative bike racks are another feature that may be introduced within private developments. The intent of the recommended bikeway system improvements is to provide a safe, non-vehicular way for residents, employees, and students to travel.

Existing pedestrian facilities within the Specific Plan area include sidewalks along all roadways and crosswalks across the signalized intersections. There are no crosswalks at unsignalized intersections across Red Hill Avenue within the Specific Plan area. As a part of the Project, the public streetscape would be enhanced to provide consistent landscaped parkways, sidewalks, street trees, landscaped medians, and street furniture.

3.7.4 PUBLIC REALM – URBAN DESIGN AND STREETScape

The Specific Plan would establish a program of streetscape landscaping improvements within the public rights-of-way along Red Hill Avenue, as well as gateway signage enhancements. The intent of these streetscape improvement concepts and gateway enhancements is to provide a "sense of place" or identity within the Specific Plan area, providing a consistent streetscape concept with expanded amenity areas adjacent to new development.

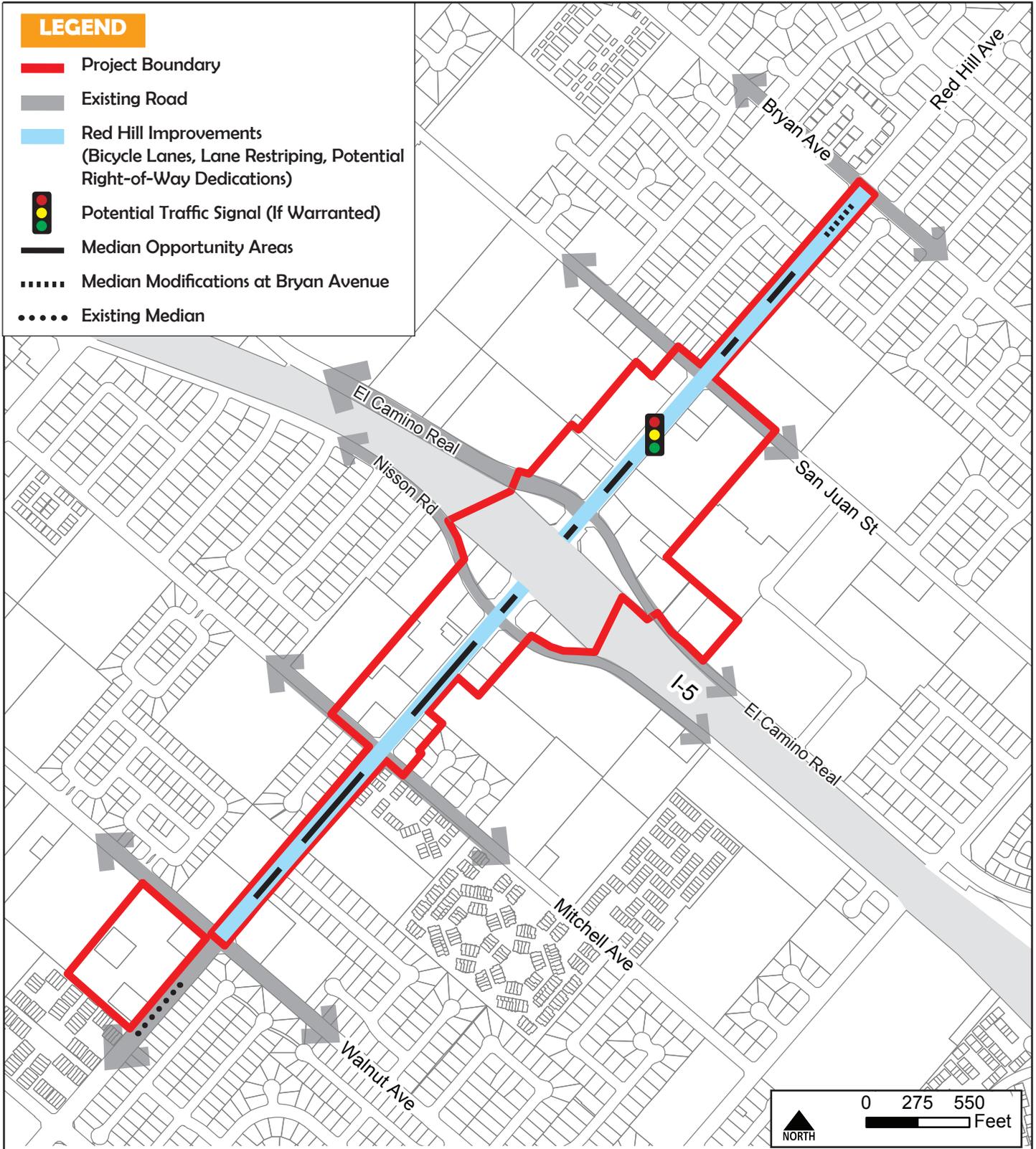
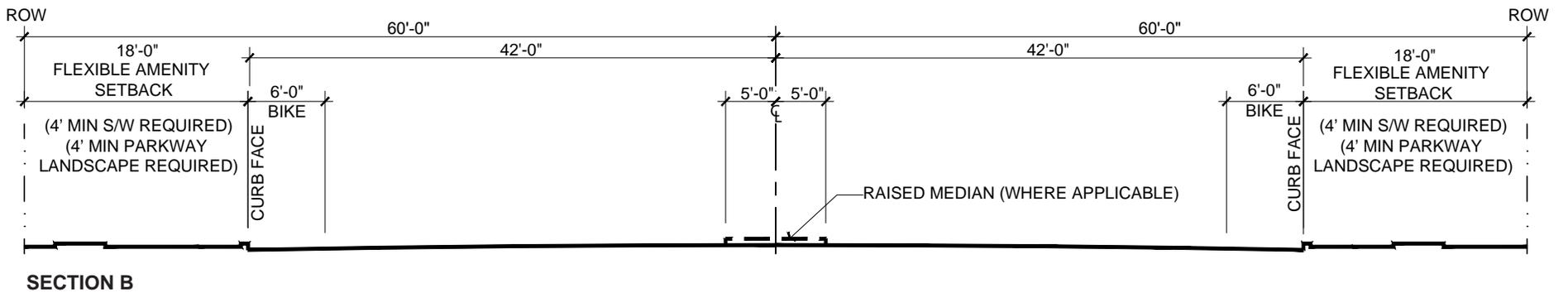
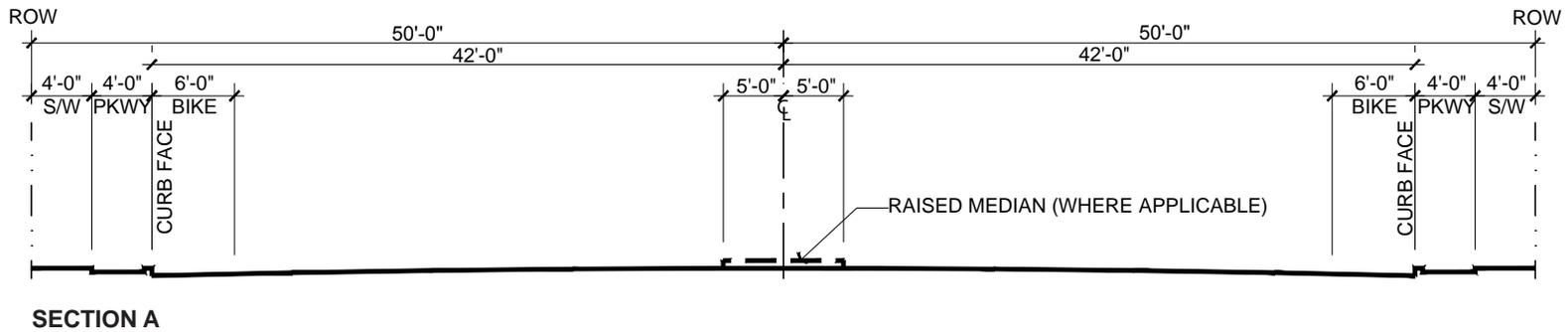


EXHIBIT 3-6: Circulation Improvements
Red Hill Avenue Specific Plan

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S/W: Sidewalk (4' min)
PKWY: Parkway (4' min)

Note: 1) In all cases the minimum sidewalk width shall be 4' and the minimum parkway width shall be 4'.
 2) For uses in the Flexible Amenity Setback refer to Specific Plan Section 4. Uses may include additional landscaping, widening sidewalks, outdoor dining, pedestrian-related uses, public art.

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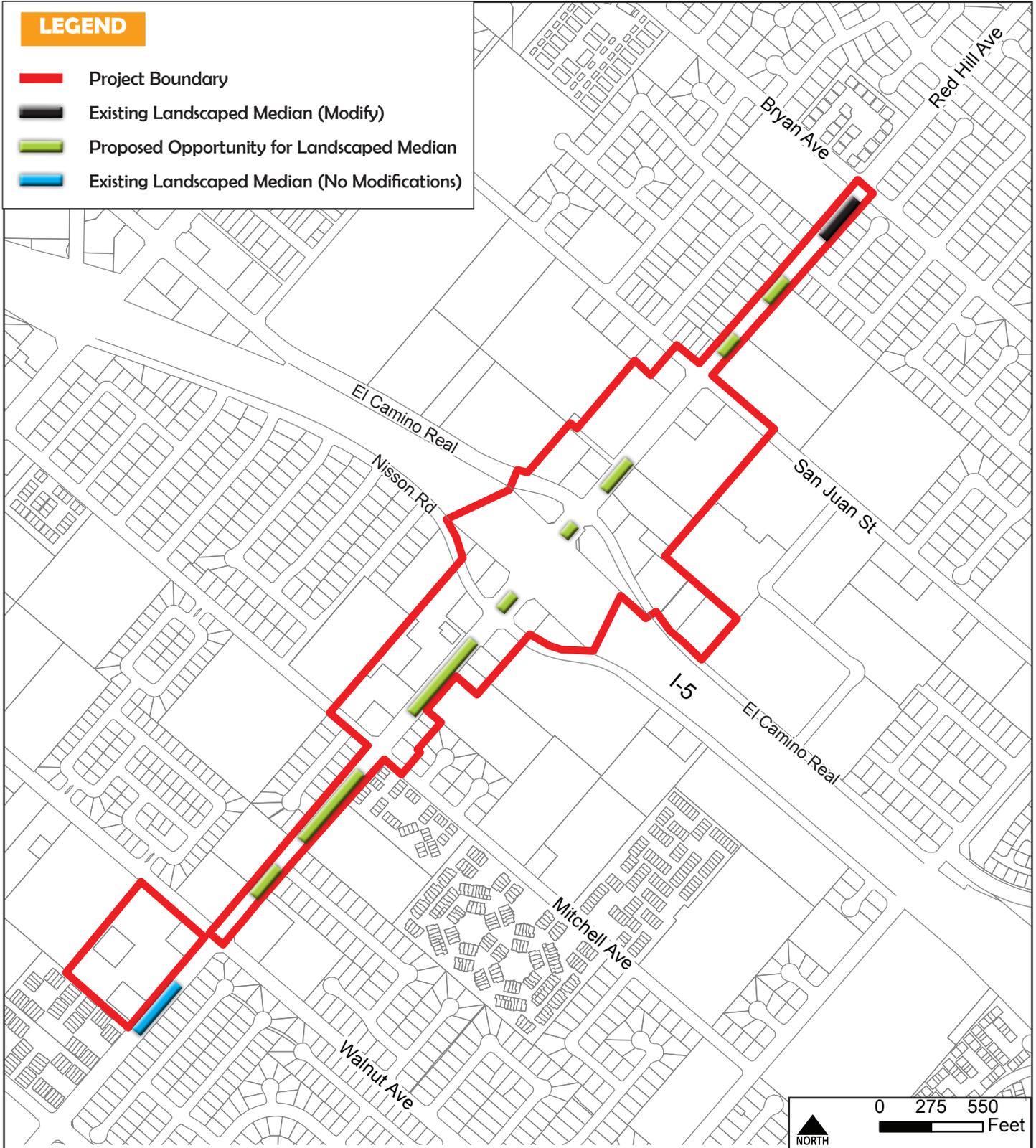


EXHIBIT 3-8: Schematic Median Opportunity Areas
 Red Hill Avenue Specific Plan 3-25

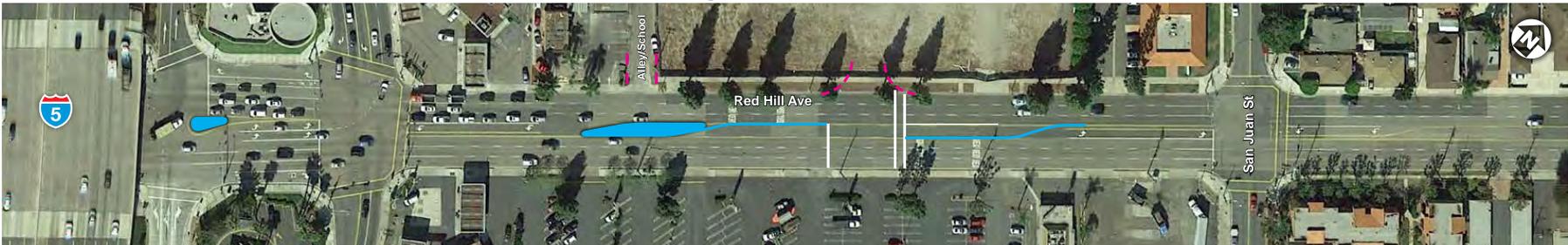
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Red Hill Avenue segment from Walnut Avenue to Mitchell Avenue



Red Hill Avenue segment from Mitchell Avenue to I-5



Red Hill Avenue segment from I-5 to San Juan Street



Red Hill Avenue segment from San Juan Street to Bryan Avenue

LEGEND

-  Potential Medians
-  Crosswalk

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Streetscape

The Specific Plan proposes streetscape improvements to enhance the visual appeal and identity of the Red Hill Avenue public realm. Streetscape improvements are proposed to promote attractive, compatible, and consistent environments with new development. The basic streetscape would consist of parkway plantings adjacent to the street along the entire length of Red Hill Avenue, with new landscaped medians where feasible. As previously addressed, the streetscape would have a minimum four-foot-wide landscaped parkway and a minimum four-foot-wide sidewalk.

Section A of Exhibit 3-10, *Streetscape Cross Sections*, illustrates the minimum streetscape standard along the length of the Specific Plan area. Section B (Exhibit 3-10) illustrates the ultimate configuration adjacent to new development where the City has, or requires dedication of, the full 120-foot-wide Red Hill Avenue right-of-way (referred to as the Flexible Amenity Setback area). As previously addressed, this 18-foot-wide area would include a required minimum 4-foot-wide sidewalk and 4-foot-wide parkway. The Flexible Amenity Setback area may include a widened walkway area, plaza spaces, enhanced landscaping, public art, and/or outdoor dining space. Other uses in this space may be proposed.

Streetscape improvements would be installed and paid for by a combination of public and private investment. New private development along Red Hill Avenue would include the installation of sidewalk and landscaping improvements between the property line and curb. Public implementation of streetscape improvements would be phased over time, as financial resources allow.

Landscape and Street Furniture

The Specific Plan Plant Palette is intended to provide a range of landscape choices to complement the design and development and provides some “sense of place” consistency in the Specific Plan area. The Public Realm Plant Palette identifies trees, shrubs, groundcover, and accents to enhance and promote native, water conserving plant materials suitable for Tustin’s local climate zones. Landscaping installed with adjacent future development would expand uses a palette which is complementary but does not distract from or disrupt the proposed streetscape for Red Hill Avenue. There is no specific required plant palette for private development.

Street furniture could include bike racks, trash receptacles, benches, bollards, and bus shelters/stops. Bike racks would be provided as a part of private development projects as required by the Tustin City Code; enhanced or decorative racks would be encouraged. Bus shelter design would require coordination with Orange County Transit Authority (OCTA). Areas of special paving are permitted and encouraged in the Flexible Amenity Setback areas.

Monumentation and Wayfinding

The proposed identity and wayfinding elements for the Specific Plan area would use materials and colors to create a distinct sense of place, while maintaining a traditional look and feel throughout the area. The proposed locations for primary and secondary gateway elements, directional signage, and banners are shown in Exhibit 3-11, *Gateway Locations*.

3.7.5 UTILITIES

Implementation of the Specific Plan may require the construction of new on-site utility infrastructure or upgrades to existing infrastructure to serve future development projects within the Specific Plan area. Utilities would be connected to existing infrastructure in adjacent roadways, with the final sizing and design of on-site facilities to occur during final building design and plan check.

Potable Water

The Specific Plan area is entirely within the domestic water system owned and operated by the City of Tustin. The City is part of the East Orange County Water District (EOCWD), a wholesale water district, and a member agency of the Metropolitan Water District of Orange County (MWDOC). It is anticipated that the section of existing six-inch water main within Red Hill Avenue would be replaced with a larger diameter pipe and would extend north from I-5 to the terminus at San Juan Street as a condition of development of the adjacent properties. The City also has a long-range plan to upgrade other sections of water mains in the corridor. Other anticipated improvements include public meters and backflow devices that would be required for domestic water service and/or separate fire lines for individual developments as they occur.

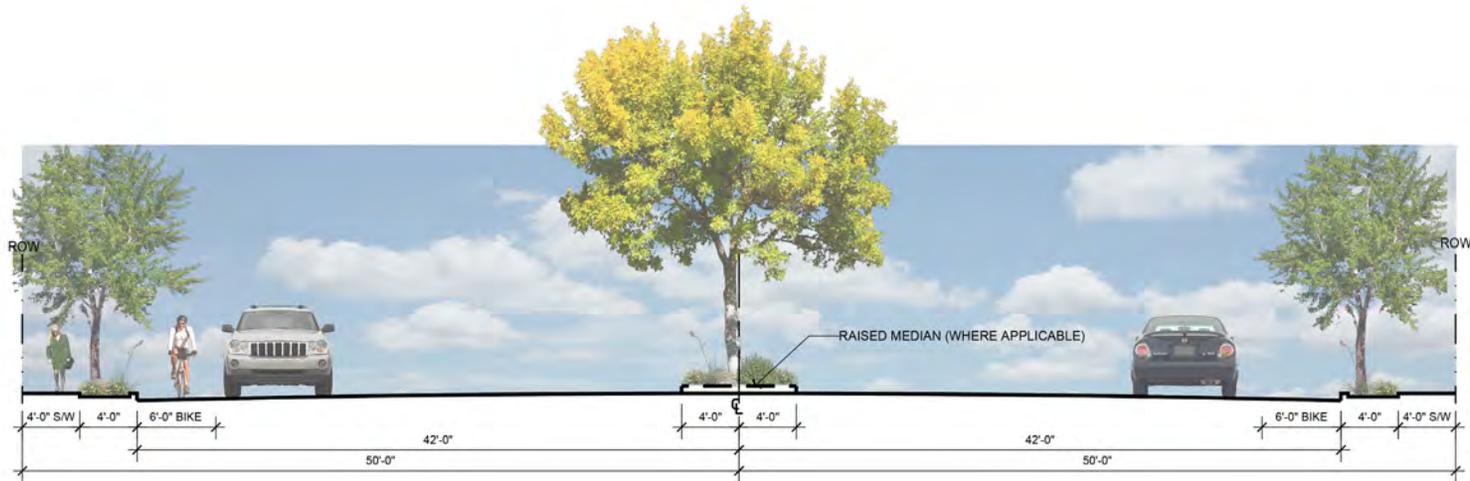
Wastewater Collection and Disposal

The local sanitary sewer mains within public streets are owned and operated by EOCWD. The Orange County Sanitation District (OCSD) owns and maintains a network of regional sewer trunk mains, lift stations, and two wastewater treatment plants. Regional sewer service upgrades because of the Specific Plan are not anticipated. There is capacity within the current system to accommodate the anticipated additional demand.

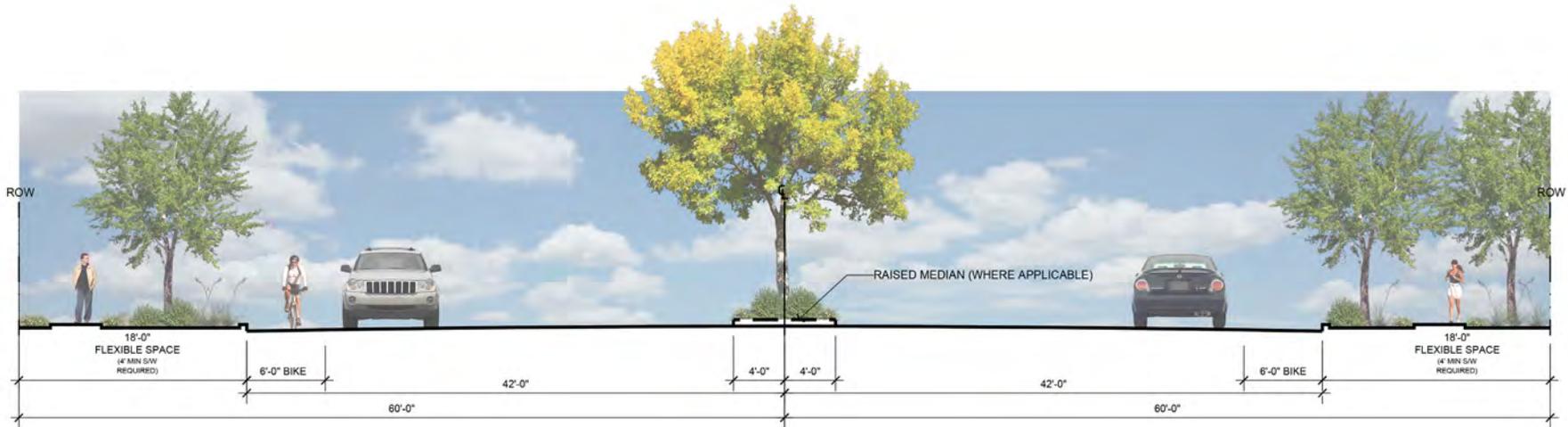
Drainage and Water Quality Treatment

The Specific Plan area lies within the Peters Canyon tributary area of the San Diego Creek watershed. Regional drainage facilities are owned and operated by Orange County Public Works, Flood Division (OCPW). Local drainage facilities are owned and operated by the City. Project applicants for future development within the Specific Plan area would prepare a hydrology and hydraulics analysis demonstrating that the existing condition flow rates are not exceeded by Project flow rates. Direct connection to the City's existing storm drain system is preferable provided that the existing tributary areas and flow rates to the existing drains are not exceeded in the proposed condition. Alternatively, applicants may provide hydraulic analyses of the downstream storm drain system that demonstrate no significant impacts to the City storm drain infrastructure.

The Specific Plan area lies within a hydromodification zone, as defined in the Stormwater Quality Technical Guidance (Technical Guidance) document prepared by the County of Orange for Water Quality Management Plans (WQMPs). The purpose of hydromodification management is to incorporate hydrologic controls within a proposed development such that post-development two-year peak flows do not exceed pre-development conditions. Hydromodification is expected to be a minimal concern since current regulations allow for discharge up to the current existing condition, which is developed in the Specific Plan.



SECTION A: Red Hill Avenue - 100' Right-of-Way (84' Curb to Curb)



SECTION B: Red Hill Avenue - 120' Right-of-Way with Flexible Amenity Setback (84' Curb to Curb)

S/W: Sidewalk (4' min)
PKWY: Parkway (4' min)

Note: 1) In all cases the minimum sidewalk width shall be 4' and the minimum parkway width shall be 4'.
 2) For uses in the Flexible Amenity setback refer to specific Plan Section 4.3.1. Uses may include additional landscaping, widening sidewalks, outdoor dining, or pedestrian-related uses.

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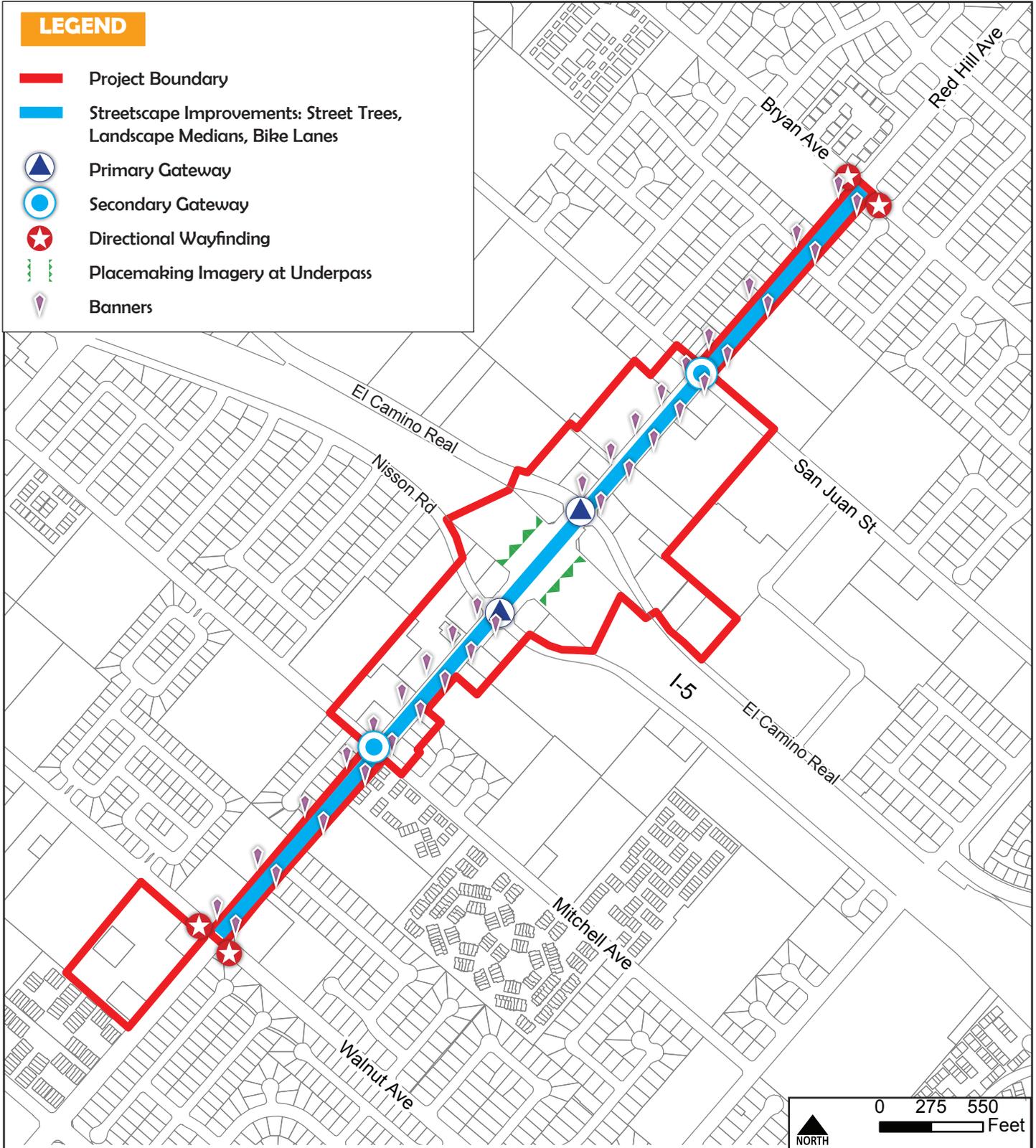


EXHIBIT 3-11: Gateway Locations
Red Hill Avenue Specific Plan

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Dry Utilities and Services

Public infrastructure and utilities including, but not limited to, electrical, gas, telephone, and cable television would be provided as a part of future development projects. Utilities would be principally located in road rights-of-way. Existing overhead utility services are located on the eastern edge of Red Hill north of El Camino Real and along El Camino Real including electrical service and communication lines under a pole sharing arrangement. At the intersection of Red Hill Avenue at El Camino Real, these facilities are underground. South of I-5, utilities are underground along Red Hill Avenue. Aboveground facilities are located along Nisson Road east and west of Red Hill Avenue, and on Walnut Avenue crossing Red Hill Avenue. As part of future development in the Specific Plan area north of I-5, the overhead power lines would be undergrounded from the I-5 to the terminus of San Juan Street in accordance with City policies.

The City contracts for residential refuse collection. Solid waste materials are transported to a Materials Recovery Facility where it is sorted for recyclables. The County of Orange owns and operates the Frank R. Bowerman Sanitary Landfill, located at 11002 Bee Canyon Access Road in Irvine, which serves Tustin.

Southern California Gas Company (SoCalGas) provides natural gas to the City. The Specific Plan area has natural gas service provided to existing uses within the area.

3.8 Phasing

It is anticipated that the implementation of the Specific Plan would occur over a multi-year timeframe based upon market conditions. For analysis purposes, a buildout year of 2035 is assumed. The City may implement the public improvements, including public streetscapes, landscaped medians, and gateway/wayfinding signage in advance of, or concurrent with, private development.

3.9 Agreements, Permits, and Approvals

Pursuant to Section 15121 of the State CEQA Guidelines (14 CCR), an EIR is primarily an informational document intended to inform the public agency decision makers and the general public of the potentially significant environmental effects of a project.

The Lead Agency is the public agency with the primary responsibility for approving a project. Responsible agencies (public agencies that have a level of discretionary approval over some component of a project) may rely upon the EIR prepared by the Lead Agency (14 CCR § 15096). As set forth in Section 15124(d) of the CEQA Guidelines, the City of Tustin is the Lead Agency, and responsible agencies are expected to use the information in this Program EIR for consideration of approvals related to and involved in implementing the Specific Plan. Permits and other approvals required to implement the Specific Plan Project are identified. As noted above, it is the intent that this Program EIR will be used by agencies in their consideration of approval of required subsequent permits and approvals:

- **Red Hill Avenue Specific Plan:** Adoption of the Specific Plan by Ordinance.
- **General Plan Amendment:** An amendment to the General Plan to provide consistency between the Specific Plan and the General Plan. The amendments to the General Plan would include an

update to the Land Use Map to show the boundaries of the Specific Plan and an update to the General Plan Land Use Element, and other related conforming amendments to the General Plan, as warranted.

- **Zoning Map Amendment:** A zoning map amendment to change the Specific Plan area to a designation of “Red Hill Avenue Specific Plan District” (SP-13).

Subsequent activities would be examined in light of the Final Program EIR to determine whether additional CEQA documentation would be required pursuant to the requirements of Section 21166 of CEQA (Public Resources Code [PRC] § 21166) and Sections 15162 and 15168 of the CEQA Guidelines (14 CCR) for subsequent approvals including, but not limited to the following:

- Design Review
- Variances/Modifications
- Sign Programs
- Residential Allocation Reservations (RARs)
- Conditional Use Permits
- Tentative Parcel or Tract Maps

The Final Program EIR would also provide environmental information to responsible agencies, trustee agencies, and other public agencies which may be required to grant approvals and permits or coordinate with the City of Tustin as a part of the Red Hill Avenue Specific Plan implementation including but not limited to:

- Issuance of National Pollution Discharge Elimination System (NPDES) Permit by the Santa Ana Regional Water Quality Control Board (RWQCB)
- Issuance of Construction General Permit by the Santa Ana RWQCB.
- Encroachment permits for work within Caltrans right-of-way.

4.1 Aesthetics and Visual Resources

4.1.1 INTRODUCTION

This section discusses impacts associated with the potential for the Specific Plan to degrade the existing visual character or quality of the site and its surroundings through changes in the existing landscape. Potential effects are evaluated relative to important visual features (e.g., scenic highways, scenic features) and the existing visual landscape and its users.

Degradation of the visual character of a site is usually addressed through a qualitative evaluation of the changes to the aesthetic characteristics of the existing environment, and the project-related modifications that would alter the visual setting.

Aesthetics, as addressed in CEQA, refers to visual considerations in the physical environment. Because a person's reaction and attachment to a given viewshed are subjective, visual changes inherently affect viewers differently. Accordingly, an aesthetics analysis, or visual resource analysis, is a systematic process to logically assess visible change in the physical environment and the anticipated viewer response to that change. This section describes the existing landscape character of the Specific Plan area, existing views of the surrounding area from various on-the-ground vantage points, the visual characteristics of the Specific Plan area, and the landscape changes that would be associated with the implementation of the Project, as seen from various vantage points.

Any additional information used to evaluate the potential impacts has been referenced. This information includes but is not limited to: review of U.S. Geological Survey (USGS) State topographic maps, highway maps, Google Earth images, and internet sources. Regulatory standards were also used, including the City of Tustin General Plan and the Tustin City Code.

4.1.2 TERMINOLOGY AND CONCEPTS

When viewing the same landscape, people may have different responses to that landscape and any proposed visual changes, based on their values, familiarity, concern, or expectations for that landscape and its scenic quality. Because each person's attachment to and value for a particular landscape is unique, visual changes to that landscape inherently affect viewers differently. However, generalizations can be made about viewer sensitivity to scenic quality and visual changes. Recreational users (e.g., hikers, equestrians, tourists, and people driving for pleasure) are expected to have high concern for scenery and landscape character. Daily commuters through the same landscape generally have a moderate concern for scenery, while people working at industrial sites generally have a lower concern for scenic quality or changes to existing landscape character. The visual sensitivity of a landscape is affected by the viewing distances at which it is seen, such as close-up or far away. The visual sensitivity of a landscape also is affected by the travel speed at which a person is viewing the landscape (high speeds on a highway, low speeds on a hiking trail, or stationary at a residence).

The same feature of a project can be perceived differently by people depending on the distance between the observer and the viewed object. When a viewer is closer to a viewed object in the landscape, more detail can be seen, and there is greater potential influence of the object on visual quality because of its

form or scale (relative size of the object in relation to the viewer). When the same object is viewed at background distances, details may be imperceptible but overall forms of terrain and vegetation are evident, and the horizon and skyline are dominant. In the middle ground, some detail is evident (e.g., the foreground), and landscape elements are seen in context with landforms and vegetation patterns (e.g., the background).

The following terms and concepts are used in the discussion below to describe and assess the aesthetic setting and impacts from the Project.

Scenic vista. An area that is designated, signed, and accessible to the public for the express purposes of viewing and sightseeing. This includes any such areas designated by a Federal, State, or local agency.

Scenic highway. Any stretch of public roadway that is designated as a scenic corridor by a Federal, State, or local agency.

Sensitive receptors. Viewer responses to visual settings are inferred from a variety of factors, including distance and viewing angle, types of viewers, number of viewers, duration of view, and viewer activities. The viewer type and associated viewer sensitivity are distinguished among project viewers in recreational, residential, commercial, military, and industrial areas. Viewer activities can range from a circumstance that encourages a viewer to observe the surroundings more closely (such as recreational activities) to one that discourages close observation (such as commuting in heavy traffic). Viewers in recreational areas are considered to have high sensitivity to visual resources. Residential viewers generally have moderate sensitivity but extended viewing periods. Viewers in commercial and industrial areas are considered to have low sensitivity.

Land uses associated with designated parks, monuments, and wilderness areas; scenic highways and corridors; recreational areas; conservation areas; and residential areas are generally considered to have high viewer concern. However, existing landscape character may temper viewer concern on some State and locally designated scenic highways and corridors; in general, people driving for pleasure or engaged in recreational activities tend to have high viewer concern.

Travelers on other highways and roads, including those in rural areas, may have moderate or high viewer concern depending on viewer expectations as conditioned by regional and local landscape conditions in these areas.

Commercial uses, including business parks and hotels/motels, typically have low-to-moderate viewer concern, although some commercial developments have specific requirements related to visual quality with respect to landscaping, building height limitations, building design, and prohibition.

Viewshed. The viewshed for a project is defined as the surrounding geographic area from which a project is likely to be seen, based on topography, atmospheric conditions, land use patterns, and roadway orientations. "Project viewshed" is used to describe the area surrounding a project site where a person standing on the ground or driving a vehicle can view a project site.

Visual character typically consists of the landforms, vegetation, water features, and cultural modifications that impart an overall visual impression of an area's landscape. Scenic areas typically include open space, landscaped corridors, and viewsheds. Visual character is influenced by many different landscape attributes including color contrasts, landform prominence, repetition of geometric forms, and uniqueness of textures among other characteristics.

Shade and Shadow. The issue of shade and shadow pertains to whether buildings or structures block direct sunlight. Shading is an important environmental issue because the users or occupants of certain land uses have expectations for direct sunlight and warmth from the sun for function, physical comfort, or conduct of commerce. Factors that influence the extent or range of shading include: season; time of day; weather (i.e., sunny vs. cloudy day); building height; bulk; scale; topography; spacing between buildings; sensitivity of adjacent land uses; and tree cover. The longest shadows are cast during the winter months, when the sun is lowest on the horizon, and the shortest shadows are cast during the summer months. Shadows are longer in the early morning and late afternoon. Consequences of shadows upon land uses may be positive, including cooling effects during warm weather, or negative, such as the loss of natural light necessary for solar energy purposes or the loss of warming influences during cool weather. The relative effects of shading from structures are site-specific.

Light and Glare. Lighting effects are associated with the use of artificial light during the evening and nighttime hours. There are two primary sources of light: light emanating from building interiors passing through windows and light from exterior sources (i.e., street lighting, architectural building illumination, security lighting, parking lot lighting, landscape lighting, and signage). Light introduction can be a nuisance. Uses such as residences and hotels/motels are considered light sensitive, since occupants have expectations of privacy during evening hours and may be subject to disturbance by bright light sources. Light spill is typically defined as the presence of unwanted light on properties adjacent to the property being illuminated. With respect to lighting, the degree of illumination may vary widely depending on the amount of light generated, height of the light source, presence of barriers or obstructions, type of light source, and weather conditions.

Glare is primarily a daytime occurrence caused by the reflection of sunlight or artificial light on highly polished surfaces such as window glass or reflective materials and, to a lesser degree, from broad expanses of light-colored surfaces. Perceived glare is the unwanted and potentially objectionable sensation as observed by a person as they look directly into the light source of a luminaire. Daytime glare generation is common in urban areas and is typically associated with buildings with exterior facades largely or entirely comprised of highly reflective glass. Glare can also be produced during evening and nighttime hours by the reflection of artificial light sources such as automobile headlights. Glare generation is typically related to either moving vehicles or sun angles, although glare resulting from reflected sunlight can occur regularly at certain times of the year. Glare-sensitive uses include residences, hotels/motels, transportation corridors, and aircraft landing corridors.

4.1.3 REGULATORY SETTING

State of California

California Department of Transportation (Caltrans) - Scenic Highway Program

The California Department of Transportation (Caltrans) manages the California Scenic Highway Program, which was created in 1963 by the California legislature to preserve and protect scenic highway corridors from changes that would diminish the aesthetic value of lands adjacent to highways. Caltrans defines a scenic highway as any freeway, highway, road, or other public right-of-way, that traverses an area of exceptional scenic quality. Suitability for designation as a State Scenic Highway is based on vividness, intactness, and unity. There are no officially designated scenic highways within the City of Tustin. The nearest officially designated State Scenic Highway is State Route 91 (SR-91) located approximately seven miles north of the Specific Plan area (Caltrans, 2017).

Regional and Local

City of Tustin General Plan Land Use Element

The Land Use Element of the *City of Tustin General Plan* includes goals and policies related to aesthetics and visual resources that are applicable to the Specific Plan Project. The purpose of the Land Use Element is to describe present and planned land use activity, and to address issues concerning the relationship between land uses and environmental quality, potential hazards, and social and economic objectives. The Specific Plan's consistency with applicable visual resources goals and policies of the General Plan are addressed in Section 4.8, *Land Use and Planning*, of this Program EIR.

Tustin City Code

The following provisions from the Tustin City Code help minimize aesthetic and light and glare impacts associated with new development projects and are relevant to the Specific Plan. The following provisions from the Tustin City Code focus on aesthetics:

Article 9, Chapter 2, 9272.a (Design Review, Review Required):

- 1) The City Council finds that poor quality in the exterior design, development and maintenance of structures, landscaping and general appearance affects the desirability of the neighborhood and the community as a whole, and impairs the benefits of both potential and existing uses to the detriment of the public health, safety, comfort and general welfare. (Ord. No. 1429, Sec. II.50, 5-21-13)
- (2) The City Council further finds that quality evaluations are necessary to fully accomplish the purpose of regulations designed to control such matters, since such regulations cannot both allow reasonable latitude for diversity and originality of design and still be specific enough to control all the aspects of the different uses that can adversely affect the community.
- (3) The Community Development Department is hereby established to accomplish the above objectives and shall have the following responsibilities:

- (a) To provide for the review of building design, site planning and site development in order to protect the increasing value, standards and importance of land and development in the City due to the urbanization of Orange County.
 - (b) To retain and strengthen the unity and order of the visual community.
 - (c) To ensure that new uses and structures enhance their sites and are harmonious with the highest standards of improvements in the surrounding area and total community.
- (4) In carrying out the functions of design review, consultant services may be utilized as budgeted by the City Council. (Ord. No. 587, Section 2)

Article 9, Chapter 2, 9271.hh (Light and Glare): All exterior lighting shall be subject to the following standards, unless otherwise exempted by the City of Tustin:

- (a) Outdoor lighting shall be designed so as to minimize impacts from light pollution including light trespass and glare to minimize conflict caused by unnecessary illumination.
- (b) Outdoor lighting fixtures that are used to illuminate a premises, architectural feature or landscape feature on private property shall be directed, shielded, or located in such a manner that the light source is not directed off-site. (Ord. No. 1429. Sec. 11. 48, 5-21-13)

4.1.4 ENVIRONMENTAL SETTING

Regional and Local Conditions

The Specific Plan area is within an existing developed part of the City of Tustin. The City is characterized as a predominately suburban, low-density community. The Specific Plan area is approximately 10 miles west of the Santa Ana Mountains, approximately 10 miles north of the Pacific Ocean, and approximately 36 miles south of the San Gabriel Mountains. The City is relatively flat with the land gently sloping from the mountain ranges to the sea. According to the General Plan EIR, the highest elevation in the City is approximately 715 feet above mean sea level (msl) and the lowest elevation is approximately 35 feet above msl along Peters Canyon Channel in the southeast corner of the City.

Specific Plan Area

The Specific Plan area is approximately 43 acres, inclusive of approximately 7 acres of roadway rights-of-way. The 1.13-mile linear Specific Plan area is bordered by Bryan Avenue on the northeast to Walnut Avenue on the southwest; I-5 bisects the Specific Plan area. The topography of the Specific Plan area is generally flat.

Existing land uses within the boundaries of the Specific Plan area include commercial, neighborhood retail shopping center, professional office, residential, motel, and institutional, as well as vacant parcels. The land use designations for the Specific Plan area include a mix of commercial and professional office land use designations. The Community Commercial (CC) land use designation applies to more than 90 percent of the Specific Plan area (see Table 3-2 in Section 3.0, *Project Description*). Approximately 10 percent of the Specific Plan development area is vacant land. The Specific Plan area contains approximately 296,446 square feet of non-residential uses and 21 dwelling units. Many buildings are older and are affected by deferred maintenance. Land uses bordering the Specific Plan area south of I-5 include single-family and

multi-family residences; Frontier Park and Benjamin F. Beswick Elementary School to the west of the Specific Plan area; and a single-family residence with associated agricultural uses on the northeast corner of Red Hill Avenue at Walnut Avenue.

Within the Specific Plan area, Red Hill Avenue is a six-lane divided roadway with three travel lanes in each direction and a center two-way left-turn lane. A raised, landscaped median is provided in the segment south of Bryan Avenue. The existing street parkways include sidewalks, with some portions containing trees and some landscaping. The Red Hill Avenue streetscape does not vary widely within the Specific Plan area. All the crosswalks across Red Hill Avenue are signalized.

North of I-5

Red Hill Avenue: North of I-5 on the east side of Red Hill Avenue between I-5 and San Juan Street, there is a continuous sidewalk. Landscaping is provided between the I-5 off-ramp and El Camino Real. Limited landscaping is provided behind the sidewalk along Red Hill Avenue and in the parking lot for the neighborhood shopping center. A grass lawn mowing strip is provided from San Juan Street to just south of Lance Drive adjacent to multi-family residences. Tree wells, with some trees, are located between the street and the sidewalk from Lance Drive to Bryan Avenue. There is a solid wall between the sidewalk and single-family residences east of Red Hill Avenue.

North of I-5 on the west side of Red Hill Avenue between the I-5 on-ramp and San Juan Street, there is a continuous sidewalk. Landscaping is provided between the street and the sidewalk from I-5 to El Camino Real, and then north of the service station on the northwest corner of Red Hill Avenue at El Camino Real (starting at the vacant parcel) to San Juan Street. Between San Juan Street and Bryan Avenue, there is a continuous sidewalk along the single-family and multi-family residences. There are tree wells and or an unvegetated landscape strip between the street on the sidewalk from 13631 Red Hill Avenue to Pine Tree Park at Bryan Avenue. At Pine Tree Park, there is on-street parking and park landscaping along Red Hill Avenue.

San Juan Street: East and west of Red Hill Avenue, the north side of San Juan Street within the Specific Plan area includes landscaping (grass and trees) and a sidewalk. East of Red Hill Avenue, the south side of the street has a sidewalk. West of Red Hill Avenue, the south side of San Juan Street behind the curb is a grass landscape area and a sidewalk.

El Camino Real: East of Red Hill Avenue, the north and south sides of El Camino Real within the Specific Plan area have a continuous sidewalk. Landscaping is only provided behind the sidewalks on private properties. West of Red Hill Avenue, the north side of El Camino Real has a continuous sidewalk; no landscaping is provided except at the intersection as a part of the service station signage. The south side of El Camino Real has a continuous sidewalk and landscaping behind the sidewalk on private property associated with the commercial uses.

South of I-5

Red Hill Avenue: South of I-5 on the east and west sides of Red Hill Avenue between the I-5 ramps and Nissan Road, there are continuous sidewalks. Landscaping is provided behind the sidewalk as a part of the commercial properties. Between Nissan Road and Walnut Avenue, there is a continuous sidewalk.

Landscaping varies by parcel from no landscaping, to tree wells in the sidewalk, to unvegetated mowing strips.

The west side of Red Hill Avenue between Nisson Road and Mitchell Avenue, there is a continuous sidewalk. Landscaping is provided behind the sidewalk on the commercial properties and service station. From Mitchell Avenue to the office building at 14351 Red Hill Avenue, the sidewalk continues. Landscaping is limited to unvegetated mowing strips between the curb and the sidewalk. Between the office building and Walnut Avenue, landscaping is provided behind the sidewalk on private property. The Specific Plan area continues south of Walnut Avenue and includes the neighborhood shopping center located on Red Hill Avenue between Walnut Avenue to the north and multi-family residences to the south. Landscaping in this area includes tree wells in the continuous sidewalk. The landscaping and tree wells continue west on Walnut Avenue adjacent to the shopping center.

Mitchell Avenue: East of Red Hill Avenue, the north side of Mitchell Avenue within the Specific Plan area includes on commercial property that fronts onto Red Hill Avenue. Adjacent to this property, a grass law area is provided adjacent to the curb; a sidewalk is located behind the landscaping; The south side of the road is adjacent to multi-family residential and includes a continuous sidewalk. Landscaping including grass, shrubs, and trees are provided behind the sidewalk on the private property. West of Red Hill Avenue, the north side of Mitchell Avenue has a sidewalk. Landscaping is limited to trees and grass in the retail center and service station surface parking areas. The south side of Mitchell Avenue has grass and trees behind the curb and a continuous sidewalk.

Scenic Views and Roadways

The Tustin General Plan Conservation, Open Space and Recreation Element does not identify any public viewpoints and coastal view roads in the City. The City of Tustin General Plan and Orange County Scenic Highway Plan do not identify any scenic vistas or viewpoints in the City. Northern Newport Avenue and Santiago Canyon Road are considered Viewscape Corridors according to the Orange County Scenic Highway Plan. These Viewscape Corridors are located approximately three miles north of the Specific Plan area. The nearest coastal viewscape is Pacific Coast Highway, approximately ten miles south of the Specific Plan area. There are no officially designated scenic highways within Tustin; the nearest officially designated State Scenic Highway is SR-91 located approximately seven miles to the north.

Light and Glare

The City of Tustin is primarily built out; therefore, ambient light from urban uses already exists. Existing sources of light in the area include building (exterior and interior), security, sign illumination, parking area lighting, street lights along Red Hill Avenue and I-5, and from commercial and office uses. Another source of nighttime light is vehicular traffic along roadways.

4.1.5 THRESHOLDS OF SIGNIFICANCE

The following significance criteria are from CEQA Guidelines Appendix G. Implementation of the Specific Plan would result in a significant aesthetic impact if it would:

Threshold 4.1-1 Have a substantial adverse effect on a scenic vista.

Threshold 4.1-2 Substantially degrade the existing visual character or quality of the site and its surroundings.

Threshold 4.1-3 Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

As addressed in Section 1.5, *Summary of Effects with No Impact*, the City has determined that the Specific Plan would not have a significant impact on the following threshold and that no further analysis is required in the Program EIR:

- Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway.

4.1.6 ENVIRONMENTAL IMPACTS

Threshold 4.1-1: Would the Specific Plan Project have a substantial adverse effect on a scenic vista?

The Specific Plan area is generally flat and includes commercial, office, and residential uses. As previously noted, the City of Tustin General Plan does not identify any scenic vistas or viewpoints in the City. The Specific Plan area has some distant views of the Santa Ana Mountains to the east and the San Gabriel Mountains to the north. However, these views are limited and often obstructed by existing structures within the Specific Plan area. The City of Tustin General Plan EIR determined buildout according to the General Plan would not result in the obstruction of existing public or scenic views. The height limitations for the Specific Plan are the same as the existing height limitations under existing General Plan and zoning designations for the Specific Plan area. Therefore, the Project would have no impact on scenic vistas.

Impact Summary: **Threshold 4.1-1: No Impact.** There are no scenic vistas within the Specific Plan area or viewed from the Specific Plan area. Therefore, implementation of the Specific Plan Project would have no impact on scenic vistas.

Threshold 4.1-2: Would the Specific Plan Project substantially degrade the existing visual character or quality of the site and its surroundings?

As previously noted, visual effects of a project can include both the objective visual resource changes created by a project and the subjective viewer response to that change. Distance from a project, frequency of view, duration of view, viewer activity, viewer perception, and viewing conditions contribute to the assessment of a visual impact.

The proposed Specific Plan would allow for the reuse of existing structures and sites, the redevelopment of underutilized parcels, and the development of vacant parcels with commercial, office and residential uses in a mixed-use setting. The Project is proposed to facilitate and encourage residential mixed-use development and commercial/retail areas.

Future development projects within the Specific Plan area could have short-term visual effects during construction activities. Views of a site during construction could include heavy equipment and machinery

preparing the land (i.e., grading) and eventually the construction of new buildings. Dust may temporarily diminish views of the area during grading and other construction activities. Any construction impacts associated with individual development projects within the Specific Plan area would be temporary in nature and would be expected to be typical for projects located in an urban environment with surrounding development. Construction activities would be required to comply with the Specific Plan, the City's General Plan, and the Tustin City Code requirements. Therefore, these impacts would be expected to be less than significant.

Chapter 5, Design Criteria, of the Specific Plan, provides a framework for high-quality design of development projects within the Specific Plan area. The Design Criteria are proposed to encourage community identity and a sense of place. The guidelines are not intended to limit innovative design but rather provide clear direction.

In summary, the Specific Plan notes that buildings should follow sound design principles by incorporating massing and proportion, structure, simple roof forms, fenestration, balconies, accent elements, and high-quality materials and colors into a unified architectural form. Within the Specific Plan area, architecture may draw inspiration from such locally relevant traditional styles as Spanish/Mediterranean, Modern Craftsman, and contemporary interpretations of agriculturally-based styles such as Farmhouse/Agricultural. Building design is not intended to literally replicate historic styles. Ornate and heavily themed styles such as Tudor, Victorian and Beaux Arts are not allowed.

The Specific Plan would not change allowable building heights in the Specific Plan area such that it would degrade the quality or character of the area. The maximum height for buildings within the Specific Plan area would be four stories. Five stories would be permitted subject to building massing and scale requirements set forth in Chapter 4, Land Use and Development Criteria, and Chapter 5, Design Criteria, of the Specific Plan. These factors include but are not limited to the provision of varied upper floor setbacks; consistency of design features on all elevations; and a minimum 16-foot ground floor height for commercial uses in a mixed-use setting.

The Specific Plan proposes streetscape landscaping improvements within the public rights-of-way along Red Hill Avenue, as well as gateway signage enhancements. The streetscape would include parkway plantings adjacent to the street along the entire length of Red Hill Avenue with new landscaped medians, the latter where feasible. The Specific Plan also proposes identity and wayfinding elements that use materials and colors which create a distinct sense of place.

Ongoing development within the Specific Plan area would alter the existing character and quality of the area. While the aesthetics of a project can be subjective, future development projects in the Specific Plan area would be required to comply with the proposed Red Hill Avenue Development Standards and Design Criteria. Individual projects would also be subject to design review by the City. Implementation of the Specific Plan is proposed to improve the visual character and quality of the area. Impacts are considered less than significant.

Impact Summary: **Threshold 4.1-2: *Less Than Significant*.** Implementation of the Specific Plan would alter the existing visual character or quality of the Specific Plan area with the goal of improving them. With compliance with the Specific Plan Design

Criteria and Land Use Regulations, the City’s General Plan, and the Tustin City Code, impacts to visual resources would be less than significant.

Threshold 4.1-3: Would the Specific Plan Project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

The Specific Plan area is located within an urban environment with a mix of non-residential and residential uses, motel, and institutional uses. Sources of lighting include streetlights, signage, and on-building and freestanding security lighting. Future development projects within the Specific Plan area would have the potential to create new sources of light from interior and exterior lighting sources, and glare from reflection of sunlight off windows and street lighting. Although the Specific Plan area currently includes buildings, parking areas, green spaces and street lighting, implementation of the Specific Plan Project is intended to introduce mixed-use development to promote the revitalization of the commercial district. The addition of buildings in areas that are undeveloped would result in new sources of light and glare consistent with that found in an urban area. Reuse of existing sites would have similar sources of lighting as currently exists in the area.

With respect to lighting, the proposed Specific Plan Land Use and Regulations provide requirements for future development within the Specific Plan as summarized below:

- Parking lot lighting and security lighting for non-residential uses shall be appropriately shielded so as not to spill over into residential areas. Illuminated commercial signs and associated fixtures shall be shielded to prevent light spillover onto adjacent residential uses as well as residential portions of mixed-use projects.
- Minimum illumination levels would be consistent with the Tustin City Code requirements for areas.
- Lighting for uncovered parking areas, vehicle access ways and walkways, shall not exceed a height of 16 feet, except that the maximum height on the rooftop of any parking structure located on a lot adjacent to any residential zone shall not exceed a height of 8 feet.
- The overall height shall be measured from the paved parking area surface to the uppermost part of the light standard, including the light globe.
- Lighting shall be directed onto the driveways, walkways and parking areas within the development and away from adjacent properties and public rights-of-way. Appropriate shields shall be incorporated into lighting fixtures to ensure lighting does not spill onto adjoining properties.

The proposed Specific Plan’s Design Criteria includes the following guidance:

- Lighting shall not produce glare or spill over onto adjacent properties; consider the latest technical and operational energy conservation concepts in lighting designs.
- Lighting shall be provided, at a minimum, in the following locations for safety and for crime prevention: parking lots, parking structures, plazas and outdoor seating areas, building entries, and walkways.

- Wall mounted lights shall not extend above the height of the wall or parapet to which they are mounted.
- Lighting fixtures shall be covered or otherwise directed so that bulbs are not directly visible to pedestrians or drivers.
- On the top floor of a parking structure with no roof, lighting should be positioned appropriately to create a safe environment for pedestrians, while not negatively impacting the users of surrounding uses and developments.
- Where appropriate, design down-directed, exterior lighting as part of the overall architectural style of the building that highlights interesting architectural features. However, the lighting of full facades or roofs is discouraged.
- Parking area lighting and security lighting for commercial uses should be shielded to prevent glare and spillover into residential areas. Residential units shall also be shielded from illuminated commercial signs.
- To reduce glare, recess windows and large areas of glass by inseting glass a minimum of three inches from the exterior wall surface to add relief. Clear glazing is strongly recommended, while reflective glazing and tinting are prohibited.
- The limited application of neon signs may be appropriate if they are consistent with the character of the area, location within a commercial center, subject to the requirements of Tustin City Code.

Because the Specific Plan area is located within an urban environment, the lighting associated with implementation of the Specific Plan would not substantially increase light and glare within the Specific Plan area or its surroundings. With adherence to the provisions of the proposed Specific Plan and the Tustin City Code, potential light and glare impacts are considered less than significant.

Impact Summary: **Threshold 4.1-3: *Less Than Significant.*** Future development within the Specific Plan area would introduce new sources of lighting. However, compliance with the land use regulations and the Design Criteria of the Specific Plan, the General Plan and the Tustin City Code would preclude significant impacts.

4.1.7 CUMULATIVE IMPACTS

When evaluating cumulative aesthetic impacts, a number of factors must be considered. The cumulative study area for aesthetic impacts is the viewshed that includes the Specific Plan area and surrounding areas. The context in which a project is being viewed will also influence the significance of the aesthetic impact. The contrast a project has with its surrounding environment may actually be reduced by the presence of other cumulative projects. If most of an area is or is becoming urbanized, the contrast of a project with the natural surrounding may be less since it would not stand out in contrast as much.

In order for a cumulative aesthetic impact to occur, the proposed elements of the cumulative projects would need to be seen together or in proximity to each other. If the projects were not near each other, the viewer would not perceive them in the same scene.

Ongoing development within the Specific Plan area would alter the existing character and quality of the area. Future development projects would have the potential to increase the amount of light. Each development project in the Specific Plan area would be required to comply with policies and regulations set out by the proposed Specific Plan and Design Criteria, the City's General Plan, and the Tustin City Code. Compliance with these policies, plans, and regulations would ensure that proposed future development in the surrounding areas would be compatible with the urban development of the City.

The Specific Plan would not change the allowable building heights in the Specific Plan area such that it would degrade the quality or character of the site, as the Specific Plan proposes buildings no greater than five stories (or approximately 50 feet). The proposed Specific Plan would allow buildings up to four stories in the Specific Plan area and up to five stories for a mixed-use development (when not located adjacent to residential uses). In the area surrounding the Specific Plan, the zoning and building heights allowed under existing zoning districts is 30 to 50 feet. The proposed Specific Plan would not increase the aesthetic impact on the surrounding area as it is similar in design and mass, bulk, and scale to the surrounding area.

With respect to nighttime illumination, nighttime lighting effects may be considered in a regional context because of the potential for night glow that would extend beyond the boundaries of a site. Therefore, with respect to night lighting, the Specific Plan Project is considered in context to the forecasted growth for the area and with cumulative projects in the area that may contribute to the increased nighttime lighting. Because the Specific Plan area is predominately developed and is bordered by existing development and has existing nighttime lighting, the Specific Plan's contribution to nighttime lighting would be less than cumulatively considerable.

With compliance with policies and regulations set out by the proposed Specific Plan and Design Criteria, the City's General Plan, and the Tustin City Code, the Specific Plan would not cumulatively contribute to cumulative impacts related to aesthetics and visual resources. Impacts would be less than significant.

4.1.8 MITIGATION PROGRAM

Standard Conditions

No standard conditions are applicable to the Specific Plan

Mitigation Measures

No mitigation is required.

4.1.9 LEVEL OF SIGNIFICANCE AFTER MITIGATION

The Specific Plan's potential impacts to aesthetics, shade/shadow, and lighting are less than significant.

4.2 Air Quality

This EIR Section evaluates the potential for air quality impacts associated with the implementation of the Red Hill Avenue Specific Plan Project and describes the affected environmental and regulatory setting for air quality. Technical data supporting the air quality analysis is included as Appendix B to this Program EIR.

4.2.1 REGULATORY SETTING

Federal

Clean Air Act

Federal air quality regulations were first promulgated with the Federal Clean Air Act of 1970. The U.S. Environmental Protection Agency (U.S. EPA) is responsible for setting and enforcing the National Ambient Air Quality Standards (NAAQS) for criteria pollutants. Under the Federal Clean Air Act, states retain the option to adopt more stringent standards or to include other specific pollutants. These standards are the levels of air quality considered safe, with an adequate margin of safety, to protect the public health and welfare. They are designed to protect those “sensitive receptors” most susceptible to further respiratory distress such as asthmatics, the elderly, very young children, people already weakened by other disease or illness, and persons engaged in strenuous work or exercise. Healthy adults can tolerate occasional exposure to air pollutant concentrations considerably above these minimum standards before adverse effects are observed.

The U.S. EPA has classified air basins (or portions thereof) as being in attainment, nonattainment, or unclassified for each criteria air pollutant, based on whether the NAAQS have been achieved. If an area is designated unclassified, it is because inadequate air quality data were available as a basis for a nonattainment or attainment designation. Federal criteria air pollutants are those identified by the U.S. EPA to be of concern with respect to the health and welfare of the general public. As a part of its enforcement responsibilities, the U.S. EPA requires each state with Federal nonattainment areas to prepare and submit a State Implementation Plan (SIP) that demonstrates the means to attain and maintain Federal standards. The SIP must integrate Federal, State, and local plan components and regulations to identify specific measures to reduce pollution by using a combination of performance standards and market-based programs within the SIP-identified timeframe.

National Emissions Standards for Hazardous Air Pollutants Program

Under Federal law, 188 substances are listed as hazardous air pollutants (HAPs). Major sources of specific HAPs are subject to the requirements of the National Emissions Standards for Hazardous Air Pollutants Program. The U.S. EPA is establishing regulatory schemes for specific source categories and requires implementation of Maximum Achievable Control Technologies for major sources of HAPs in each source category. State law has established the framework for California’s toxic air contaminants (TAC) identification and control program, which is generally more stringent than the Federal program and is aimed at HAPs that are a problem in California. The State has formally identified 244 substances as TACs and is adopting appropriate control measures for each. Once adopted at the State level, each air district will be required to adopt a measure that is equally or more stringent.

State

California Air Resources Board

The Federal Clean Air Act allows states to adopt ambient air quality standards and other regulations provided that they are at least as stringent as Federal standards. California Air Resources Board (CARB), a part of the California Environmental Protection Agency, is responsible for the coordination and administration of Federal and State air pollution control programs within California including setting the California ambient air quality standards. CARB also conducts research, compiles emission inventories, develops suggested control measures, and provides oversight of local programs. It establishes emissions standards for motor vehicles sold in California, consumer products (such as hairspray, aerosol paints, and barbecue lighter fluid), and various types of commercial equipment. It also sets fuel specifications to further reduce vehicular emissions. CARB also has primary responsibility for the development of California's SIP, for which it works closely with the Federal government and the local air districts.

In addition to standards set for the six criteria pollutants, the State has set standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility reducing particles. These standards are designed to protect the health and welfare of the populace with a reasonable margin of safety. Further, in addition to primary and secondary ambient air quality standards, the State has established a set of episode criteria for ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, and particulate matter. These criteria refer to episode levels representing periods of short-term exposure to air pollutants that actually threaten public health.

California State Implementation Plan

The Federal Clean Air Act (and its subsequent amendments) requires each state to prepare an Air Quality Control Plan referred to as the SIP. The SIP is a living document that is periodically modified to reflect the latest emissions inventories, plans, and rules and regulations of air basins as reported by the agencies with jurisdiction over them. The Federal Clean Air Act Amendments dictate that states containing areas violating the National ambient air quality standards revise their SIPs to include extra control measures to reduce air pollution. The SIP includes strategies and control measures to attain the NAAQS by deadlines established by the Clean Air Act. The U.S. EPA has the responsibility to review all State Implementation Plans to determine if they conform to the requirements of the Clean Air Act.

State law makes CARB the lead agency for all purposes related to the SIP. Local air districts and other agencies prepare SIP elements and submit them to CARB for review and approval. CARB then forwards SIP revisions to the U.S. EPA for approval and publication in the Federal Register. The *2016 Air Quality Management Plan* (2016 AQMP) is the SIP for the South Coast Air Basin (SCAB). The 2016 AQMP is a regional blueprint for achieving air quality standards and healthful air in the SCAB and those portions of the Salton Sea Air Basin that are under the South Coast Air Quality Management District's (SCAQMD's) jurisdiction. The 2016 AQMP represents a new approach, focusing on available, proven, and cost-effective alternatives to traditional strategies, while seeking to achieve multiple goals in partnership with other entities promoting reductions in greenhouse gases and toxic risk, as well as efficiencies in energy use, transportation, and goods movement. The most effective way to reduce air pollution impacts is to reduce emissions from mobile sources. The AQMP relies on a regional and multi-level partnership of governmental agencies at the Federal, State, regional, and local level. These agencies (U.S. EPA, CARB, local governments, Southern California Association of Governments [SCAG] and the SCAQMD) are the primary agencies that implement the AQMP programs.

The 2016 AQMP incorporates the latest scientific and technical information and planning assumptions, including SCAG's latest *Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS)*, updated emission inventory methodologies for various source categories, and SCAG's latest growth forecasts. The 2016 AQMP includes integrated strategies and measures to meet the NAAQS.

California Air Toxics "Hot Spots" Information and Assessment Act (AB 2588)

The California Air Toxics "Hot Spots" Information and Assessment Act (Assembly Bill [AB] 2588) is a statewide program enacted in 1987. AB 2588 requires facilities that exceed recommended Office of Environmental Health Hazard Assessment levels to reduce risks to acceptable levels.

Typically, land development projects generate diesel emissions from construction vehicles during the construction phase, as well as some diesel emissions from small trucks during the operational phase. Diesel exhaust is mainly composed of particulate matter and gases, which contain potential cancer-causing substances. Emissions from diesel engines currently include over 40 substances that are listed by the U.S. EPA as hazardous air pollutants and by CARB as toxic air contaminants. On August 27, 1998, CARB identified particulate matter in diesel exhaust as a TAC, based on data linking diesel particulate emissions to increased risks of lung cancer and respiratory disease.

In September 2000, CARB adopted a comprehensive diesel risk reduction plan to reduce emissions from both new and existing diesel-fueled engines and vehicles. The goal of the plan is to reduce diesel PM emissions and the associated health risk by 75 percent in 2010 and by 85 percent by 2020. As part of this plan, CARB identified Airborne Toxic Control Measures (ATCM) for mobile and stationary emissions sources. Each ATCM is codified in the California Code of Regulations (CCR), including the ATCM to limit diesel-fueled commercial motor vehicle idling, which puts limits on idling time for large diesel engines (13 CCR Chapter 10 § 2485).

National and State Ambient Air Quality Standards

Both the State of California and the Federal government have established ambient air quality standards for several different criteria air pollutants, a summary of which is shown in Table 4.2-1, *Federal and State Ambient Air Quality Standards*. For some pollutants, separate standards have been set for different time periods. Most standards have been set to protect public health. For other pollutants, standards have been based on some other value (such as protection of crops, protection of materials, or avoidance of nuisance conditions).

Pollutant	Averaging Time	Federal Primary Standards	California Standard
Ozone	1-Hour	---	0.09 ppm
	8-Hour	0.070 ppm	0.070 ppm
Carbon Monoxide	8-Hour	9.0 ppm	9.0 ppm
	1-Hour	35.0 ppm	20.0 ppm
Nitrogen Dioxide	Annual	0.053 ppm	0.030 ppm
	1-Hour	0.100 ppm	0.18 ppm
Sulfur Dioxide	Annual	---	---
	24-Hour	---	0.04 ppm
	1-Hour	0.075 ppm	0.25 ppm
PM ₁₀	Annual	---	20 µg/m ³
	24-Hour	150 µg/m ³	50 µg/m ³
PM ₂₅	Annual	12 µg/m ³	12 µg/m ³
	24-Hour	35 µg/m ³	---
Lead	30-Day Average	---	1.5 µg/m ³
	3-Month Average	0.15 µg/m ³	---

ppm = parts per million; µg/m³ = micrograms per cubic meter
 Source: California Air Resources Board, *Ambient Air Quality Standards Chart*, May 14, 2016.

Regional and Local

South Coast Air Quality Management District

The SCAQMD is the air pollution control agency for Orange County and the urban portions of Los Angeles, Riverside, and San Bernardino Counties. The agency’s primary responsibility is ensuring that the Federal and State ambient air quality standards are attained and maintained in the air basin. The SCAQMD is also responsible for adopting and enforcing rules and regulations concerning air pollutant sources, issuing permits for stationary sources of air pollutants, inspecting stationary sources of air pollutants, responding to citizen complaints, monitoring ambient air quality and meteorological conditions, awarding grants to reduce motor vehicle emissions, and conducting public education campaigns, as well as many other activities. All projects are subject to SCAQMD rules and regulations in effect at the time of construction.

City of Tustin General Plan Conservation/Open Space/Recreation Element

The Conservation/Open Space/Recreation Element of the *City of Tustin General Plan* includes goals and policies related to the reduction of air pollutant emissions that are applicable to the Specific Plan. The Conservation/Open Space/Recreation Element identifies measures implemented for conservation purposes, including air quality measures. General Plan goals and policies applicable to air pollutant emissions are addressed in Section 4.8, *Land Use and Planning*, of this Program EIR.

4.2.2 AIR POLLUTANTS OF CONCERN

Criteria Air Pollutants

Air pollutants emitted into the ambient air by stationary and mobile sources are regulated by Federal and State laws. These regulated air pollutants are known as “criteria air pollutants” and are categorized into primary and secondary pollutants. Primary air pollutants are those that are emitted directly from sources. Carbon monoxide (CO), reactive organic gases (ROG), nitrogen oxide (NO_x), sulfur dioxide (SO₂), coarse particulate matter (PM₁₀), fine particulate matter (PM_{2.5}), lead, and fugitive dust are primary air pollutants. Of these, CO, SO₂, PM₁₀, and PM_{2.5} are criteria pollutants. ROG and NO_x are criteria pollutant precursors and that form secondary criteria pollutants through chemical and photochemical reactions in the atmosphere (for example, ozone [O₃] is formed by a chemical reaction between ROG and NO_x in the presence of sunlight). O₃ and nitrogen dioxide (NO₂) are the principal secondary pollutants. Sources and health effects commonly associated with criteria pollutants are summarized in Table 4.2-2, *Criteria Air Pollutants Summary of Common Sources and Effects*.

Toxic Air Contaminants

Toxic air contaminants (TACs) are considered carcinogenic or noncarcinogenic based on the nature of the health effects associated with exposure to the pollutant. For regulatory purposes, carcinogenic TACs are assumed to have no safe threshold below which health impacts would not occur, and cancer risk is expressed as excess cancer cases per one million exposed individuals. Noncarcinogenic TACs differ in that there is generally assumed to be a safe level of exposure below which no negative health impact is believed to occur. These levels are determined on a pollutant-by-pollutant basis.

There are many different types of TACs, with varying degrees of toxicity. Sources of TACs include industrial processes, such as petroleum refining and chrome-plating operations; commercial operations, such as gasoline stations and dry cleaners; and motor vehicle exhaust. Public exposure to TACs can result from emissions from normal operations, as well as from accidental releases of hazardous materials during upset conditions. The health effects associated with TACs are quite diverse and generally are assessed locally, rather than regionally. TACs can cause long-term health effects such as cancer, birth defects, neurological damage, asthma, bronchitis, or genetic damage, or short-term acute effects such as eye-watering, respiratory irritation (a cough), running nose, throat pain, and headaches.

To date, CARB has designated 244 compounds as TACs (CARB, 1999). Additionally, CARB has implemented control measures for a number of compounds that pose high risks and show potential for effective control. The majority of the estimated health risks from TACs can be attributed to relatively few compounds, most importantly particulate matter from diesel fuel engines. CARB identified diesel particulate matter (DPM) as a toxic air contaminant. DPM differs from other TACs in that it is not a single substance but rather a complex mixture of hundreds of substances. Diesel exhaust is a complex mixture of particles and gases produced when an engine burns diesel fuel. DPM is a concern because it causes lung cancer; many compounds found in diesel exhaust are carcinogenic. Some short-term (acute) effects of diesel exhaust include eye, nose, throat, and lung irritation, and diesel exhaust can cause coughs, headaches, lightheadedness, and nausea. DPM poses the greatest health risk among the TACs. Almost all diesel exhaust particle mass is 10 microns or less in diameter. Because of their extremely small size, these particles can be inhaled and eventually trapped in the bronchial and alveolar regions of the lung.

Table 4.2-2. Criteria Air Pollutants Summary of Common Sources and Effects		
Pollutant	Major Man-Made Sources	Human Health & Welfare Effects
Carbon Monoxide (CO)	An odorless, colorless gas formed when carbon in fuel is not burned completely; a component of motor vehicle exhaust.	Reduces the ability of blood to deliver oxygen to vital tissues, affecting the cardiovascular and nervous system. Impairs vision, causes dizziness, and can lead to unconsciousness or death.
Nitrogen Dioxide (NO ₂)	A reddish-brown gas formed during fuel combustion for motor vehicles and industrial sources. Sources include motor vehicles, electric utilities, and other sources that burn fuel.	Respiratory irritant; aggravates lung and heart problems. Precursor to ozone and acid rain. Contributes to global warming and nutrient overloading which deteriorates water quality. Causes brown discoloration of the atmosphere.
Ozone (O ₃)	Formed by a chemical reaction between volatile organic compounds (VOC) and nitrous oxides (NO _x) in the presence of sunlight. VOCs are also commonly referred to as reactive organic gases (ROGs). Common sources of these precursor pollutants include motor vehicle exhaust, industrial emissions, gasoline storage and transport, solvents, paints, and landfills.	Irritates and causes inflammation of the mucous membranes and lung airways; causes wheezing, coughing, and pain when inhaling deeply; decreases lung capacity; aggravates lung and heart problems. Damages plants; reduces crop yield. Damages rubber, some textiles, and dyes.
Particulate Matter (PM ₁₀ and PM _{2.5})	Produced by power plants, steel mills, chemical plants, unpaved roads and parking lots, wood-burning stoves and fireplaces, automobiles, and others.	Increased respiratory symptoms, such as irritation of the airways, coughing, or difficulty breathing; aggravated asthma; development of chronic bronchitis; irregular heartbeat; nonfatal heart attacks; and premature death in people with heart or lung disease. Impairs visibility (haze).
Sulfur Dioxide (SO ₂)	A colorless, nonflammable gas formed when fuel containing sulfur is burned; when gasoline is extracted from oil; or when metal is extracted from ore. Examples are petroleum refineries, cement manufacturing, metal processing facilities, locomotives, and ships.	Respiratory irritant. Aggravates lung and heart problems. In the presence of moisture and oxygen, sulfur dioxide converts to sulfuric acid which can damage marble, iron, and steel. Damages crops and natural vegetation. Impairs visibility. Precursor to acid rain.

4.2.3 ENVIRONMENTAL SETTING

Local Climate and Meteorology

The Specific Plan area is in the SCAB, which is bound by the Pacific Ocean to the west and the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east, and includes all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties, in addition to the San Gorgonio Pass area in Riverside County. The regional climate in the SCAB is semi-arid and is characterized by warm summers, mild winters, infrequent seasonal rainfall, moderate daytime onshore breezes, and

moderate humidity. Air quality in the SCAB is primarily influenced by meteorology and a wide range of emissions sources, such as dense population centers, substantial vehicular traffic, and industry.

Air pollutant emissions in the SCAB are generated primarily by stationary and mobile sources. Stationary sources can be divided into two major subcategories: point and area sources. Point sources occur at a specific location and are often identified by an exhaust vent or stack. Examples include boilers or combustion equipment that produce electricity or generate heat. Area sources are widely distributed and include such sources as residential and commercial water heaters, painting operations, lawn mowers, agricultural fields, landfills, and some consumer products. Mobile sources refer to emissions from motor vehicles, including tailpipe and evaporative emissions, and are classified as either on-road or off-road. On-road sources may be legally operated on roadways and highways. Off-road sources include aircraft, ships, trains, and self-propelled construction equipment. Air pollutants can also be generated by the natural environment, such as when high winds suspend fine dust particles.

Current Air Quality

The SCAQMD operates a network of air quality monitoring stations throughout the SCAB. The purpose of the monitoring stations is to measure ambient concentrations of pollutants and determine whether ambient air quality meets the California and Federal standards. The monitoring station located closest to the Specific Plan area is the Costa Mesa station, located at 2850 Mesa Verde Drive East, approximately seven miles southwest of the Specific Plan area. Table 4.2-3, *Ambient Air Quality at the Monitoring Station*, indicates the number of days that each of the standards has been exceeded at the Costa Mesa station. This station does not monitor PM emissions; therefore, data for PM emissions were obtained from the Anaheim-Pampas Lane monitoring station located approximately 9.75 miles northwest of the Specific Plan area.

SCAB is designated nonattainment for the Federal and State one-hour and eight-hour ozone standards, the Federal and State PM₁₀ standards, the Federal 24-hour PM_{2.5} standard, and the State and Federal annual PM_{2.5} standard. The SCAB is in attainment of all other Federal and State standards.

Sensitive Receptors

Ambient air quality standards have been established to represent the levels of air quality considered sufficient, with a margin of safety, to protect public health and welfare. They are designed to protect that segment of the public most susceptible to respiratory distress, such as children under 14; the elderly over 65; persons engaged in strenuous work or exercise; and people with cardiovascular and chronic respiratory diseases. Many sensitive receptor locations are, therefore, schools, hospitals, and residences. Sensitive receptors likely to be affected by air quality impacts associated with the Specific Plan area are described below.

Within the Specific Plan Area. Sensitive receptors within the Specific Plan area include single-family residences located near the intersection of Red Hill Avenue at Mitchell Avenue; multiple-family residences located to the west of Red Hill Avenue along Nisson Road; the Red Hill Montessori Preschool and Infant Toddler Care located at the corner of Red Hill Avenue at San Juan Street; and the Main Place Christian Fellowship Church located on the north side of El Camino Real east of Red Hill Avenue.

Pollutant	2014	2015	2016
8 Hour Ozone (ppm), 8-Hr Maximum	0.079	0.079	0.069
Number of Days of State exceedances (>0.070)	6	2	0
Number of days of Federal exceedances (>0.070)	6	2	0
Ozone (ppm), Worst Hour	0.096	0.099	0.090
Number of days of State exceedances (>0.09 ppm)	1	1	0
Number of days of Federal exceedances (>0.112 ppm)	*	*	*
Nitrogen Dioxide (ppb) - Worst Hour	60.6	52.4	59.8
Number of days of State exceedances (>0.18 ppm)	0	0	0
Number of days of Federal exceedances (0.10 ppm)	0	0	0
Particulate Matter 10 microns, $\mu\text{g}/\text{m}^3$, Worst 24 Hours ^a .	85	59	74
Number of days above Federal standard (>150 $\mu\text{g}/\text{m}^3$)	0	0	0
Particulate Matter <2.5 microns, $\mu\text{g}/\text{m}^3$, Worst 24 Hours ^a .	45	45.8	44.4
Number of days above Federal standard (>35 $\mu\text{g}/\text{m}^3$)	4	3	1
Note: Costa Mesa-Mesa Verde Drive Monitoring Station unless otherwise noted. a. Anaheim-Pampas Lane monitoring station data * There was insufficient (or no) data available to determine the value. Source: California Air Resources Board, <i>Aerometric Data Analysis and Management (iADAM) System</i> , https://www.arb.ca.gov/adam , accessed January 12, 2018.			

Outside the Specific Plan Area. Sensitive receptors outside of but adjacent to the Specific Plan area along and adjacent to Red Hill Avenue include Pine Tree Park, and single-family and multiple-family residences.

4.2.4 THRESHOLDS OF SIGNIFICANCE

The following significance criteria are from CEQA Guidelines Appendix G. Implementation of the Specific Plan would result in a significant impact on air quality if it would:

- Threshold 4.2-1** Conflict with or obstruct implementation of the applicable air quality plan.
- Threshold 4.2-2** Violate any air quality standard or contribute substantially to an existing or projected air quality violation.
- Threshold 4.2-3** Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in nonattainment under an applicable Federal or State ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors).
- Threshold 4.2-4** Expose sensitive receptors to substantial pollutant concentrations.
- Threshold 4.2-5** Create objectionable odors affecting a substantial number of people.

Regional Thresholds

The SCAQMD recommends the quantitative regional significance thresholds identified in Table 4.2-4, *SCAQMD Regional Significance Thresholds*, for temporary construction activities and long-term operations within the SCAB.

Air Pollutant	Construction Activities	Operations
Reactive Organic Gases (ROG)	75	55
Carbon Monoxide (CO)	550	550
Nitrogen Oxides (NO _x)	100	55
Sulfur Oxides (SO _x)	150	150
Coarse Particulates (PM ₁₀)	150	150
Fine Particulates (PM _{2.5})	55	55

a. Pounds per day
Source: South Coast Air Quality Management District, *CEQA Handbook*, 1993 (PM_{2.5} threshold adopted June 1, 2007).

Localized Significance Threshold

In addition to the above thresholds, the SCAQMD has developed Localized Significance Thresholds (LSTs). LSTs represent the maximum emissions from a project that will not cause or contribute to an air quality exceedance of the most stringent applicable Federal or State ambient air quality standard at the nearest sensitive receptor. However, LSTs are applicable to projects at the project-specific level and are not applicable to regional projects such as Specific Plans (SCAQMD, 2003). As such, LSTs would be required for future development projects, but do not apply to the programmatic Specific Plan analysis.

Methodology

The air quality analysis performed for the Specific Plan Project conforms to the methodologies recommended in the SCAQMD's *CEQA Air Quality Handbook* (1993, as amended). The handbook includes thresholds for emissions associated with both construction and operation development projects within the Specific Plan area.

Construction for future development within the Specific Plan area would generate diesel emissions and dust. Construction equipment that would generate criteria air pollutants includes excavators, graders, cranes, dump trucks, and loaders. Some of this equipment would be used during grading activities as well as during building construction. It is assumed that all construction equipment used would be diesel-powered.

Operational emissions were estimated using the California Emissions Estimator Model (CalEEMod). Operational emissions include mobile source emissions, energy emissions, and area source emissions. Mobile source emissions are generated by the increase in motor vehicle trips to and from the Specific Plan area associated with operation of onsite development. Specific Plan traffic generation rates from the Traffic Impact Analysis (Kimley-Horn, 2018) were used for the traffic analysis to provide a conservative estimate of the potential traffic generation emissions. Emissions attributed to energy use include natural

gas consumption for space and water heating. Area source emissions are generated by landscape maintenance equipment, consumer products, and architectural coatings.

4.2.5 ENVIRONMENTAL IMPACTS

Threshold 4.2-1: Would implementation of the Specific Plan conflict with or obstruct implementation of the applicable air quality plan?

A project may be inconsistent with the AQMP if it would generate a considerable increase in regional air quality violations and affect the region’s attainment of air quality standards, or if it would generate population, housing, or employment growth exceeding forecasts used in the development of the AQMP. The 2016 AQMP, the most recent AQMP adopted by the SCAQMD, incorporates local municipalities’ general plans and SCAG’s 2016 RTP/SCS socioeconomic forecast projections of regional population, housing and employment growth. Table 4.2-5, *Orange County and Tustin Regional Growth Estimates*, shows the SCAG regional growth projections.

Table 4.2-5. Orange County and Tustin Regional Growth Estimates				
	2012		2040	
	County of Orange	Tustin	County of Orange	Tustin
Population	3,071,600	77,300	3,461,500	83,000
Households	999,500	25,600	1,135,300	27,800
Jobs	1,526,500	37,600	1,898,900	66,400

Source: SCAG RTP/SCS, 2016.

The Specific Plan Project would allow for the development of 500 additional residential units and 325,000 additional square feet of non-residential development. According to the California Department of Finance 2017 housing estimates, the average household size for the City of Tustin is 3.04 persons per household (DOF 2017). Assuming 3.04 per dwelling unit, the Specific Plan has the potential to generate 1,520 additional residents. According to the California Department of Finance (DOF), the City has an estimated current population of 82,372 (DOF, 2017). The estimated population increase of 1,520 new residents is within the forecasted population increase by SCAG for the City of Tustin of 5,700 residents between 2012 and 2040. Assuming no change in the average household size and no other changes to the number of housing units in Tustin, implementation of the Specific Plan could increase the City population to 83,892 over the course of Specific Plan buildout, an increase of 1.8 percent. This population increase would result in a total population that exceeds both SCAG’s forecasted population for the City of 83,100 and the City of Tustin’s General Plan projected population of 82,878.

According to SCAG’s employment density study, the employment density factor for commercial retail development in Orange County is 450 square feet per employee. Development of 325,000 additional square feet of non-residential uses would generate approximately 722 new permanent employment opportunities which could include both full-time and part-time employment positions with varying salaries including minimum wage positions. The 722 jobs represent approximately 3 percent of the City’s total forecasted increase in employment between 2012 and 2040. As this employment increase would be

within SCAG’s and the City of Tustin’s forecasted 2040 employment growth for the City, employment growth generated by the Specific Plan would be consistent with the AQMP.

As described above, the population, housing, and employment forecasts, which are adopted by SCAG’s Regional Council, are based on local City plans and policies; these are used by SCAG in all phases of implementation and review. Additionally, the SCAQMD has incorporated these same projections into the 2016 AQMP. Implementation of the Specific Plan would incrementally exceed the population growth forecasted in the RTP/SCS, on which the 2016 AQMP is based. However, the Specific Plan Project, which encourages mixed-use, infill development with access to alternative transportation, is consistent with regional policies established in the 2016 RTP/SCS that promote alternative modes of transport and “livable corridors” to reduce air quality impacts from vehicle emissions. In addition, implementation of the Specific Plan would improve the job-housing balance in the City, which reduces vehicle miles traveled by residents to employment opportunities outside the City. Although the Specific Plan would be consistent with the goals of the RTP/SCS to reduce vehicle miles traveled and associated air pollutant emissions, the Specific Plan would exceed population forecasts, on which the AQMP is based. Further, implementation of proposed mitigation measures and compliance with SCAQMD rules would reduce conflicts and obstruction of the AQMP; however, the combined emissions from future development (i.e., new development in the Specific Plan area) would exceed SCAQMD operational thresholds (refer to discussion under Threshold 4.2-2). Exceeding these thresholds has the potential to hinder the region’s compliance with the AQMP. Impacts would be significant and unavoidable.

Impact Summary: **Threshold 4.2-1: Significant and Unavoidable Impact.** Implementation of the Specific Plan would incrementally exceed population growth forecasted in the Regional Transportation Plan/Sustainable Communities Strategy on which the 2016 AQMP is based, as well as exceed SCAQMD operational thresholds.

Threshold 4.2-2: **Would implementation of the Specific Plan violate any air quality standard or contribute substantially to an existing or projected air quality violation?**

Construction Emissions

The Specific Plan would allow for 325,000 square feet of additional non-residential development and 500 additional dwelling units. Construction activities associated with implementation of the Specific Plan would result in fugitive dust and exhaust emissions. As described below, grading and hauling tend to generate the greatest fugitive dust and exhaust emissions. Additionally, demolition of buildings with asbestos containing materials could occur.

Fugitive Dust. Construction activities are a source of fugitive dust (PM₁₀ and PM_{2.5}) emissions that may have a substantial, temporary impact on local air quality. Fugitive dust emissions vary substantially from day to day, depending on the level of activity, specific operations, and weather conditions. Fugitive dust (PM₁₀) poses a serious health hazard alone or in combination with other pollutants. Fine Particulate Matter (PM_{2.5}) is mostly derived from combustion sources, such as automobiles, trucks, and other vehicle exhaust, as well as from stationary sources. These particles are either directly emitted or are formed in the atmosphere from the combustion of gases such as NO_x and SO_x combining with ammonia. PM_{2.5} components from material in the earth’s crust, such as dust, are also present, with the amount varying in different locations.

Exhaust. Exhaust emissions would be generated by the operation of vehicles and equipment on future construction sites, such as tractors, dozers, scrapers, backhoes, cranes, and trucks. The majority of construction equipment and vehicles would be diesel powered, which tends to be more efficient than gasoline-powered equipment. Diesel-powered equipment produces lower CO and hydrocarbon emissions than gasoline equipment, but produces greater amounts of NO_x, SO_x, and particulates per hour of activity. The transportation of equipment and materials to and from project sites, as well as construction workers traveling to and from the sites, would also generate vehicle emissions during construction.

Grading/Hauling. Depending on the amount of over-excavation and re-compaction that may be necessary to create a suitable building pad, future development facilitated by a project may require the import/export of fill material. Although these activities may create additional dust and PM₁₀ and PM_{2.5}, as well as truck-related emissions, they would be mitigated to less than significant levels through implementation of standard dust control practices required as part of the grading permit (periodic site watering, covering laden trucks with tarps, and periodic street sweeping).

Asbestos. It is possible that asbestos-containing materials may be present within existing buildings that may be modified or demolished within the Specific Plan area. Therefore, the possibility exists that asbestos fibers may be released into the air should no asbestos assessment or removal (if needed) take place prior to demolition. Standard practice would be to conduct an asbestos assessment for candidate buildings to determine the presence of asbestos. If identified, an asbestos abatement contractor would be retained to develop an abatement plan and remove the asbestos containing materials, in accordance with local, State, and Federal requirements. After removal, demolition may proceed without significant concern to the release of asbestos fibers into the air.

Construction activities associated with future development would occur in incremental phases over time based upon numerous factors, including market demand, and economic and planning considerations. Construction activities would consist of grading, demolition, excavation, cut-and-fill, paving, building construction, and application of architectural coatings. In addition, construction worker vehicle trips, building material deliveries, soil hauling, etc. would occur during construction. Construction-related emissions are typically site-specific and depend upon multiple variables. Quantifying individual future development's air emissions from short-term, temporary construction-related activities is not possible due to project-level variability and uncertainties concerning locations, detailed site plans, construction schedules/duration, equipment requirements, etc., among other factors, which are presently unknown. Since these parameters can vary so widely (and individual project-related construction activities would occur over time dependent upon numerous factors), quantifying precise construction-related emissions and impacts would be speculative.

Depending on how development proceeds, construction-related emissions associated with future development could exceed SCAQMD thresholds of significance. Standard Condition (SC) 4.2-1 requires adherence to SCAQMD Rule 403 (Fugitive Dust) would reduce fugitive dust emissions generated at future construction sites by requiring dust abatement measures. State Vehicle Code Section 23114 requires all trucks hauling excavated or graded material to the prevention of such material spilling onto public streets. SC 4.2-2 requires future construction contractors to adhere to SCAQMD Rule 1113 (Architectural Coatings) to limit volatile organic compounds from architectural coatings. Additionally, all building demolition

activities would be required to adhere to SCAQMD Rule 1403 (Asbestos Emissions From Demolition/Renovation Activities). However, due to the unknown nature of future construction activities associated with implementation of the Specific Plan, the potential exists that SCAQMD thresholds may be exceeded. Therefore, construction-related air quality impacts would be considered significant and unavoidable due to the potential magnitude of construction that could occur from implementation of the Specific Plan.

Operational Emissions

Table 4.2-6, *Estimated Unmitigated Operational Emissions*, summarizes the Specific Plan’s operational emissions. The majority of the Specific Plan-related operational emissions would be due to vehicle trips to, from, and within the Specific Plan area. Specific Plan-generated emissions would exceed SCAQMD recommended thresholds for ROG, and NO_x. However, no specific development projects are proposed at this time. In order to quantify the level of emissions associated with individual development projects and compare emissions to established project-level SCAQMD thresholds, specific information regarding the size and type of development would be needed. Though overall operational emissions associated with the Specific Plan would exceed applicable SCAQMD thresholds for criteria pollutants, any project proposed within the Specific Plan area would be subject to site-specific CEQA review to determine if subsequent CEQA documentation or technical analyses are required. The SCAQMD’s significance thresholds would be relied upon to determine the significance level of a future project’s operational impact. In addition, individual development projects would be required to comply with energy performance and water efficiency building code requirements established under State Title 24 Energy Regulations, which would further reduce criteria air pollutant emissions. While some of the individual development projects may be able to incorporate design and reduction features that would reduce emissions to below SCAQMD thresholds, the overall project must be evaluated for significance consideration. At a programmatic level, operational emissions would exceed thresholds and impacts would be potentially significant.

Table 4.2-6. Estimated Unmitigated Operational Emissions						
Emissions Source	Estimated Unmitigated Emissions (lbs/day)					
	ROG	NO_x	CO	SO_x	PM₁₀	PM_{2.5}
Area	19.87	5.46	43.61	0.03	0.63	0.63
Energy	0.26	2.30	1.27	0.01	0.18	0.18
Mobile	33.26	128.16	383.97	1.25	103.56	28.63
Project Total	53.40	135.92	428.85	1.29	104.37	29.45
<i>SCAQMD Thresholds</i>	55	55	550	150	150	55
Threshold Exceeded?	No	Yes	No	No	No	No
lbs = pounds per day Note: Numbers may not add due to rounding. Estimated operational emissions (lbs/day) of the Specific Plan. Model used buildout date 2019 for conservative, worst-case scenario emissions estimates. Maximum emissions occurred during winter for NO _x , PM ₁₀ , and PM _{2.5} Maximum emissions occurred during summer for ROG, CO, and SO _x						

MM 4.2-1 would require the inclusion of EV charging stations with the development of vehicle parking spaces within the Specific Plan area to reduce ROG and NO_x emissions. MM 4.2-2 would require future development to encourage vanpool/rideshare programs to reduce NO_x impacts. MM 4.2-3 would require future development within the Specific Plan area mitigate regional air quality impacts during the development review process. Mitigation measures may include energy efficiency measures, water efficiency measures, encouragement of alternatively fueled vehicles, facilitation of ride-sharing programs, provide informational materials on low ROG/VOC consumer products, among others.

Table 4.2-7, *Estimated Mitigated Operational Emissions*, shows the operational air pollutant emissions with implementation of MM 4.2-1 through 4.2-4. As shown therein, emissions would continue to exceed thresholds at the programmatic level; therefore, operational air quality impacts would be significant and unavoidable.

Impact Summary: **Threshold 4.2-2 – Construction: *Significant and Unavoidable Impact.*** SC 4.2-1 and SC 4.2-2 are applicable. Construction-related air quality impacts would be considered significant and unavoidable due to the potential magnitude of construction that could occur from implementation of the Specific Plan.

Threshold 4.2-2 – Operations. *Significant and Unavoidable Impact.* Operational emissions would exceed the SCAQMD’s NO_x thresholds with MMs 4.2-1 through 4.2-4.

Table 4.2-7. Estimated Mitigated Operational Emissions						
Emissions Source	Estimated Mitigated Emissions (lbs/day)					
	ROG	NO_x	CO	SO_x	PM₁₀	PM_{2.5}
Area	19.46	5.46	43.61	0.03	0.63	0.63
Energy	0.26	2.30	1.27	0.01	0.18	0.18
Mobile	29.12	99.34	271.55	0.80	64.75	17.94
Project Total	48.84	107.10	316.43	0.85	65.56	18.75
<i>SCAQMD Thresholds</i>	55	55	550	150	150	55
Threshold Exceeded?	No	Yes	No	No	No	No
lbs = pounds per day Note: Numbers may not add due to rounding. Estimated operational emissions (lbs/day) of the Specific Plan. Model used buildout date 2019 for conservative, worst-case scenario emissions estimates. Maximum emissions occurred during winter for NO _x , PM ₁₀ , and PM _{2.5} Maximum emissions occurred during summer for ROG, CO, and SO _x						

Threshold 4.2-3: Would implementation of the Specific Plan result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in nonattainment under an applicable NAAQS or CAAQS (including releasing emissions that exceed quantitative thresholds for ozone precursors)?

The SCAB is designated nonattainment for the Federal and State one-hour and eight-hour ozone standards, the Federal and State PM₁₀ standards, the Federal 24-hour PM_{2.5} standard, and the State and Federal annual PM_{2.5} standard. As discussed under Threshold 4.2-2, future development associated with implementation of the Specific Plan could result in increased emissions of regional criteria air pollutants and precursors that would be forecasted to exceed SCAQMD’s project-level significance thresholds. Although these thresholds are intended to apply to individual development projects, future development within the Specific Plan area could contribute to an increase in frequency and/or severity of air quality violations, which may delay attainment of the ambient air quality standards. Implementation of MMs 4.2-1 through 4.2-4 would help reduce the overall operational emissions. However, emissions with some future projects could potentially exceed SCAQMD-recommended significance thresholds. Therefore, this impact is considered significant and unavoidable.

Impact Summary: **Threshold 4.2-3: Significant and Unavoidable Impact.** The Specific Plan Project would contribute to an exceedance in overall operational related emissions that may exceed SCAQMD recommended significance thresholds. Therefore, this impact is considered significant and unavoidable.

Threshold 4.2-4: Would implementation of the Specific Plan expose sensitive receptors to substantial pollutant concentrations?

Implementation of the Specific Plan could expose sensitive receptors to elevated pollutant concentrations during construction or operational activities if it would cause or contribute significantly to elevated levels. Exposure to pollutant concentrations in exceedance of the NAAQS or CAAQS are generally considered substantial.

Local Carbon Monoxide Concentration

Areas with high vehicle density, such as congested intersections, have the potential to create high concentrations of CO, known as CO hotspots. A project’s localized air quality impact is considered significant if CO emissions create a hotspot where either the California one-hour standard of 20 ppm or the Federal and State eight-hour standard of 9.0 ppm is exceeded. This typically occurs at severely congested intersections (level of service [LOS] E or worse). CO emissions that would be generated from the Specific Plan would not exceed SCAQMD thresholds (Table 4.2-7). The Specific Plan area is not typically characterized by high levels of traffic congestion and the regional air basin has been in attainment of the Federal CO standards since 2007. Further, CO levels at the closest air quality monitoring station, the Costa Mesa – Mesa Verde Drive station, have consistently been substantially below the State and Federal standards. Because background CO concentrations are low and implementation of the Specific Plan would not generate CO emissions above thresholds, the Specific Plan would not result in the creation of CO hotspots or expose sensitive receptors to substantial pollutant concentrations; impacts would be less than significant.

Toxic Air Contaminants

CARB’s *Air Quality and Land Use Handbook: A Community Health Perspective* recommends against siting sensitive receptors within 500 feet of a freeway, urban roads with 100,000 vehicles per day, or rural roads with 50,000 vehicles per day. The primary concern with respect to heavy-traffic roadway adjacency is the long-term effect of TACs, such as diesel exhaust particulates, on sensitive receptors. The primary source of diesel exhaust particulates is heavy-duty trucks on freeways and high-volume arterial roadways. The I-5 bisects the Specific Plan area, and the I-5 freeway segment that crosses Red Hill Avenue experiences an average of 324,300 trips per day. Residential units could be constructed as close as 100 feet from I-5. The proximity of potential future development to I-5 poses a concern for TAC exposure. Therefore, implementation of MM 4.2-5 is required to ensure a project-specific Health Risk Assessment (HRA) is conducted for future residential uses located within 500 feet of I-5. Implementation of MM 4.2-5 would reduce exposure of sensitive receptors to substantial pollutant concentrations to a less than significant level.

Impact Summary: **Threshold 4.2-4: *Less Than Significant With Mitigation.*** Implementation of the Specific Plan would potentially expose sensitive receptors to substantial pollutant concentrations. This impact would be mitigated to a level considered less than significant with implementation of MM 4.2-5.

Threshold 4.2-5: **Would implementation of the Specific Plan create objectionable odors affecting a substantial number of people?**

CARB’s *Air Quality and Land Use Handbook: A Community Health Perspective* (2005) identifies land uses associated with odor complaints. The Specific Plan would include residential and commercial development. Commercial development within the Specific Plan area would likely consist of retail facilities. As retail land uses are not identified as land uses associated with odor complaints by SCAQMD, implementation of the Specific Plan would not generate objectionable odors affecting a substantial number of people. Therefore, impacts would be less than significant.

Impact Summary: **Threshold 4.2-5: *Less Than Significant.*** Land uses proposed in the Specific Plan are not identified as land uses associated with odor complaints by SCAQMD. Therefore, impacts would be less than significant.

4.2.6 CUMULATIVE IMPACTS

A significant impact to air quality would occur if a project would result in a cumulative considerable net increase of any criteria pollutant for which the region is nonattainment under applicable National or State ambient air quality standards. To determine whether a project would result in a cumulatively considerable increase in nonattainment criteria pollutants or exceed the quantitative thresholds for ozone precursors, project emissions may be evaluated based on the quantitative emission thresholds in SCAQMD’s *CEQA Air Quality Handbook* (1993, as amended). The SCAQMD has established quantitative thresholds against which a project’s emissions could be evaluated to determine if there is a potential for a significant impact. The SCAQMD’s approach to assessing cumulative impacts is based on the AQMP forecasts of attainment of ambient air quality standards in accordance with the requirements of the Federal and California Clean Air Acts. As such, the analysis of cumulative impacts focuses on determining

whether the Project is consistent with the growth assumptions upon which the SCAQMD's AQMP is based. If the Project is consistent with the growth assumptions, then future development would not impede the attainment of NAAQS and a significant cumulative air quality impact would not occur.

With respect to the Specific Plan's construction-related air quality emissions and cumulative basin-wide conditions, the SCAQMD has developed strategies to reduce criteria pollutant emissions outlined in the 2016 AQMP pursuant to Federal Clean Air Act mandates. As such, the Project would comply with SCAQMD Rule 403 requirements. In addition, the Specific Plan would comply with adopted 2016 AQMP emissions control measures. Per SCAQMD rules and mandates, as well as the CEQA requirement that significant impacts be mitigated to the extent feasible, these same requirements (i.e., Rule 403 compliance, the implementation of all feasible mitigation measures, and compliance with adopted AQMP emissions control measures) would also be imposed on construction projects throughout the air basin, which would include related projects. The Specific Plan would exceed SCAQMD construction thresholds. Therefore, the Specific Plan's contribution to construction-related regional pollutant concentrations would be cumulatively considerable.

The Specific Plan Project would result in operational air quality impacts because emissions would exceed the SCAQMD-adopted operational threshold for NO_x. Because the operational emissions calculated for the Project exceed the applicable SCAQMD daily significance threshold that are designed to assist the region in attaining the applicable ambient air quality standards, the Project would contribute a cumulatively considerable net increase of a nonattainment criteria pollutant. Cumulative projects would be required to reduce their emissions per SCAQMD rules and mandates, cumulative emissions would not contribute to an exceedance of the Federal or California ambient air quality standards and would, therefore, comply with the goals of the 2016 AQMP. Therefore, it can be reasonably inferred that the Specific Plan-related emissions, in combination with those from other projects in the area, could result in cumulative operational impacts. Therefore, the Project's contribution to regional pollutant concentrations would be cumulatively considerable.

4.2.7 MITIGATION PROGRAM

Standard Conditions and Requirements

SC 4.2 -1 **Dust Control.** During construction of future development within the Specific Plan area, project applicants shall require all construction contractors to comply with South Coast Air Quality Management District's (SCAQMD's) Rules 402 and 403 in order to minimize short-term emissions of dust and particulates. SCAQMD Rule 402 requires that air pollutant emissions not be a nuisance off-site. SCAQMD Rule 403 requires that fugitive dust be controlled with Best Available Control Measures so that the presence of such dust does not remain visible in the atmosphere beyond the property line of the emission source. This requirement shall be included as notes on the contractor specifications. Table 1 of Rule 403 lists the Best Available Control Measures that are applicable to all construction projects. The measures include, but are not limited to, the following:

- ***Clearing and grubbing:*** Apply water in sufficient quantity to prevent generation of dust plumes.

- **Cut and fill:** Pre-water soils prior to cut and fill activities and stabilize soil during and after cut and fill activities.
- **Earth-moving activities:** Pre-apply water to depth of proposed cuts; re-apply water as necessary to maintain soils in a damp condition and to ensure that visible emissions do not exceed 100 feet in any direction; and stabilize soils once earth-moving activities are complete.
- **Importing/exporting of bulk materials:** Stabilize material while loading to reduce fugitive dust emissions; maintain at least six inches of freeboard on haul vehicles; and stabilize material while transporting to reduce fugitive dust emissions.
- **Stockpiles/bulk material handling:** Stabilize stockpiled materials; stockpiles within 100 yards of off-site occupied buildings must not be greater than 8 feet in height, must have a road bladed to the top¹ to allow water truck access, or must have an operational water irrigation system that is capable of complete stockpile coverage.
- **Traffic areas for construction activities:** Stabilize all off-road traffic and parking areas; stabilize all haul routes; and direct construction traffic over established haul routes.

Rule 403 defines large operations as projects with 50 or more acres of grading or with a daily earth-moving volume of 5,000 cubic yards at least 3 times in 1 year. Future development within the Specific Plan would potentially be considered a large operation. Large operations are required to implement additional dust-control measures (as specified in Tables 2 and 3 of Rule 403); provide additional notifications, signage, and reporting; and appoint a Dust Control Supervisor.

The Dust Control Supervisor is required to:

- Be employed by or contracted with the Property Owner or Developer;
- Be on the site or available on site within 30 minutes during working hours;
- Have the authority to expeditiously employ sufficient dust mitigation measures to ensure compliance with all Rule 403 requirements; and
- Have completed the AQMD Fugitive Dust Control Class and have been issued a valid Certificate of Completion for the class.

SC 4.2-2 Architectural Coatings. Architectural coatings shall be selected so that the VOC content of the coatings is compliant with SCAQMD Rule 1113. This requirement shall be included as notes on the contractor specifications.

Mitigation Measures

MM 4.2-1 Electric Vehicle (EV) Charging Stations. Prior to the issuance of building permits, the City's Building Official shall confirm that project plans and specifications designate that vehicle parking spaces developed within the Specific Plan area shall be EV ready to encourage EV use and appropriately size electrical panels to accommodate future expanded EV use.

¹ Refers to a road to the top of the pile.

MM 4.2-2 Vanpool/Rideshare Programs. Prior to the issuance of occupancy permits, the City's Building Official shall confirm that future commercial uses within the Specific Plan area include Codes, Covenants, and Restrictions (CC&Rs) that provide for a voluntary vanpool/shuttle and employee ridesharing programs for which all employees shall be eligible to participate. The voluntary ride sharing program could be achieved through a multi-faceted approach, such as designating a certain percentage of parking spaces for ride-sharing vehicles, designating adequate passenger loading and unloading and waiting areas for ridesharing vehicles, and/or providing a web site or message board for coordinating rides. This measure is not applicable to residential uses.

MM 4.2-3 Operational Emissions Reductions. Prior to the issuance of building permits, the City's Planning Official shall confirm that project plans and specifications consider and mitigate the impacts on regional air quality and GHG emissions when reviewing proposals for new development. Impacts shall be evaluated in accordance with SCAQMD recommended methodologies and procedures. Recommended mitigation measure may include, but are not limited to, the following:

- Install heat transfer modules in all furnaces;
- Install solar panels for water heating systems for residential and other facilities;
- Incorporate renewable energy sources in the project design (e.g., solar photovoltaic panels).
- Include passive solar cooling/heating design elements in building designs;
- Include design elements that maximize use of natural lighting in new development;
- Include provisions to install energy efficient appliances and lighting in new development.
- Install higher efficacy public street and exterior lighting.
- Increase project density.
- Incorporate design measures that promote bicycle, pedestrian, and public transportation use.
- Provide preferential parking spaces for alternatively-fueled vehicles.
- Incorporate measures that reduce water use and waste generation.
- Provide informational materials on low ROG/VOC consumer products, cleaners, paints, and other products, as well as the importance of recycling and purchasing recycled material. Informational materials shall be provided to residential and commercial occupants through CC&R requirements.
- Incorporate measures and design features that promote ride sharing and consistency with the commute-reduction requirements of SCAQMD Rule 2202 (On-Road Motor Vehicle Mitigation Options).

MM 4.2-4 Toxic Air Contaminants/Health Risk Assessment. A project-specific Health Risk Assessment shall be conducted for future residential development proposed within 500 feet of the Interstate 5 right-of-way, pursuant to the recommendations set forth in the CARB *Air Quality and Land Use Handbook*. The Health Risk Assessment shall evaluate a project per the following SCAQMD thresholds:

- *Cancer Risk:* Emit carcinogenic or toxic contaminants that exceed the maximum individual cancer risk of 10 in one million.
- *Non-Cancer Risk:* Emit toxic contaminants that exceed the maximum hazard quotient of one in one million.

The SCAQMD has also established non-carcinogenic risk parameters for use in HRAs. Noncarcinogenic risks are quantified by calculating a “hazard index,” expressed as the ratio between the ambient pollutant concentration and its toxicity or Reference Exposure Level (REL). An REL is a concentration at or below which health effects are not likely to occur. A hazard index less of than one (1.0) means that adverse health effects are not expected. If projects are found to exceed the SCAQMD’s Health Risk Assessment thresholds, mitigation shall be incorporated to reduce impacts to below SCAQMD thresholds.

4.2.8 LEVEL OF SIGNIFICANCE AFTER MITIGATION

With implementation of the Specific Plan, significant unavoidable impacts would occur in the following areas despite the implementation of the Mitigation Program:

- ***Specific Plan-Related Construction Emissions.*** Despite implementation of Standard Conditions, construction-related air quality impacts would be considered significant and unavoidable due to the potential magnitude of construction that could occur from implementation of the Specific Plan.
- ***Specific Plan-Related Operational Emissions.*** Despite implementation of MMs 4.2-1 through 4.2-3, the Specific Plan’s mitigated operational emissions would remain above the SCAQMD thresholds for NO_x resulting in a significant unavoidable impact.
- ***AQMP Consistency.*** Although the Project’s long-term impacts would be consistent with the 2016 AQMP and SCAG’s goals and policies, the Specific Plan’s exceedance of population forecasts and operational NO_x thresholds would potentially result in a long-term impact on the region’s ability to meet State and Federal air quality standards. Construction-related air quality impacts would be considered significant and unavoidable due to the potential magnitude of construction that could occur from implementation of the Specific Plan. Impacts associated with AQMP compliance would be significant and unavoidable due to the exceedance of SCAQMD’s NO_x operational thresholds.
- ***Cumulative Emissions.*** As stated above, construction emissions would be considered significant and unavoidable due to the magnitude of construction that could occur with implementation of the Specific Plan. Additionally, operational activities would create a significant and unavoidable impact due to exceedances of SCAQMD thresholds for NO_x. Implementation of MM 4.2-1 through MM 4.2-4 would reduce impacts; however, a significant and unavoidable impact would remain.

The Project's contribution to regional pollutant concentrations would be cumulatively considerable.

Should the City of Tustin approve the Specific Plan Project, the City would be required to cite their findings in accordance with CEQA Guidelines Section 15091 and prepare a Statement of Overriding Considerations in accordance with CEQA Guidelines Section 15093.

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4.3 Cultural Resources and Tribal Cultural Resources

This Section provides contextual background information on resources within the Specific Plan area, including the area's prehistoric, ethnographic, and historical settings. This Section also summarizes the results of cultural surveys of the Red Hill Avenue Specific Plan area, analyzes of the potential impacts on cultural resources resulting from implementation of the Project, and identifies measures to address adverse impacts.

For the purposes of CEQA, "historical resources" generally refers to cultural resources that have been determined to be significant, either by eligibility for listing in state or local registers of historical resources, or by determination of a lead agency (see definitions below). Historical resources can also include areas determined to be important to Native Americans that qualify as tribal cultural resources as defined in Public Resources Code (PRC) Section 21074 (sites, landscapes, historical, or archeological resources). Paleontological resources are also considered within this Section.

4.3.1 REGULATORY SETTING

Federal

National Historic Preservation Act (NHPA)

Pursuant to the National Historic Preservation Act (NHPA) of 1966, as amended, the Federal government, acting through the U.S. Department of the Interior's National Park Service, maintains an inventory of properties and structures that have been determined to meet certain criteria as significant historic resources commonly referred to as the "National Register of Historic Places" (NRHP). The NHPA established the Advisory Council on Historic Preservation and provided procedures for the agency to follow if a proposed action affects a property that is included or may be eligible for inclusion, on the NRHP. The NRHP was developed as a direct result of the NHPA.

National Register of Historic Places (NRHP)

The NRHP was established by the NHPA of 1966, as "an authoritative guide to be used by federal, state, and local governments, private groups, and citizens to identify the Nation's cultural resources and to indicate what properties should be considered for protection from destruction or impairment" (CFR 36 § 60.2). To be eligible for listing in the NRHP, a resource must be significant in American history, architecture, archaeology, engineering, or culture. A property (districts, sites, buildings, structures, and objects of potential significance) is eligible for the NRHP if it is significant under one or more of the following four established criteria:

- **Criterion A:** It is associated with events that have made a significant contribution to the broad patterns of our history.
- **Criterion B:** It is associated with the lives of persons who are significant in our past.
- **Criterion C:** It embodies the distinctive characteristics of a type, period, or method of construction; represents the work of a master; possesses high artistic values; or represents a significant and distinguishable entity whose components may lack individual distinction.
- **Criterion D:** It has yielded, or may be likely to yield, information important in prehistory or history.

In addition to meeting the criteria of significance, a property must have integrity. Integrity is defined as “the ability of a property to convey its significance.” The seven factors that define integrity are location, design, setting, materials, workmanship, feeling, and association.

State of California

Similar to the Federal NRHP, the State of California also maintains a list of historic properties called the California Register of Historical Resources (CRHR). Eligibility for the CRHR is determined by the California Office of Historic Preservation (OHP) in a formal review process in which a resource is proposed for listing. A resource deemed eligible for the NRHP is typically deemed eligible for the CRHR. The CRHR is an authoritative guide to California’s significant historical and archaeological resources to be used by State and local agencies, private groups, and citizens in identifying the existing historical resources of the State and to indicate which resources deserve to be protected, to the extent prudent and feasible, from substantial adverse change. The CRHR is maintained by the OHP’s State Historic Preservation Officer. Additionally, the State maintains California Points of Historical Interest and California Historical Landmarks.

California Environmental Quality Act (CEQA)

CEQA requires a Lead Agency to determine whether a project may have a significant effect on one or more historical resources. A “historical resource” is defined as a resource listed in or determined to be eligible for listing in the CRHR (PRC § 21084.1); a resource included in a local register of historical resources (14 CCR § 15064.5[a][2]); or any object, building, structure, site, area, place, record, or manuscript that a Lead Agency determines to be historically significant (14 CCR § 15064.5[a][3]).

Section 15064.5(a)(3) of the State CEQA Guidelines states that “[generally], a resource shall be considered by the Lead Agency to be ‘historically significant’ if the resource meets the criteria for listing on the California Register of Historical Resources” (PRC § 5024.1; 14 CCR § 4852), including if the resource:

- A. Is associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage;
- B. Is associated with lives of persons important in our past;
- C. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
- D. Has yielded, or may be likely to yield, information important in prehistory or history.

The Lead Agency shall concurrently determine whether a project will cause damage to a unique archaeological resource (as defined in PRC § 21083.2[b]) and, if so, must make reasonable efforts to permit the resources to be preserved in place or left undisturbed. Section 21083.2(g) of CEQA defines a unique archaeological resource as an archaeological artifact, object, or site about which it can be demonstrated that without merely adding to the existing body of archaeological knowledge, there is a high probability that it meets any of the following criteria:

1. Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information.

2. Has a special and particular quality such as being the oldest of its type or the best available example of its type.
3. Is directly associated with a scientifically recognized important prehistoric or historic event or person.

To the extent that unique archaeological resources are not preserved in place, mitigation measures shall be required (PRC § 21083.2[c]). Using the information outlined above, the first level of evaluation is to determine whether a resource on a site is a historical resource and/or a unique archaeological resource that would be considered eligible for the CRHR and, therefore, significant.

Impacts to significant cultural resources that affect those characteristics of the resource that qualify it for the CRHR or adversely alter the significance of a resource listed in or eligible for listing in the CRHR are considered a significant effect on the environment. Impacts to cultural resources are considered significant if a project (1) physically destroys or damages all or part of a resource; (2) changes the character of the use of the resource or physical feature within the setting of the resource that contributes to its significance; and/or (3) introduces visual, atmospheric, or audible elements that diminish the integrity of significant features of the resource. CEQA Guidelines Section 15064.5(b) states “A project with an effect that may cause a substantial adverse change in the significance of a historical resource is a project that may have a significant effect on the environment.” An archaeological resource must be determined to be “unique” or “historic” for an impact to the resource to be considered significant. A “unique archaeological resource” is defined in Section 21083.2(g) of CEQA.

Native American Heritage Commission (NAHC)

PRC Section 5097.91 established the Native American Heritage Commission (NAHC), the duties of which include inventorying of places of religious or social significance to Native Americans and identifying known graves and cemeteries of Native Americans on private lands. PRC Section 5097.98 specifies a protocol to be followed when the NAHC receives notification of a discovery of Native American human remains from a county coroner.

Senate Bill 18

Senate Bill (SB) 18 (*California Government Code* § 65352.3) requires local governments to consult with Native American tribes prior to making certain planning decisions and to provide notice to tribes at certain key points in the planning process. These consultation and notice requirements apply to the adoption and amendment of general plans and specific plans. The consultation process requires (1) that local governments send the NAHC information on a proposed project and request contact information for local Native American tribes; (2) that local governments then send information on the project to the tribes that the NAHC has identified and notify them of the opportunity to consult; (3) that the tribes have 90 days to respond on whether they want to consult or not, and (4) that consultation begins, if requested, by a tribe and there is no statutory limit on the duration of the consultation. If issues arise and consensus on mitigation cannot be reached, SB 18 allows a finding to be made that the suggested mitigation is infeasible.

Assembly Bill 52

Assembly Bill (AB) 52 (Chapter 532, Statutes of 2014) establishes “Tribal Cultural Resources” as a new, separate, and distinct category of resources requiring consideration in the CEQA process. AB 52 amends CEQA by adding a new definition for tribal cultural resources. Such resources include “[s]ites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are eligible for inclusion in the California Register of Historical Resources or included in a local register of historical resources.” It also requires a new consultation process with Native American tribes to occur during the CEQA process to allow tribes the opportunity to provide input on tribal cultural resources, and appropriate mitigation and alternatives to avoid or reduce significant impacts to tribal cultural resources. AB 52 also gives lead agencies the discretion to determine, based on substantial evidence, whether a resource qualifies as a “tribal cultural resource”.

Paleontological Resources

Paleontological resources are nonrenewable scientific and educational resources. The CEQA regulatory framework for impacts on paleontological resources is contained in Appendix G (Environmental Checklist Form) of the CEQA Guidelines and includes paleontological resources under the general heading “Cultural Resources.” Projects subject to CEQA must determine whether the project would “directly or indirectly destroy a unique paleontological resource”.

An impact to paleontological resources would be considered a significant impact if a project results in the direct or indirect destruction of a unique or important paleontological resource or site. A project site is deemed paleontologically sensitive if (1) it has fossils that have previously been recovered from a particular geologic unit; (2) there are recorded fossil localities within the same geologic units as occur within the project area; and (3) the types of fossil materials that have been recovered from the geologic unit are unique or important.

Regional and Local

City of Tustin General Plan Conservation/ Open Space/ Recreation Element

The primary objective of the Conservation, Open Space and Recreation Element deals with the preservation and management of natural resources. The General Plan’s Conservation Element deals primarily with the preservation of natural resources such as water, soils, minerals and animal life, and includes an air quality “sub-element.” The Open Space Element focuses on the preservation of “open-space land” or land that is used for agricultural production, scenic enjoyment, and natural resource extraction. The Recreation Element addresses recreational resources and needs. The City has one of the oldest historical “old towns” in Orange County which contributes to the community’s sense of place. The Specific Plan’s consistency with applicable General Plan goals and policies is provided in Section 4.8, *Land Use and Planning*.

Cultural Resources District

The Tustin Cultural Resources District Ordinance establishes criteria for use in designating cultural resources and Cultural Resources Districts and the procedures to be followed in making such designations. Final action of any designation must be approved by the City Council. Certificates of Appropriateness are required for exterior improvements within Cultural Resource Districts or upon Designated Cultural

Resources when such improvements require a City building permit. Article 9, Chapter 2, Part 5, Section 9252 of the Tustin City Code established the Cultural Resource District, an overlay district that applies to properties shown on the Zoning Map and to cultural resource structures and sites as are designated by the City Council and listed by address and filed with the Department of Community Development. According to the General Plan EIR, the City of Tustin has several listings in the NRHP, including the Lighter-than-Air Ship Hangars at Valencia and Redhill Avenues, and Sherman Stevens House located at 228 West Main Street. There are no listed properties within the Specific Plan area.

4.3.2 ENVIRONMENTAL SETTING

Natural Setting

California is divided into geomorphic provinces, which are distinctive, generally easy-to-recognize natural regions in which the geologic record, types of landforms, pattern of landscape features, and climate in all parts are similar. Tustin is part of the coastal plain and the Santiago Foothills, leading to a wide variety of natural and open space resources. The Specific Plan area is within the Peninsular Ranges Geomorphic Province of Southern California. The Peninsular Ranges Geomorphic Province, one of the largest geomorphic units in western North America, extends from the Transverse Ranges Geomorphic Providence and the Los Angeles Basin, south to Baja California.

Paleontological and Archeological Resources

Although most of Tustin is developed, archaeological resources have been found. Limited numbers of cultural artifacts have been found in the City from the Early Man Horizon, approximately 8,000 years before present (YBP). These remains include roughly shaped scrapers, choppers large leaf-shaped knives, large projectile points, and hammer stones. The Milling Stone Horizon (about 7,500 to 3,000 YBP) is represented in a variety of sites in the City through manos (small rounded grinding stones) and metates (flatter grinding stones), large pressure flaked projectile points, end scrapers, and enigmatic cogged stones. The Intermediate Horizon was between 3,100 to 2,000 YBP and the Late Prehistoric Horizon approximately 1,800 YBP until the Spanish arrived in 1769 AD. The artifacts recovered to date indicate that the Late Prehistoric Horizon was a period of major population increase, intensive use of natural resources, and increased social complexity.

The distribution of paleontological resources within the City is directly dependent upon the distribution of geologic formations in which the fossils have been preserved. According to the General Plan EIR, the City contains geologic strata ranging in age from Eocene to Quaternary. While fossils have not been found, the rock types are known to be fossiliferous and therefore suitable conditions for fossil presentation. Paleontological resources are noted as being of higher sensitivity in the northern part of the City.

Historical Context

The City of Tustin incorporated in 1927 as a small agricultural community of approximately 200 acres and 900 residents, making Tustin the third oldest city in Orange County. The name “Tustin” attributed to Columbus Tustin, a Petaluma carriage maker who, with his partner, Nelson O. Stafford, purchased 1,359 acres of Rancho Santiago de Santa Ana in 1868. Columbus Tustin took the eastern 839 acres and moved to his property in 1870 to begin his real estate venture. He divided 100 acres into 300 square blocks, laid out streets, and provided lots for sale. However, Tustin experienced slow growth in the 1870s, hampered

by Santa Ana's successful bid for the terminus of the Southern Pacific Railroad. In the 1880's, the land boom brought a second life to the City. The Tustin Improvement Association established a bank and a large hotel, and by 1888 the Southern Pacific Railroad established a station in Tustin and started running two trains daily to Los Angeles. Several prominent pioneers, David Hewes and Sherman Stevens among them, arrived in Tustin during this period and built Victorian houses, some of which are still in existence today.

The successes of the 1880s were reversed by the panic of 1893, which led to the demise of several businesses in town and closure of the bank. With the 20th century came a gradual rebuilding of the economy and the successful additions of the First National Bank of Tustin, Tustin Lumber Company, Tustin Garage, Tustin Hardware, Piepers Feed Store, Utt Juice Company, and three large citrus association packing houses. Soon after World War II, urban development began to increase in Tustin and throughout Southern California. In 1942, the war brought a new kind of growth to Tustin when the U.S. Navy built its Lighter-Than-Air Base on nearby beanfields. By the 1960s, rising land values and falling grove production induced agricultural landowners to sell their land for urban development. Because of new development and annexations, the City's population increased from 2,000 in 1960 to 21,000 in 1970, and has continued to grow at a steady pace.

Red Hill Avenue is named after a relatively well-known Tustin historical landmark—a hill only 347 feet high and 1,000 feet long with rust-colored outcroppings. American Indians called it “katuktu,” meaning “signifying hill of prominence or place of refuge” because of a legend that told of people gathering at the hill to weather an epic flood. By the time European settlement began, Mexicans had given the hill its present name, Cerro Colorado or Red Hill. The new settlers recognized the reason for the hill's reddish hue: cinnabar, the ore that yields mercury. Several attempts were made to mine the ore, but the hill produced too little profit to continue. The surrounding area took its name from the hill, as did the road out of Tustin located nearby to the west – Red Hill Avenue.

Historical Resources

There are numerous buildings of historical, cultural, and architectural importance within the City. The General Plan notes that the City conducted historic surveys in 1990 and 2003 and maintains an historic preservation district. The Tustin Cultural Resources District was established in response to growing concerns over future development in Old Town. The purpose of the district is to provide a framework for recognizing, preserving, and protecting culturally significant structures, natural features, sites, and neighborhoods within Tustin. The Tustin Historic Resources Survey identified over 400 sites of possible distinction and notable recognition. Five buildings are listed on the National Register of Historic Places: the Stevens House (228 West Main Street); the Hewes House ((350 S. B Street); the Artz Building (550-558 West Main Street); and, the two Lighter-Than-Air Hangers at the U.S. Marine Corps Air Station. Significant structures outside the district are also protected by the City. In addition to City recognition, the Orange County Historical Commission recognizes the Hewes House and the First Advent Christian Church. The Specific Plan area is not within the Cultural Resources District. The Artz Building, located in Tustin's Old Town, is a California Historic Resource and is listed on the NRHP (Office of Historic Preservation [OHP], 2017). This building is located approximately 0.7 miles southeast of the Specific Plan area.

There are two buildings on the Historic Resources Survey that are proximate to the Specific Plan area. A residence, located at 14462 Red Hill Avenue, is identified as a significant resource (Status Code 3S – eligible for the NRHP) (City of Tustin, 2003a). This residential property was built in 1915 by the Nisson family and was noted as significant due to its architecture and association with early Tustin residents. The property is located adjacent to but not within the Specific Plan area. A building located at 1681 Mitchell Avenue is identified in the Historical Resource Survey as being ineligible for the NRHP but eligible for special consideration in local planning (Status Code 5S3 – not eligible for the NRHP but of local interest). The property was built at the end of the 20th century by the Bowman family and is approximately 900 feet east of the Specific Plan area.

4.3.3 THRESHOLDS OF SIGNIFICANCE

The following significance criteria are from CEQA Guidelines Appendix G. The Specific Plan would result in a significant impact on cultural resources if it would:

- Threshold 4.3-1** Cause a substantial adverse change in the significance of a historical resource, as defined in CEQA Guidelines Section 15064.53.
- Threshold 4.3-2** Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5.
- Threshold 4.3-3** Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.
- Threshold 4.3-4** Disturb any human remains, including those interred outside of formal cemeteries.
- Threshold 4.3-5** Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is: a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k).
- Threshold 4.3-6** Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is: b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

4.3.4 ENVIRONMENTAL IMPACTS

Threshold 4.3-1:	Would the Specific Plan cause a substantial adverse change in the significance of a historical resource, as defined in CEQA Guidelines Section 15064.53?
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Section 15064.5(c)(1) of the State CEQA Guidelines provides criteria for the determination of significance of impacts to both archaeological and historical resources. The following analysis addresses potential significant impacts to built-environment historical resources. Potential impacts to prehistoric archaeological resources, including prehistoric archeological resources that meet the CEQA definition of a historical resource, are addressed under Threshold 4.3-2.

As discussed, there are buildings and structures of historical, cultural, and architectural importance within the City. The Tustin Historic Resources Survey identified over 400 sites of possible distinction and notable recognition. None of these sites are within the Specific Plan area. Outside of but adjacent to the Specific Plan area on the northeast corner of Red Hill Avenue at Walnut Avenue, the property at 14462 Red Hill Avenue includes a residence constructed in 1915. The Tustin Historic Resources Survey identifies the building as a significant resource (Status Code 3S – eligible for the NRHP) due to its architecture and association with early Tustin residents. At the location, the only changes proposed by the Specific Plan would be within the City’s rights-of-way associated with the streetscape improvements. No significant impacts to this residence are anticipated.

Future development would be subject to compliance with the established Federal and State regulatory framework, which is intended to mitigate potential impacts to historical resources. As a part of Specific Plan implementation, no existing buildings would be directly or indirectly affected in the context of historic resources. Consequently, implementation of the Specific Plan would not impact an historic resource. Therefore, potential impacts to historic resources would be less than significant with compliance with the applicable local, Federal, and State regulatory framework.

Impact Summary: **Threshold 4.3.1: *Less Than Significant.*** Implementation of the Red Hill Avenue Specific Plan would not cause adverse impacts to historic resources. Less than significant impacts would occur.

Threshold 4.3-2:	Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5?
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An archaeological and historical records search was conducted at the South Central Coastal Information Center of the California Historic Resources Inventory System (CHRIS) in June 2017. The search included a review of all recorded archaeological and built-environment resources as well as a review of cultural resource reports on file (South Central Coastal Information Center, 2017). In addition, the search included a review of California Points of Historical Interest, the California Historical Landmarks, the CRHR, the NRHP, and the California State Historic Properties Directory listings. The records search found one archaeological resource within 0.5 miles of the Specific Plan area. Due to the sensitive nature of cultural resources, archaeological site locations are not identified in this Program EIR.

While the properties within the Specific Plan area have been extensively altered by prior ground disturbance and development, there is the potential for Specific Plan implementation to affect previously

unidentified archaeological resources. Future development within the Specific Plan area would be required to comply with MM 4.3-1, which requires future developments under the Specific Plan to retain an archaeologist to determine if any found archaeological deposits meet the CEQA definition of historical (State CEQA Guidelines § 15064.5(a)) and/or unique archaeological resource (Public Resources Code § 21083.2(g)). Compliance with MM 4.3-1 would mitigate potential impacts to archaeological resources to a less than significant level.

Impact Summary: **Threshold 4.3.2: *Less Than Significant With Mitigation.*** Implementation of the Red Hill Avenue Specific Plan could potentially impact unknown prehistoric archaeological resources. This impact can be mitigated to a level considered less than significant with implementation of MM 4.3-1.

Threshold 4.3-3: Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

A paleontological records search was conducted at the Natural History Museum of Los Angeles. The Specific Plan area has surface exposures of younger terrestrial Quaternary Terrace deposits. The records search identified no vertebrate fossil localities that lie directly within the Specific Plan area but that there are nearby localities from the same sedimentary deposits that probably occur subsurface in the Specific Plan area. Most properties do not have paleontological resources exposed at the surface, and fossils are usually found during the earth-moving activities as grading exposes the geologic formations.

The records search determined that surface grading or shallow excavations in the younger Quaternary deposits would likely not uncover significant vertebrate fossil remains. Deeper excavations that extend down into older Quaternary deposits may encounter significant fossil vertebrate specimens. Future development under the Specific Plan area would be required to comply with MM 4.3-2. MM 4.3-2 requires a paleontologist be retained to determine if any found paleontological resources require further treatment. Potential impacts can be mitigated to a less than significant level.

Impact Summary: **Threshold 4.3.3: *Less Than Significant With Mitigation.*** Implementation of the Red Hill Avenue Specific Plan would potentially have direct impacts on paleontological resources. This impact would be mitigated to a level considered less than significant with implementation of MM 4.3-2.

Threshold 4.3-4: Would the Specific Plan disturb any human remains, including those interred outside of formal cemeteries?

The Specific Plan area has been previously disturbed and is primarily developed. There is no indication that there are burials present within the Specific Plan area and it is unlikely that human remains would be discovered during Specific Plan implementation. In the event that human remains are discovered during grading activities at any point during future development under the Specific Plan, SC 4.3-1 addresses procedures to follow in the event of a discovery of suspected human remains.

As described by SC 4.3-1, California Health and Safety Code Section 7050.5, CEQA Guidelines Section 15064.5, and Public Resources Code Section 5097.98 mandate the process to be followed in the event of an accidental discovery of any human remains in a location other than a dedicated cemetery. Specifically,

in the event that human remains are discovered within the Specific Plan area, disturbance of the site shall be halted until the coroner has conducted an investigation into the circumstances, manner and cause of death, and the recommendations concerning the treatment and disposition of the human remains have been made to the person responsible for the excavation, or to his or her authorized representative, in the manner provided in Section 5097.98 of the Public Resources Code. If the coroner determines that the remains are not subject to his or her authority and if the coroner recognizes or has reason to believe the human remains to be those of a Native American, he or she shall contact, by telephone within 24 hours, the Native American Heritage Commission. Compliance with existing law would ensure that impacts to human remains would not occur.

Impact Summary: **Threshold 4.3.4: *Less Than Significant Impact.*** Future development under the Red Hill Avenue Specific Plan would be required to comply with SC 4.3-1 which establishes procedures to be implemented should human remains be discovered.

Threshold 4.3-5:	Would the Specific Plan cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is: a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?
Threshold 4.3-6:	Would the Specific Plan cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is: b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?

SB 18 (Government Code § 65352.3) requires local governments to consult with California Native American tribes identified by the Native American Heritage Commission (NAHC) for the purpose of avoiding, protecting, and/or mitigating impacts to cultural places in creating or amending general plans, including specific plans. The City contacted the following tribal representatives.

- Campo Band of Mission Indians, Ralph Goff
- Ewiiapaayp Tribal Office, Robert Pinto and Michael Garcia
- Gabrieleño Band of Mission Indians – Kizh Nation, Andrew Salas
- Gabrieleño/Tongva San Gabriel Band of Mission Indians, Anthony Morales
- Gabrieleño/Tongva Nation, Sandonne Goad

- Gabrieleño/Tongva Indians of California Tribal Council, Robert Dorame
- Gabrieleño/Tongva Tribe, Charles Alvarez
- Jamul Indian Village, Erica Pinto
- Juaneño Band of Mission Indians, Sonia Johnston
- Juaneño Band of Mission Indians – Acjachemen Nation, Matias Belardes
- Juaneño Band of Mission Indians – Acjachemen Nation, Teresa Romero
- La Posta Band of Mission Indians, Javaughn Miller, and Gwendolyn Parada
- Manzanita Band of Kumeyaay Nation, Angela Elliott Santos
- San Fernando Band of Mission Indians, John Valenzuela
- San Pasqual Band of Mission Indians, Allen E. Lawson
- Sycuan Band of the Kumeyaay Nation, Cody J. Martinez
- Viejas Band of Kumeyaay Indians, Robert Welch

Correspondence to the tribal representatives is included in Appendix C. The City received responses from two tribal representatives contacted regarding the Specific Plan Project. Mr. Ray Teran of the Viejas Band of Kumeyaay Indians identified that the Specific Plan area “has little cultural significance or ties to Viejas.” The City received a request for consultation from Chairman Andrew Salas of the Gabrieleño Band of Mission Indians – Kizh Nation.¹

With respect to AB 52, in compliance with PRC Section 21080.3.1(b), the City has provided formal notification to California Native American tribal representatives that have previously requested notification from the City regarding projects within the geographic area traditionally and culturally affiliated with the tribe. Native American groups may have knowledge about cultural resources in the area and may have concerns about adverse effects from development on tribal cultural resources as defined in PRC Section 21074. The City contacted the following tribal representatives (Appendix C).

- Gabrieleño Band of Mission Indians – Kizh Nation, Andrew Salas
- Juaneño Band of Mission Indians – Acjachemen Nation, Joyce Stanfield Perry
- Soboba Band of Luiseno Indians, Joseph Ontiveros
- Torres Martinez Desert Cahuilla Indians, Michael Mirelez
- Gabrieleño/Tongva San Gabriel Band of Mission Indians San Gabriel Band of Mission Indians, Anthony Morales

While the properties within the Specific Plan area have been extensively altered by prior ground disturbance and development, there is the potential for Specific Plan implementation to affect previously unidentified tribal cultural resources. Construction activities associated with future development projects could include excavation and grading. MM 4.3-1 has been identified to mitigate this potential impact to

¹ As of publication of the Draft EIR, no response has been received by the City regarding initiating consultation.

archaeological resources. Compliance with MM 4.3-1 would mitigate potential impacts to tribal cultural resources to a less than significant level.

Impact Summary: **Threshold 4.3.5: *Less Than Significant With Mitigation.*** Implementation of the Red Hill Avenue Specific Plan would potentially have direct impacts on tribal cultural resources. This impact would be mitigated to a level considered less than significant with implementation of MM 4.3-1.

4.3.5 CUMULATIVE IMPACTS

Future development projects in the Specific Plan area may potentially impact previously unknown historic, archaeological, and/or paleontological resources. It is possible that cumulative development could result in the adverse modification or damage to historic, archaeological and/or paleontological resources. Potential cultural resource impacts associated with the development of individual projects within the Specific Plan would be site specific. All new development would be required to comply with existing Federal, State, and local regulations concerning the protection of historic, archaeological, and paleontological resources on a project-by-project basis. Further, each development proposal received by the City is required to undergo environmental review. If there is a potential for significant impacts on cultural or paleontological resources, an investigation will be required to determine the nature and extent of the resources and identify appropriate mitigation measures.

Neither the Specific Plan nor cumulative development in accordance with the City's General Plan is expected to result in significant impacts to cultural or paleontological resources, provided site-specific surveys and test and evaluation excavations are conducted, as needed, to determine whether the resources are unique archaeological resources or historical resources, and appropriate measures are implemented prior to grading. Implementation of the Mitigation Program would reduce cumulative impacts to a level of less than significant.

4.3.6 MITIGATION PROGRAM

Standard Conditions

SC 4.3-1 California Health and Safety Code Section 7050.5, CEQA Section 15064.5, and Public Resources Code Section 5097.98 mandate the process to be followed in the event of an accidental discovery of any human remains in a location other than a dedicated cemetery. California Health and Safety Code Section 7050.5 requires that in the event that human remains are discovered within the Specific Plan area, disturbance of the site shall be halted until the coroner has conducted an investigation into the circumstances, manner and cause of death, and the recommendations concerning the treatment and disposition of the human remains have been made to the person responsible for the excavation, or to his or her authorized representative, in the manner provided in Section 5097.98 of the Public Resources Code. If the coroner determines that the remains are not subject to his or her authority and if the coroner recognizes or has reason to believe the human remains to be those of a Native American, he or she shall contact, by telephone within 24 hours, the Native American Heritage Commission.

Mitigation Measures

MM 4.3-1 The State CEQA Guidelines (14 CCR §15126.4[b][3]) direct public agencies, wherever feasible, to avoid damaging historical resources of an archaeological nature, preferably by preserving the resource(s) in place. Preservation in place options suggested by the State CEQA Guidelines include (1) planning construction to avoid an archaeological site; (2) incorporating the site into open space; (3) capping the site with a chemically stable soil; and/or (4) deeding the site into a permanent conservation easement. Prior to issuance of any grading or building permits and/or action that would permit project site disturbance (whichever occurs first) for any development projects within the Red Hill Avenue Specific Plan area, the applicant shall provide a letter to the City of Tustin Community Development Department, or designee, from a qualified professional archeologist meeting the Secretary of Interior's Professional Qualifications for Archaeology as defined at 36 CFR Part 61, Appendix A stating that the applicant has retained this individual and that the archeologist shall provide on-call services in the event archeological resources are discovered. The archeologist shall be present at the pre-grading conference to establish procedures for archeological resource surveillance. If unknown cultural resources are discovered during the development of any project within the Specific Plan area, all activity within 50 feet of the area of discovery shall cease and the City shall be immediately notified. The archeologist shall be contacted to flag the area in the field and determine if the archaeological deposits meet the CEQA definition of historical (State CEQA Guidelines § 15064.5(a)) and/or unique archaeological resource (Public Resources Code [PRC] § 21083.2(g)).

If the find is considered a "resource" the archeologist shall pursue either protection in place or recovery, salvage, and treatment of the deposits. Recovery, salvage and treatment protocols shall be developed in accordance with applicable provisions of PRC Section 21083.2 and State CEQA Guidelines Sections 15064.5 and 15126.4. If unique archaeological resources cannot be preserved in place or left in an undisturbed state, recovery, salvage, and treatment shall be required at the applicant's expense. All recovered and salvaged resources shall be prepared to the point of identification and permanent preservation by the archeologist. Resources shall be identified and curated into an established accredited professional repository. The archeologist shall have a repository agreement in hand prior to initiating recovery of the resource. Excavation as a treatment option will be restricted to those parts of the unique archaeological resource that would be damaged or destroyed by Specific Plan implementation.

MM 4.3-2 Prior to issuance of any grading or building permits for any development projects under the Red Hill Avenue Specific Plan, the applicant shall provide a letter to the City of Tustin Community Development Department, or designee, from a paleontologist selected from the roll of qualified paleontologists maintained by the County of Orange, stating that the applicant has retained this individual and that the paleontologist shall provide on-call services in the event resources are discovered. The paleontologist shall be present at the pre-grading conference to establish procedures for paleontological resource surveillance. If paleontological resources are discovered during of any development project within the Red Hill Avenue Specific Plan area, ground-disturbing activity within 50 feet of the area of the discovery shall cease.

If the find is determined by paleontologists to require further treatment, the area of discovery will be protected from disturbance while qualified paleontologists and appropriate officials, in consultation with a recognized museum repository (e.g., National History Museum of Los Angeles County), determine an appropriate treatment plan.

4.3.7 LEVEL OF SIGNIFICANCE AFTER MITIGATION

With implementation of the Mitigation Program set forth in this Program EIR, potential impacts to cultural resources would be reduced to a level considered less than significant.

4.4 Geology and Soils

This Section describes the existing geology, soils, and seismicity setting and potential effects from implementation of the Specific Plan Project. The analysis of this Section is based on the City of Tustin General Plan and Tustin City Code and applicable information from the California Department of Conservation and California Geological Survey.

4.4.1 REGULATORY SETTING

Geologic resources and geotechnical hazards are governed primarily by local jurisdictions. The conservation elements and seismic safety elements of city and county general plans contain policies for the protection of geologic features and avoidance of hazards. In addition, project proponents must comply with other applicable State and local applicable statutes, regulations, and policies. Relevant and potentially relevant statutes, regulations, and policies are discussed below.

Federal

International Building Code

The International Building Code (IBC) is the National model building code providing standardized requirements for construction. The IBC replaced earlier regional building codes (including the Uniform Building Code) in 2000 and established consistent construction guidelines for the nation. In 2006, the IBC was incorporated into the 2007 California Building Code (CBC) and currently applies to all structures being constructed in California. The 2015 IBC is the most recent addition of the IBC. The National model codes are therefore incorporated by reference into the building codes of local municipalities, such as the CBC discussed below.

Earthquake Hazards Reduction Act

The Earthquake Hazards Reduction Act of 1977 established the National Earthquake Hazards Reduction Program. Under the Program, four Federal agencies have responsibility for long-term earthquake risk reduction: the U.S. Geological Survey (USGS), the National Science Foundation, the Federal Emergency Management Agency, and the National Institute of Standards and Technology. The Program's mission includes improved understanding, characterization, and prediction of hazards and vulnerability; improvements of building codes and land use practices; risk reduction through post-earthquake investigation and education; development and improvement of design and construction techniques; improvement of mitigation capacity; and accelerated application of research results.

State of California

The Alquist-Priolo Earthquake Fault Zoning Act of 1972

The Alquist-Priolo Earthquake Fault Zoning Act (Alquist-Priolo Act) was passed in 1972 to regulate development and construction of buildings intended for human occupancy to avoid the hazard of surface fault rupture. Under the Alquist-Priolo Act, the California State Geologist identifies areas that are at risk of surface fault rupture. The primary purpose of the Alquist-Priolo Act is to prevent the construction of buildings used for human occupancy on the surface trace of active faults. An active fault is defined by the State Mining and Geology Board as one which has "had surface displacement within Holocene time (about

the last 11,000 years)." The Department of Conservation, California Geological Survey (CGS), previously known as the California Division of Mines and Geology, has compiled Special Publication 42 – Fault Rupture Hazard Zones (CGS, 2007) that delineates and defines active fault traces and zones that require specific studies to address rupture hazards with respect to "structure[s] for human occupancy." Any project that involves the construction of buildings or structures for human occupancy is subject to the Alquist-Priolo Act, and any structures for human occupancy must be located at least 50 feet from any active fault.

Seismic Hazards Mapping Act

In accordance with Public Resources Code, Chapter 7.8, Division 2, the CGS, is directed to delineate Seismic Hazard Zones through the Seismic Hazards Zonation Program. The purpose of the Seismic Hazards Mapping Act is to reduce the threat to public health and safety and to minimize the loss of life and property by identifying and mitigating seismic hazards, such as those associated with strong ground shaking, liquefaction, landslides, other ground failures, or other hazards caused by earthquakes. Cities, counties, and State agencies are directed to use seismic hazard zone maps developed by CGS in their land-use planning and permitting processes. In accordance with the Seismic Hazards Mapping Act, site-specific geotechnical investigations must be performed prior to permitting most urban development projects within seismic hazard zones.

California Building Code

The California Building Code (also known as the "California Building Standards Code" or CBC) is promulgated under the *California Code of Regulations* (CCR), Title 24 (Parts 1 through 12) and is administered by the California Building Standards Commission. Local agencies must ensure the development complies with the guidelines contained beyond the CBC. Cities and counties have the ability to adopt additional building standards beyond the CBC. CBC Part 2, named in the California Building Code is based upon the 2012 International Building Code with necessary California amendments, and Part 11, named the California Green Building Standards Code, and is also called the CalGreen Code. The CBC is updated every three years: the most recent version was adopted in 2016 by the California Building Standards Commission and took effect January 1, 2017.

Regional and Local

The Specific Plan's consistency with applicable General Plan safety goals and policies is provided in Section 4.8, *Land Use and Planning*.

City of Tustin General Plan Conservation/Open Space/Recreation Element

The Conservation/Open Space/Recreation Element of the *City of Tustin General Plan* deals primarily with the preservation of natural resources, such as water, soils, minerals, and animal life.

City of Tustin General Plan Public Safety Element

The purpose of the Public Safety Element is to identify and address those natural or man-made characteristics which exist in or near the City which represent a potential danger to the safety of the citizens, sites, structures, public facilities, and infrastructure. The Element establishes policies to minimize the danger to residents, workers, and visitors and identifies actions needed to deal with crisis situations.

The Public Safety Element specifically addresses flooding; seismically induced conditions including surface rupture, ground shaking, ground failure, and seiche; slope instability leading to mudslides and landslides; subsidence and other geologic hazards; wildland/urban interface fires; and evacuation routes.

Tustin City Code

The City of Tustin adopted the Building and Construction Codes listed in Article 8, Chapter 1, Section 8100 (Building and Construction Codes Adopted by Reference), of the Tustin City Code. Article 8, Chapter 9 (Grading and Excavation) regulates grading, drainage, cut and fills, and hillside construction. Grading permits are required for all development sites requiring excavation, fills, and paving. Building permits are issued for a site graded under a valid precise grading permit upon completion and approval of rough grade inspection as specified in the Grading Manual, site inspection by the Building Official.

4.4.2 ENVIRONMENTAL SETTING

Regional Geologic Setting

Regionally, the Specific Plan area lies within the Peninsular Ranges Geomorphic Province of Southern California. This province consists of a series of ranges separated by northwest trending valley, sub-parallel to branches of the San Andreas Fault. The Peninsular Ranges Geomorphic Province, one of the largest geomorphic units in western North American, extends from the Transverse Ranges Geomorphic Province and the Los Angeles Basin, south to Baja California. It is bound on the west by the Pacific Ocean, on the south by the Gulf of California, and on the east by Colorado Desert Province. The Peninsular Ranges are essentially a series of northwest-southeast oriented fault blocks. Major fault zones and subordinate fault zones found in the Peninsular Ranges Province typically trend in a northwest-southeast direction.

Local Geologic Setting

Most the City's lower lying areas are composed of Quaternary deposits of younger alluvium and colluvium. Tustin's northern area is underlain by Quaternary non-marine terrace deposits and Tertiary deposits including Vaqueros, Sespe, Topanga, Santiago, and Puente formations as well as El Modena volcanics.

Most of the City is level or nearly level, although slopes in the northern parts of the City can exceed 50 percent. Several hundred acres in the northern section of the East Tustin area are hillside areas. The hills extend west into unincorporated North Tustin. The highest elevation is approximately 715 feet above msl. The lowest is approximately 35 feet above msl along the Peters Canyon Channel in the southeast corner of the City.

Specific Plan Area Soils

According to Natural Resources Conservation Science Web Soil Survey, the Specific Plan area includes following soil types (USDA, 2016):

- Mocho Loam, 0 to 2 percent slopes: Mocho Loam soils derived from sedimentary rocks. The soils are well-drained soils with low runoff potential. Frequency of flooding is also low.
- Metz Loamy Sand: Metz Loamy Sand are excessively drained and have low flooding and flooding potential. These soils can transmit water up to 1.98 inches per hour.

- Chino Silty Clay Loam, Drained: Chino Silty Clay Loams are poorly drained and have low runoff potential. Flooding frequency is rare and the soils also transmit water relatively quickly, up to 0.60 inches per hour.

Faulting and Seismicity

Faults, Seismicity, and Seismic Hazards

A fault is a fracture in the crust of the earth along which land on one side has moved relative to land on the other side. Most faults are the result of repeated displacement over a long period of time. A fault trace is the line on the earth's surface that defines the fault. As previously noted, an active fault is defined as one that has had "surface displacement within Holocene times (about the last 11,000 years)." This definition does not mean that faults that lack evidence of surface displacement within Holocene times are necessarily inactive. A fault may be presumed to be inactive based on satisfactory geologic evidence; however, the evidence necessary to prove inactivity is sometimes difficult to obtain and locally may not exist.

Strong Ground Shaking

As with most of California, the Specific Plan area is in a seismically active area and could experience seismic shaking during earthquakes generated by active faults. Strong ground shaking from an earthquake can result in damage associated with landslides, ground lurching, structural damage, and liquefaction. Major faults which have caused earthquakes and those with the potential to cause earthquakes and ground shaking include the Newport-Inglewood Fault Zone, Whittier Fault Zone, Norwalk and El Modena Fault Zone, San Andreas Fault, and the San Jacinto Fault Zone. Potential regional sources for major ground-shaking hazards include the San Andreas, San Jacinto, and Elsinore fault zones.

Liquefaction

Liquefaction occurs when saturated, loose materials (e.g., sand or silty sand) are weakened and transformed from a solid to a near-liquid state because of increased pore water pressure. The increase in pressure is caused by strong ground motion from an earthquake. A site's susceptibility to liquefaction is a function of depth, density, groundwater level, and magnitude of an earthquake. For liquefaction to occur, the soil must be saturated (i.e., shallow groundwater) and relatively loose. The surface effects of liquefaction can cause structural distress or failure due to ground settlement, lurching, loss of bearing capacity in the foundation soils, and the buoyant rise of buried structures or utilities, and development of lateral spreads.

Prior to an earthquake, pore water is typically low; however, earthquake motion can cause the pore water pressure to increase to the point where the soil particles can readily move with respect to each other. When liquefaction occurs; the strength in soil decreases and the ability of a soil deposit to support structural loads are reduced. Based on a review of the Seismic Hazard Zones Map for the local area, the Specific Plan area is susceptible to liquefaction (Department of Conservation [DOC], 2001). According to the *City of Tustin General Plan EIR*, the area south of I-5, which includes a portion of the Specific Plan area, has been identified as being the most susceptible to liquefaction. The area north of I-5, but south of the foothills, which includes a portion of the Specific Plan area, is identified as being moderately susceptible.

Lateral Spreading

Lateral spreading is the finite, horizontal movement of material associated with pore pressure build-up or liquefaction. This process can occur in a shallow underlying deposit during an earthquake in areas susceptible to liquefaction. In order to occur, lateral spreading requires the existence of a continuous and laterally unconstrained liquefiable zone. Lateral spreading can occur on gently sloping and on flat ground close to rivers and lakes. The Specific Plan area is located at an elevation of approximately 100 feet above msl, on relatively level ground. There are no lakes or rivers in the immediate area.

Subsidence

The subsidence of soils is characterized by sinking or descending soils that occur as the result of a heavy load being placed on underlying sediments and may be triggered by seismic events. Seismically induced settlement is dependent on the relative density of the subsurface soils. Settlements from collapsible soils can be relatively large and damaging to improvements.

Landslides

Regional seismic hazard maps for the Specific Plan area indicate that the area is not considered susceptible to land sliding and/or seismic induced settlement. Additionally, no historic landslides were mapped within or adjacent to the Specific Plan area.

Other Geologic Hazards

Expansion

Soils that expand and contract in volume (“shrink-swell” pattern) are considered to be expansive and may cause damage to aboveground infrastructure as a result of density changes that shift overlying materials. Fine-grain clay sediments are most likely to exhibit shrink-swell patterns in response to changing moisture levels.

Erosion

Soil erosion occurs when surface materials are worn away from the earth’s surface due to land disturbance and/or natural factors such as wind and precipitation. The potential for soil erosion is determined by characteristics including texture and content, surface roughness, vegetation cover, and slope grade and length. Wind erosion typically occurs when fine-grained non-cohesive soils are exposed to high-velocity winds, while water erosion tends to occur when loose soils on moderate to steep slopes are exposed to high-intensity storm events.

4.4.3 THRESHOLDS OF SIGNIFICANCE

The following significance criteria are from CEQA Guidelines Appendix G. The Specific Plan Project would result in a significant impact related to geology and soils if it would:

- Threshold 4.4-1** Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death from the rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued

by the State Geologist for the area or based on other substantial evidence of a known fault.

Threshold 4.4-2 Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking.

Threshold 4.4-3 Expose people or structures to potentially substantial adverse effects, including the risk of loss, injury, or death from seismic-related ground failure, involving liquefaction.

Threshold 4.4-4 Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death from landslides.

Threshold 4.4-5 Result in substantial soil erosion or the loss of top soil.

Threshold 4.4-6 Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the Project, and potentially result in on-site or off-site landslide, lateral spreading, subsidence, liquefaction or collapse.

Threshold 4.4-7 Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property.

As addressed in Section 1.5, *Summary of Effects with No Impact*, the City has determined that the Specific Plan would not have a significant impact on the following threshold and no further analysis is required in the Program EIR:

- Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater.

4.4.4 ENVIRONMENTAL IMPACTS

Threshold 4.4-1: **Would implementation of the Specific Plan expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death from rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?**

The Alquist-Priolo Earthquake Fault Zoning Act was passed to prevent construction of buildings used for human occupancy on the surface of active faults, in order to minimize the hazard of surface rupture of a fault to people and buildings. Before cities and counties can permit development within Alquist-Priolo Earthquake Fault Zones, geologic investigations are required to show that sites are not threatened by surface rupture from future earthquakes. The nearest active fault to the Specific Plan area is the Newport-Inglewood Fault, which is located approximately ten miles to the southwest (CGS, 2010). The Specific Plan area is not located within an Alquist-Priolo Earthquake Fault Zone and no known active faults cross the area. No known impacts would occur.

Impact Summary: **Threshold 4.4-1: *No Impact.*** The Project would not result in any significant impacts in relation to a rupture of a known earthquake fault as delineated on the most recent Alquist-Priolo Earthquake Fault Map.

Threshold 4.4-2: **Would implementation of the Specific Plan expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking?**

The Specific Plan area lies within a region of active faulting and seismicity in Southern California. Potential regional sources for major ground-shaking hazards include the San Andreas, San Jacinto, and Elsinore fault zones. While such shaking would be less severe from an earthquake that originates at a greater distance from the Specific Plan area, the effects could potentially be damaging to buildings and supporting infrastructure within the Specific Plan area. It is likely that the Specific Plan area would be subject to a moderate or larger earthquake occurring close enough to produce strong ground shaking at the Specific Plan area.

Future development within the Specific Plan area would be required to conform to the seismic design requirements of the most current CBC (or applicable adopted code at the time of plan submittal or grading and building permit issuance for construction) which would reduce anticipated impacts related to the proximity of earthquake faults by requiring structures to be built to withstand seismic ground shaking. Additionally, projects would need to comply with the Tustin City Code, Article 8, Chapter 1, and Chapter 9 (Grading and Excavation) which regulates grading, drainage, and cuts and fills. Grading permits are required for all development sites requiring excavation, fills, and paving. Building permits are issued for a site graded under a valid precise grading permit.

State laws and local ordinances require that, prior to construction, potential seismic hazards be identified and mitigated, as needed, to protect public health and safety from substantial risks through appropriate engineering practices. Compliance with SCs 4.4-1 and 4.4-2 would ensure that impacts related to strong seismic ground shaking remain at a less than significant level. SC 4.4-1 identifies that the issuance of grading permits is subject to approval of geological and soils engineering reports. SC 4.4-2 requires geotechnical evaluation to identify appropriate engineering design measures to reduce potential impacts relative to strong seismic ground shaking to less than significant.

Impact Summary: **Threshold 4.4.2: *Less Than Significant.*** The Specific Plan area is in a seismically active area and strong ground shaking due to regional seismic activity is anticipated. Structures are subject to seismic design parameters that would appropriately address seismic building standards. Compliance with SC 4.4-1 and SC 4.4-2 would preclude significant impacts associated with seismic shaking.

Threshold 4.4-3: **Would implementation of the Specific Plan expose people or structures to potentially substantial adverse effects including the risk of loss, injury, or death from seismic-related ground failure, including liquefaction?**

Most of the Specific Plan area is mapped as a Liquefaction Zone (CGS, 2001). However, as described above, site-specific geotechnical investigations would be required for future development projects.

Remedial grading including the replacement of unsuitable soil materials with suitable engineered fill materials can preclude liquefaction impacts.

Impact Summary: **Threshold 4.4-3: *Less Than Significant*.** The Specific Plan area is in a seismically active area and considered susceptible to seismic-induced liquefaction. Development projects would be required to comply with the provisions of SCs 4.4-1 and 4.4-2. Compliance would preclude significant impacts associated with liquefaction.

Threshold 4.4-4: Would implementation of the Specific Plan expose people or structures to potential substantial adverse effects including the risk of loss, injury, or death from landslides?

According to the Seismic Hazard Zones Map for the Tustin Quadrangle, the Specific Plan area is not within an Earthquake-Induced Landslide Zone (CGS, 2001). The ground surface of the Specific Plan area and surrounding area is relatively flat. Therefore, implementation of the Specific Plan would not expose people or structures to potential substantial adverse effects involving landslides.

Impact Summary: **Threshold 4.4-4: *No Impact*.** The Specific Plan area is relatively level and landslides are not anticipated. No impacts would occur in this regard.

Threshold 4.4-5: Would the Specific Plan Project result in substantial soil erosion or the loss of topsoil?

Construction and long-term operations of future development projects within the Specific Plan area could potentially result in erosion. For a discussion of sedimentation, please refer to Section 4.7, *Hydrology and Water Quality*.

Construction

Construction activities can loosen on-site soils or remove stabilizing vegetation and expose areas of loose soil. These areas, if not properly stabilized during construction could be subject to increased soil loss and erosion by wind and stormwater runoff. Where future development projects would disturb one or more acres of soil, or where a project would disturb less than one acre but is a part of a larger development plan that totals one or more acres, the National Pollutant Discharge Elimination System (NPDES) permitting process requires coverage under the General Permit for Discharges of Storm Water Associated with Construction Activity. The Construction General Permit requires the development of a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP would include erosion-control and sediment-control Best Management Practices (BMPs) to be implemented throughout the construction process which would prevent or reduce erosion. Erosion-control BMPs are designed to prevent erosion, whereas sediment controls are designed to trap sediment once it has been mobilized. For future development projects that would disturb less than one acre, the City requires an Erosion and Sediment Control Plan be prepared. Upon completion of projects, sites would be fully developed and landscaped. The potential for soil erosion or loss would be extremely minimal. These requirements would ensure that potential impacts are less than significant. Projects would be required to comply with SC 4.4-3. Please refer to Section 4.7, *Hydrology and Water Quality*.

Long-Term Operations

Where future projects occur on currently undeveloped sites or sites with larger areas of pervious surfaces, these project sites would increase the amount of impervious surfaces within the Specific Plan area. Where sites are currently developed, the amount of pervious surfaces would be expected to be similar or greater, the latter where more landscaping or recreational areas are provided. Pervious areas would be required to be landscaped to prevent soil erosion. No significant impacts are anticipated.

Impact Summary: **Threshold 4.4-5: *Less Than Significant.*** Grading activities would increase the potential for soil erosion. Projects would be required to comply with SC 4.4-3. As described in Section 4.7, *Hydrology and Water Quality*, with the incorporation of construction BMPs (SC 4.7-1 and SC 4.7-2), impacts on soil erosion and soil loss would be less than significant. Upon completion of projects, soil erosion and the loss of soil would be minimized by factors including but not limited to the use of engineered grading, surface and subsurface drainage improvements, and landscaping.

Threshold 4.4-6: **Would implementation of the Specific Plan Project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the Specific Plan, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?**

As discussed under Impact 4.4-4, there no risk of landslides in the Specific Plan area. Lateral spreading typically occurs adjacent to slopes and creek channels. Considering the general topography of the terrain, the potential for lateral spreading to occur in the Specific Plan area would be low. Future development projects in the Specific Plan area would be required to evaluate geological conditions as set forth in SC 4.4-1 and SC 4.4-2. Compliance would preclude potentially significant impacts.

Ground subsidence is the lowering of the ground surface over a wide area, most often due to withdrawal of water or soil. Subsidence resulting from groundwater withdrawal has not been reported in the region (HNTB, 2001). Groundwater levels in the Orange County Water District’s service area, which includes the Specific Plan area, are managed to avoid overdraft of the underlying groundwater basin (OCWD, 2015). Impacts from ground subsidence would be less than significant.

As previously discussed, the Geologic Hazards Map identifies the Specific Plan area as an area subject to liquefaction. SC 4.4-1 and SC 4.4-2 require future development projects to prepare a geotechnical evaluation and mitigate, if necessary, any project-specific impacts. Compliance with required geotechnical investigations and engineering techniques would preclude significant impacts related to liquefaction.

Impact Summary: **Threshold 4.4-6: *Less Than Significant.*** The Specific Plan area is in a seismically active area and considered susceptible to limited amounts of seismic-induced liquefaction. Impacts associated with seismic shaking would be less than significant with implementation of SC 4.4-1 and SC 4.4-2. The potential for landslides, lateral spreading, and subsidence are low and considered less than significant.

Threshold 4.4-7: Would the Specific Plan be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?

Soils that expand and contract in volume (“shrink-swell” pattern) are considered to be expansive and may cause damage to aboveground infrastructure as a result of density changes that shift overlying materials. Soils testing to determine expansive characteristics is required for new development pursuant to the CBC.

Where expansive soils are present, remedial grading including the replacement of unsuitable soil materials with suitable engineered fill materials is anticipated to be required. The City’s continued compliance with State and local regulations, inclusive of SC 4.4-1 and SC 4.4-2, would preclude potentially significant impacts.

Impact Summary: **Threshold 4.4-7: *Less Than Significant.*** On-site soils within the Specific Plan area would be evaluated on a project-by-project basis. Compliance with SCs 4.4-1 and 4.4-2 would preclude potential impacts associated with expansive soils.

4.4.5 CUMULATIVE IMPACTS

Southern California is a seismically active region with a range of geologic and soil conditions. These conditions can vary widely within a limited geographical area due to factors, including differences in landforms and proximity to fault zones, among others. Therefore, while geotechnical impacts may be associated with the cumulative development, by the very nature of the impacts (i.e., landslides and expansive and compressible soils), the constraints are typically site specific and there is typically little, if any, cumulative relationship between the development of a proposed project and development within a larger cumulative area, such as citywide development. Additionally, while seismic conditions are regional in nature, seismic impacts on a given project site are site specific. For example, development within the Specific Plan area or surrounding area would not alter geologic events or soil features/characteristics (such as ground-shaking, seismic intensity, or soil expansion). Therefore, the Project would not affect the level of intensity at which a seismic event on an adjacent site is experienced. However, ongoing development in the Specific Plan area and future development in the City and region may expose more persons to seismic hazards.

In accordance with the thresholds of significance, impacts associated with seismic events and hazards would be considered significant if the effects of an earthquake on a property could not be mitigated by an engineered solution. The significance criteria do not require elimination of the potential for structural damage from seismic hazards. Instead, the criteria require an evaluation of whether the seismic conditions on a site can be overcome through engineering design solutions that would reduce to less than significant the substantial risk of exposing people or structures to loss, injury, or death.

State and local regulatory code requirements and their specific mandatory performance standards are designed to ensure the integrity of structures during maximum ground shaking and seismic events. Future development within the Specific Plan area would be constructed in compliance with all applicable codes and in accordance with the Mitigation Program set forth in this Program EIR, which are designed to reduce the exposure of people or structures to substantial risk of loss, injury, or death related to geological

conditions or seismic events. Therefore, Project impacts would be mitigated to a less than significant level. Current building codes and regulations would apply to all present and reasonably foreseeable future projects, which could also be subject to even more rigorous requirements. Therefore, the Specific Plan Project—in combination with past, present, and reasonably foreseeable future projects—would not result in a cumulatively significant impact by exposing people or structures to risks related to geologic hazards, soils, or seismic conditions.

The Specific Plan's compliance with the California Building Code and City building code requirements would ensure that geology and soil impacts would be less than significant. As such, potential impacts would be reduced to a less than significant level with implementation of applicable standard engineering practices and construction requirements. The Project's incremental contribution to cumulative geotechnical and seismic impacts would be less than significant. None of the Project characteristics would affect or influence the geotechnical hazards for off-site development. Similarly, the cumulative projects, which would be required to comply with the California Building Code and City building code requirements are not expected to have an adverse impact on the Specific Plan. For these reasons, no significant cumulative geotechnical impacts would occur.

4.4.6 MITIGATION PROGRAM

Standard Conditions

Please refer to Section 4.7, *Hydrology and Water Quality*, which identifies NPDES permitting requirements.

SC 4.4-1 Projects are required to comply with Tustin City Code, Chapter 9, Grading and Excavation. Prior to the issuance of any grading permits, the grading plans shall be accompanied by geological and soils engineering reports and shall incorporate all information as required by the City. Grading plans shall indicate all areas of grading. Grading plans shall provide for temporary erosion control on all graded sites scheduled to remain unimproved for more than 30 days.

SC 4.4-2 A specific geotechnical survey shall be prepared by a certified geotechnical engineer to confirm/refine engineering design parameters regarding site preparation, grading, and foundation design, to assure design criteria are responsive to specific development site soils and potential effects of differential settlements resulting from ground shaking, as well as effects of subsidence, lateral spreading, and collapse potential. All geotechnical recommendations shall be noted on individual site development plans and implemented prior to issuance of an occupancy permit.

Project-specific geotechnical measures shall be developed, as needed, based on the design-level geotechnical report and depicted on plans prepared by the geotechnical engineer of record or on plan sheets included within final grading plans, and subject to the approval by the City of Tustin Building Division and/or the Public Works Department.

SC 4.4-3 Future developments shall limit grading to the minimum area necessary for construction. Final grading plans shall include best management practices (BMPs) to limit on-site and

off-site erosion and a water plan to treat disturbed areas during construction and reduce dust. The plans shall be submitted to the City of Tustin Building Division and/or the Public Works Department for review and approval prior to the issuance of a grading permit.

Mitigation Measures

No mitigation is required.

4.4.7 LEVEL OF SIGNIFICANCE AFTER MITIGATION PROGRAM

With implementation of the Mitigation Program, no significant impacts are anticipated.

4.5 Greenhouse Gas Emissions

This Section evaluates the greenhouse gas (GHG) emissions impacts of the Specific Plan and the consistency of the Specific Plan with relevant plans and programs that are applicable to the area as mandated by Senate Bill (SB) 97. SB 97 (2007) acknowledged that climate change was an environmental issue that required analysis under CEQA. Technical data supporting the air quality analysis is included as Appendix B to this Program EIR.

4.5.1 REGULATORY SETTING

Federal

Federal Clean Air Act

The U.S. EPA is charged with implementing National air quality programs. U.S. EPA's air quality mandates are drawn primarily from the Federal Clean Air Act. The Federal Clean Air Act was passed in 1963 by the U.S. Congress and has been amended several times. In 1977, Congress added several provisions, including nonattainment requirements for areas not meeting National Ambient Air Quality Standards as well as the Prevention of Significant Deterioration program. The 1990 amendments represent a series of Federal efforts to regulate the protection of air quality in the United States. The Act allows states to adopt more stringent standards or to include other pollution species.

The U.S. Supreme Court in *Massachusetts et al. v. Environmental Protection Agency*, 549 U.S. 497 (2007), held that the U.S. EPA has the authority to regulate motor vehicle GHG emissions under the Federal Clean Air Act. The Supreme Court held that the U.S. EPA Administrator must determine whether emissions of GHGs from new motor vehicles cause or contribute to air pollution which may reasonably be anticipated to endanger public health or welfare, or whether the science is too uncertain to make a reasoned decision.

The U.S. EPA publishes an annual GHG inventory (Inventory of U.S. Greenhouse Gas Emissions and Sinks),¹ which tracks the National trend in GHG emissions and removals back to 1990. The report contains total National emissions by source, economic sector, and greenhouse gases. The U.S. EPA uses National energy data, data on National agricultural activities, and other National statistics to provide a comprehensive accounting of total GHG emissions for all man-made sources in the country. It also collects GHG emissions data from individual facilities and suppliers of certain fossil fuels and industrial gases through the Greenhouse Gas Reporting Program.

In May 2010, the U.S. EPA and the Department of Transportation's National Highway Traffic Safety Administration published the final rule-making for a National program that would reduce GHG emissions and improve fuel economy for new cars and trucks sold in the United States. The standards for the first phase of this National program apply to passenger cars, light-duty trucks, and medium-duty passenger vehicles, covering model years 2012 through 2016. They require these vehicles to meet an estimated combined average emissions level of 250 grams of carbon dioxide (CO₂) per mile, equivalent to 35.5 miles per gallon (mpg), if the automobile industry were to meet this CO₂ level solely through fuel economy

¹ A greenhouse gas "sink" is a process, activity, or mechanism that absorbs more greenhouse gases than it releases.

improvements. Together, these standards are projected to cut GHG emissions by an estimated 960 million metric tons and 1.8 billion barrels of oil over the lifetime of the vehicles sold under the program.

In October 2012, the U.S. EPA and Department of Transportation's National Highway Traffic Safety Administration published the final rule-making for the second phase of the National program, which covers model years 2017 through 2025. The final standards are projected to result in an average industry fleetwide level of 163 grams of CO₂ per mile, equivalent to 54.5 mpg, if the automobile industry were to meet this CO₂ level solely through fuel economy improvements. The U.S. EPA does not regulate residential sources of GHG emissions.

Executive Order 13963

Executive Order (EO) 13693, Planning for Federal Sustainability in the Next Decade, signed in 2015, seeks to maintain Federal leadership in sustainability and GHG emission reductions. Its goal is to reduce agency Scope 1 and 2 GHG emissions² by at least 40 percent by 2025, foster innovation, reduce spending, and strengthen communities through increased efficiency and improved environmental performance. Sustainability goals are set for building efficiency and management, energy portfolio, water use efficiency, fleet efficiency, sustainable acquisition and supply chain greenhouse gas management, pollution prevention, and electronic stewardship.

State of California

The CARB is responsible for the coordination and oversight of State and local air pollution control programs in California. Various statewide and local initiatives to reduce California's contribution to GHG emissions have raised awareness about climate change and its potential for severe long-term adverse environmental, social, and economic effects.

Assembly Bill (AB) 1493

AB 1493 (Pavley) of 2002 (Health and Safety Code Sections 42823 and 43018.5) requires the CARB to develop and adopt the nation's first GHG emission standards for automobiles. These standards are also known as Pavley I. The California Legislature declared in AB 1493 that global warming is a matter of increasing concern for public health and the environment. It cites several risks that California faces from climate change, including a reduction in the State's water supply, an increase in air pollution caused by higher temperatures, harm to agriculture, an increase in wildfires, damage to the coastline, and economic losses caused by higher food, water, energy, and insurance prices. The bill also notes that technological solutions to reduce GHG emissions would stimulate California's economy and provide jobs. In 2004, the State submitted a request for a waiver from Federal clean air regulations, as the State is authorized to do under the FCAA, to allow California to require reduced tailpipe emissions of CO₂. In late 2007, the U.S. EPA denied California's waiver request and declined to promulgate adequate Federal regulations limiting GHG emissions. In early 2008, the State brought suit against the U.S. EPA related to this denial.

² In GHG inventories, direct emissions are Scope 1; indirect emissions from consumption of purchased electricity, heat or steam are Scope 2; and other indirect emissions (such as extraction and production of purchased materials and fuels, transport in vehicles not controlled by the reporting entity, outsourced activities) are Scope 3.

In January 2009, President Obama instructed the U.S. EPA to reconsider the Bush Administration's denial of California's and 13 other states' requests to implement global warming pollution standards for cars and trucks. In June 2009, the U.S. EPA granted California's waiver request, enabling the State to enforce its GHG emissions standards for new motor vehicles beginning with the current model year. California committed to further strengthening these standards beginning in 2017 to obtain a 45 percent GHG reduction from the 2020 model year vehicles.

Executive Order S-3-05

In 2005, then-Governor Schwarzenegger issued Executive Order (EO) S-3-05, establishing statewide GHG emissions reduction targets. EO S-3-05 provides that by 2010, emissions be reduced to 2000 levels; by 2020, emissions be reduced to 1990 levels; and by 2050, emissions be reduced to 80 percent below 1990 levels (California Environmental Protection Agency [CalEPA], 2006). In response to EO S-3-05, CalEPA created the Climate Action Team (CAT) which published the Climate Action Team Report (the "2006 CAT Report") (CalEPA, 2006). The 2006 CAT Report identified recommended strategies the State could pursue to reduce GHG emissions. They are strategies that could be implemented by State agencies to meet emission reduction targets in EO S-3-05 within the existing authority of the State agencies. The strategies include, but are not limited to, the reduction of passenger and light-duty truck emissions, the reduction of idling times for diesel trucks, an overhaul of shipping technology/infrastructure, increased use of alternative fuels, increased recycling, and landfill methane (CH₄) capture.

Executive Order S-6-06

Executive Order S-6-06, signed on April 25, 2006, established two primary goals related to the use of biofuels within California: by 2010, 20 percent of its biofuels need to be produced within California; increasing to 40 percent by 2020 and 75 percent by 2050; and by 2010, 20 percent of the renewable electricity should be generated from biomass resources within the State, maintaining this level through 2020.

Assembly Bill (AB) 32

AB 32 (Health and Safety Code §§ 38500, 38501, 28510, 38530, 38550, 38560, 38561–38565, 38570, 38571, 38574, 38580, 38590, 38592–38599) requires that statewide GHG emissions be reduced to 1990 levels by the year 2020. The gases that are regulated by AB 32 include carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, nitrogen trifluoride, and sulfur hexafluoride. The reduction to 1990 levels would be accomplished through an enforceable statewide cap on GHG emissions phased in starting in 2012. To effectively implement the cap, AB 32 directs CARB to develop and implement regulations to reduce statewide GHG emissions from stationary sources. AB 32 specifies that regulations adopted in response to AB 1493 should be used to address GHG emissions from vehicles. However, AB 32 also includes language stating that if the AB 1493 regulations cannot be implemented, then CARB should develop new regulations to control vehicle GHG emissions under the authorization of AB 32.

AB 32 requires that CARB adopt a quantified cap on GHG emissions representing 1990 emissions levels and disclose how it arrives at the cap, institute a schedule to meet the emissions cap, and develop tracking, reporting, and enforcement mechanisms to ensure that the State achieves reductions in GHG emissions

necessary to meet the cap. AB 32 also includes guidance to institute emissions reductions in an economically efficient manner and conditions to ensure that businesses and consumers are not unfairly affected by the reductions.

Climate Change Scoping Plan

In October 2008, CARB published its Climate Change Proposed Scoping Plan, which is the State's plan to achieve GHG reductions in California as required by AB 32. The Scoping Plan contains the main strategies California will implement to achieve reduction of 169 million metric tons of CO₂e, or approximately 30 percent from the State's projected 2020 emissions level of 596 MMTCO₂e under a business-as-usual scenario (this is a reduction of 42 MMTCO₂e, or almost 10 percent, from 2002–2004 average emissions). The Scoping Plan also includes CARB-recommended GHG reductions for each emissions sector of the State's GHG inventory. The largest proposed GHG reduction recommendations are from improving emissions standards for light-duty vehicles (estimated reductions of 31.7 MMTCO₂e), implementation of the Low Carbon Fuel Standard (15.0 MMTCO₂e) program, energy efficiency measures in buildings and appliances and the widespread development of combined heat and power systems (26.3 MMTCO₂e), and a renewable portfolio standard for electricity production (21.3 MMTCO₂e). The Scoping Plan identifies the local equivalent of AB 32 targets as a 15 percent reduction below baseline GHG emissions level, with baseline interpreted as GHG emissions levels between 2003 and 2008.

A key component of the Scoping Plan is the Renewable Portfolio Standard, which is intended to increase the percentage of renewables in California's electricity mix to 33 percent by 2020, resulting in a reduction of 21.3 MMTCO₂e. Sources of renewable energy include, but are not limited to, biomass, wind, solar, geothermal, hydroelectric, and anaerobic digestion. Increasing the use of renewables will decrease California's reliance on fossil fuels, thus reducing GHG emissions.

The Scoping Plan states that land use planning and urban growth decisions play important roles in the State's GHG reductions because local governments have primary authority to plan, zone, approve, and permit how land is developed to accommodate population growth and the changing needs of their jurisdictions. Meanwhile, CARB is also developing an additional protocol for community emissions. CARB further acknowledges that decisions on how land is used have large impacts on the GHG emissions that result from the transportation, housing, industry, forestry, water, agriculture, electricity, and natural gas emissions sectors. The Scoping Plan states that the ultimate GHG reduction assignment to local government operations is to be determined. With regard to land use planning, the Scoping Plan expects approximately 5.0 MMTCO₂e will be achieved associated with implementation of SB 375, which is discussed further below. The First Update of the Scoping Plan was approved by the CARB on May 22, 2014. The update defines CARB's climate change priorities for the next five years, and sets the groundwork for each long-term goal set forth in Executive Orders S-3-05 and B-30-15. The update highlights California's progress toward meeting the "near-term" 2020 GHG emission reduction goals defined in the initial Scoping Plan, and evaluates how to align the State's "longer-term" GHG reduction strategies with other State policy priorities in water, waste, natural resources, clean energy, transportation, and land use.

In 2016, the Legislature passed SB 32, which codifies a 2030 GHG emissions reduction target of 40 percent below 1990 levels. With SB 32, the Legislature passed companion legislation, AB 197, which provides

additional direction for developing the Scoping Plan. On December 14, 2017 CARB adopted a second update to the Scoping Plan³. The 2017 Scoping Plan details how the State will reduce GHG emissions to meet the 2030 target set by Executive Order B-30-15 and codified by SB 32. Other objectives listed in the 2017 Scoping plan are to provide direct GHG emissions reductions; support climate investment in disadvantaged communities; and, support the Clean Power Plan and other Federal actions.

Renewables Portfolio Standard (Senate Bill X1-2 & Senate Bill 350)

California's Renewables Portfolio Standard (RPS) requires retail sellers of electric services to increase procurement from eligible renewable energy resources to 33 percent of total retail sales by 2020. The 33 percent standard is consistent with the RPS goal established in the Scoping Plan. The passage of SB 350 in 2015 updates the RPS to require the amount of electricity generated and sold to retail customers per year from eligible renewable energy resources to be increased to 50 percent by December 31, 2030. The bill will make other revisions to the RPS program and to certain other requirements on public utilities and publicly owned electric utilities.

Senate Bill 375

SB 375 took effect in 2008 and provides a new planning process to coordinate land use planning, regional transportation plans, and funding priorities to help California meet the GHG reduction goals established in AB 32. SB 375 requires Metropolitan Planning Organizations (MPO) to incorporate a Sustainable Communities Strategy (SCS) in their regional transportation plans that will achieve GHG emissions reduction targets by reducing vehicle miles traveled (VMT) from light-duty vehicles through the development of more compact, complete, and efficient communities.

CARB adopted per capita reduction targets for each MPO rather than a total magnitude reduction target. The Southern California Association of Government's (SCAG) targets are eight percent per capita reduction from 2005 GHG emission levels by 2020 and a 13 percent per capita reduction from 2005 GHG emission levels by 2035. SB 375 requires CARB to periodically update the targets, no later than every eight years. CARB is in the process of updating targets, with the intent to make them effective in 2018. SCSs adopted in 2018 would be subject to the updated targets.

Senate Bill (SB) 2X

In April 2011, Governor Brown signed SB 2X requiring California to generate 33 percent of its electricity from renewable energy by 2020.

Senate Bill 1368

SB 1368 (codified at Public Utilities Code Chapter 3) is the companion bill of AB 32. SB 1368 required the California Public Utilities Commission to establish a GHG emissions performance standard for baseload generation from investor-owned utilities by February 1, 2007. The bill also required the California Energy Commission (CEC) to establish a similar standard for local publicly owned utilities by June 30, 2007. These standards cannot exceed the GHG emission rate from a baseload combined-cycle natural gas-fired plant. The legislation further requires that all electricity provided to California, including imported electricity,

³ California Air Resources Board, *California's 2017 Climate Change Scoping Plan*, https://www.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf. Accessed January 12, 2018.

must be generated from plants that meet the standards set by the California Public Utilities Commission and CEC.

Senate Bill 32

In September 2016, SB 32 was signed into law, formally codifying the 40 percent GHG emission reduction target adopted by Governor Brown in April 2015 through an executive order (B-30-15) into California legislation. SB 32 became effective on January 1, 2017 and requires CARB to develop technologically feasible and cost-effective regulations to achieve the targeted 40 percent GHG emission reduction. CARB is currently working to update the Scoping Plan to provide a framework for achieving the 2030 target. The Scoping Plan Update calls for emissions reductions at the State level that meet or exceed the statewide GHG target, and notes that additional effort will be needed to maintain and continue GHG reductions to meet the mid-term (2030) and long-term (2050) targets. Programs included in the Scoping Plan Update that would reduce emissions associated with individual projects associated with the proposed Specific Plan include:

- Cap and Trade regulation
- Short-lived climate pollutants reduction strategy
- Mobile Sources Cleaner Fuel Technology and Freight providing a transition to cleaner fuels
- Behind-the-meter solar PV
- Increased energy efficiency
- Increased RPS
- Low Carbon Fuel Standard increased stringency
- Increased demand response and flexible loads

Additionally, the Scoping Plan Update recognizes the need to reach beyond statewide policy and engage local jurisdictions to develop plans to address local conditions and provide a “fair share” contribution towards the achievement of the State’s GHG reduction targets. To assist local planning efforts with developing strategies to meet these targets, the Scoping Plan includes annual community-wide goals of no more than six metric tons CO₂e per capita by 2030 and no more than two metric tons CO₂e per capita by 2050; as stated in the Proposed Scoping Plan, these goals are appropriate for plan-level analyses (city, county, subregional, or regional level), but not for specific individual projects because they include all emissions sectors in the State.

California Building Energy Efficiency Standards

In general, the California Building Energy Efficiency Standards require the design of building shells and building components to conserve energy. The CEC adopted changes to the 2016 Building Energy Efficiency Standards contained in the California Code of Regulations, Title 24, Part 6 (also known as the California Energy Code) and associated administrative regulations in Part 1. The amended standards took effect on July 1, 2017. Under the 2016 Standards, residential buildings are 28 percent more energy efficient than the 2013 Standards, and nonresidential buildings are 5 percent more energy efficient than the 2013 Standards. The 2016 standards will not achieve zero net energy. However, they get very close to

the State's goal and make important steps toward changing residential building practices in California. The 2019 standards are intended to achieve zero net energy for newly constructed residential buildings throughout California.

California Green Building Standards

The California Green Building Standards Code (California Code of Regulations, Title 24, Part 11), commonly referred to as the CALGreen Code, is a statewide mandatory construction code developed and adopted by the California Building Standards Commission and the Department of Housing and Community Development. The CALGreen standards require new residential and commercial buildings to comply with mandatory measures under the topics of planning and design, energy efficiency, water efficiency/conservation, material conservation and resource efficiency, and environmental quality. CALGreen also provides voluntary tiers and measures that local governments may adopt that encourage or require additional measures in the five green building topics. The most recent update to the CALGreen Code went into effect January 1, 2017.

Regional and Local

Southern California Association of Governments Regional Transportation Plan/ Sustainable Communities Strategy

On April 7, 2016, the SCAG Regional Council adopted the 2016-2040 RTP/SCS which outlines how to closely integrate land use and transportation so that the region can grow smartly and sustainably. It is a long-range visioning plan that balances future mobility and housing needs with economic, environmental and public health goals. The SCAG region must achieve specific Federal air quality standards and is required by State law to lower regional GHG emissions. Pursuant to the 2016-2040 RTP/SCS, SCAG anticipates lowering GHG emissions below 2005 levels by 8 percent by 2020, 18 percent by 2035, and 21 percent by 2040. Land use strategies to achieve the region's targets include planning for new growth around High Quality Transit Areas, Livable Corridors, and creating Neighborhood Mobility Areas to integrate land use and transportation and plan for more active lifestyles.

City of Tustin General Plan Conservation/Open Space/Recreation Element

The Conservation/Open Space/Recreation Element of the *City of Tustin General Plan* includes goals and policies related to the reduction of greenhouse gas emissions that are applicable to the Specific Plan. The Conservation/Open Space/Recreation Element identifies measures implemented for conservation purposes, including air quality measures. General Plan goals and policies related to GHG emissions are addressed in Section 4.8, *Land Use and Planning*, of this Program EIR.

4.5.2 ENVIRONMENTAL SETTING

Certain gases in the earth's atmosphere, classified as GHGs, play a critical role in determining the earth's surface temperature. Solar radiation enters the earth's atmosphere from space. A portion of the radiation is absorbed by the earth's surface and a smaller portion of this radiation is reflected back toward space. This absorbed radiation is then emitted from the earth as low-frequency infrared radiation. The frequencies at which bodies emit radiation are proportional to temperature. Because the earth has a much lower temperature than the sun, it emits lower-frequency radiation. Most solar radiation passes

through GHGs; however, infrared radiation is absorbed by these gases. As a result, radiation that otherwise would have escaped back into space is instead “trapped,” resulting in a warming of the atmosphere. This phenomenon, known as the greenhouse effect, is responsible for maintaining a habitable climate on earth.

The primary GHGs contributing to the greenhouse effect are CO₂, CH₄, and nitrous oxide (N₂O). Fluorinated gases also make up a small fraction of the GHGs that contribute to climate change. Fluorinated gases include chlorofluorocarbons, hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride, and nitrogen trifluoride; however, it is noted that these gases are not associated with typical land use development. Human-caused emissions of these GHGs in excess of natural ambient concentrations are believed to be responsible for intensifying the greenhouse effect and leading to a trend of unnatural warming of the earth’s climate, known as global climate change or global warming.

GHGs are global pollutants, unlike criteria air pollutants and toxic air contaminants, which are pollutants of regional and local concern. Whereas pollutants with localized air quality effects have relatively short atmospheric lifetimes (about one day), GHGs have long atmospheric lifetimes (one to several thousand years). GHGs persist in the atmosphere for long enough time periods to be dispersed around the globe. Although the exact lifetime of any particular GHG molecule is dependent on multiple variables and cannot be pinpointed, more CO₂ is emitted into the atmosphere than is sequestered by ocean uptake, vegetation, or other forms of carbon sequestration. Of the total annual human-caused CO₂ emissions, approximately 55 percent is sequestered through ocean and land uptakes every year, averaged over the last 50 years, whereas the remaining 45 percent of human-caused CO₂ emissions remains stored in the atmosphere (IPCC 2013). Table 4.5-1, *Greenhouse Gases*, describes the primary GHGs attributed to global climate change, including their physical properties.

The California Climate Change Center (2012) identifies that global warming in California is anticipated to impact resources. The California Climate Change Center states that climate changes could affect the resources described below.

Air Quality

Higher temperatures, which are conducive to air pollution formation, could worsen air quality in many areas of California. Climate change may increase the concentration of ground-level O₃, but the magnitude of the effect, and therefore its indirect effects, are uncertain. If higher temperatures are accompanied by drier conditions, the potential for large wildfires could increase, which, in turn, would further worsen air quality. However, if higher temperatures are accompanied by wetter, rather than drier conditions, the rains would tend to temporarily clear the air of particulate pollution and reduce the incidence of large wildfires, thereby ameliorating the pollution associated with wildfires. Additionally, severe heat accompanied by drier conditions and poor air quality could increase the number of heat-related deaths, illnesses, and asthma attacks throughout the State.

Table 4.5-1. Greenhouse Gases	
Greenhouse Gas	Description
Carbon Dioxide (CO ₂)	Carbon dioxide is a colorless, odorless gas. CO ₂ is emitted naturally and through human activities. The largest source of CO ₂ emissions globally is the combustion of fossil fuels such as coal, oil, and gas in power plants, automobiles, and industrial facilities. Specialized industrial production processes and product uses such as mineral production, metal production, and the use of petroleum-based products can lead to CO ₂ emissions. The atmospheric lifetime of CO ₂ is variable because it is readily exchanged in the atmosphere.
Methane (CH ₄)	Methane, a highly potent GHG, primarily results from off-gassing (the release of chemicals from nonmetallic substances under ambient or greater pressure conditions) and is largely associated with agricultural practices and landfills. Methane is a colorless, odorless gas and is the major component of natural gas, about 87 percent by volume. Human-related sources include fossil fuel production, animal husbandry, rice cultivation, biomass burning, and waste management. Natural sources of CH ₄ include wetlands, gas hydrates, termites, oceans, freshwater bodies, non-wetland soils, and wildfires. The atmospheric lifetime of CH ₄ is about 12 years.
Nitrous Oxide (N ₂ O)	Nitrous oxide is a colorless gas with a slightly sweet odor. N ₂ O is largely attributable to agricultural practices and soil management. Primary human-related sources of N ₂ O include agricultural soil management, sewage treatment, combustion of fossil fuels, and adipic and nitric acid production. N ₂ O is produced from biological sources in soil and water, particularly microbial action in wet tropical forests. The atmospheric lifetime of N ₂ O is approximately 120 years.

Water Supply

Analysis of paleoclimatic data (such as tree-ring reconstructions of streamflow and precipitation) indicates a history of naturally and widely varying hydrologic conditions in California and the west, including a pattern of recurring and extended droughts. Uncertainty remains with respect to the overall impact of climate change on future water supplies in California. However, the average early spring snowpack in the Sierra Nevada decreased by about 10 percent during the last century, a loss of 1.5 million acre-feet of snowpack storage. During the same period, sea level rose eight inches along California’s coast. California’s temperature has risen 1°F, mostly at night and during the winter, with higher elevations experiencing the highest increase. Many Southern California cities have experienced their lowest recorded annual precipitation twice within the past decade. In a span of only two years, Los Angeles experienced both its driest and wettest years on record.

This uncertainty complicates the analysis of future water demand, especially where the relationship between climate change and its potential effect on water demand is not well understood. The Sierra snowpack provides most of California’s water supply by accumulating snow during the State’s wet winters and releasing it slowly during the State’s dry springs and summers. Based upon historical data and modeling California Department of Water Resources (DWR) projects that the Sierra snowpack will experience a 25 to 40 percent reduction from its historic average by 2050. Climate change is also anticipated to bring warmer storms that result in less snowfall at lower elevations, reducing the total snowpack.

Hydrology and Sea Level Rise

As discussed above, climate change could potentially affect: the amount of snowfall, rainfall, and snowpack; the intensity and frequency of storms; flood hydrographs (flash floods, rain or snow events, coincidental high tide and high runoff events); sea level rise and coastal flooding; coastal erosion; and the potential for saltwater intrusion. According to The Impacts of Sea-Level Rise on the California Coast, prepared by the California Climate Change Center, climate change has the potential to induce substantial sea level rise in the coming century. The rising sea level increases the likelihood and risk of flooding. The rate of increase of global mean sea levels between 2001-2010, as observed by satellites, ocean buoys and land gauges, was approximately 3.2 millimeter (mm) per year, which is double the observed 20th Century trend of 1.6 mm per year. As a result, sea levels averaged over the last decade were about 8 inches higher than those of 1880. Sea levels are rising faster now than in the previous two millennia, and the rise is expected to accelerate, even with robust GHG emission control measures. The most recent IPCC report (2013) predicts a mean sea-level rise of 11 to 38 inches by 2100. This prediction is more than 50 percent higher than earlier projections of 7 to 23 inches, when comparing the same emissions scenarios and time periods. A rise in sea levels could result in coastal flooding and erosion and could jeopardize California's water supply due to saltwater intrusion. In addition, increased CO₂ emissions can cause oceans to acidify due to the carbonic acid it forms. Increased storm intensity and frequency could affect the ability of flood-control facilities, including levees, to handle storm events.

Agriculture

California has a \$30 billion annual agricultural industry that produces half of the country's fruits and vegetables. Higher CO₂ levels can stimulate plant production and increase plant water-use efficiency. However, if temperatures rise and drier conditions prevail, water demand could increase; crop-yield could be threatened by a less reliable water supply; and greater air pollution could render plants more susceptible to pest and disease outbreaks. In addition, temperature increases could change the time of year certain crops, such as wine grapes, bloom or ripen, and thereby affect their quality.

Ecosystems and Wildlife

Climate change and the potential resulting changes in weather patterns could have ecological effects on the local and global levels. Increasing concentrations of GHGs are likely to accelerate the rate and severity of climate change impacts. Scientists project that the average global surface temperature could rise by 1.0 to 4.5°F (0.6-2.5°C) in the next 50 years, and 2.2-10°F (1.4 to 5.8°C) during the next century, with substantial regional variation. Soil moisture is likely to decline in many regions, and intense rainstorms are likely to become more frequent. Rising temperatures could have four major impacts on plants and animals: timing of ecological events; geographic range; species' composition within communities; and ecosystem processes, such as carbon cycling and storage.

Greenhouse Gas Emissions Inventory

Worldwide anthropogenic emissions of GHG were approximately 46,000 MMT of CO₂e in 2010. CO₂ emissions from fossil fuel combustion and industrial processes contributed about 65 percent of total emissions in 2010. Of anthropogenic GHGs, CO₂ was the most abundant accounting for 76 percent of total 2010 emissions. CH₄ emissions accounted for 16 percent of the 2010 total, while N₂O and fluorinated gases account for 6 and 2 percent, respectively.

Total U.S. GHG emissions were 6,586.7 MMT CO₂e in 2015. Total U.S. emissions have increased by 3.5 percent since 1990; emissions decreased by 2.3 percent from 2014 to 2015. The decrease from 2014 to 2015 was a result of multiple factors, including: (1) substitution from coal to natural gas consumption in the electric power sector; (2) warmer winter conditions in 2015 resulting in a decreased demand for heating fuel in the residential and commercial sectors; and (3) a slight decrease in electricity demand. Since 1990, U.S. emissions have increased at an average annual rate of 0.2 percent. In 2015, the industrial and transportation end-use sectors accounted for 29 percent and 27 percent of CO₂ emissions (with electricity-related emissions distributed), respectively. Meanwhile, the residential and commercial end-use sectors accounted for 16 percent and 17 percent of CO₂ emissions, respectively.

Based on the CARB California Greenhouse Gas Inventory for 2000-2014, California produced 441.5 MMT CO₂e in 2014. The largest single source of GHG in California is transportation, contributing 37 percent of the State's total GHG emissions. Industrial sources are the second largest source of the State's GHG emissions, contributing 24 percent of the State's GHG emissions. California emissions are due in part to its large size and large population compared to other states. However, the State's mild climate reduces California's per capita fuel use and GHG emissions as compared to other states. The CARB has projected statewide unregulated GHG emissions for 2020 will be 509.4 MMT CO₂e. These projections represent the emissions that would be expected to occur in the absence of any GHG reduction actions.

4.5.3 THRESHOLDS OF SIGNIFICANCE

The following significance criteria are from the CEQA Guidelines Appendix G. The Project would result in a significant impact related to climate change if it would:

- Threshold 4.5-1** Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.

- Threshold 4.5-2** Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

California has adopted various administrative initiatives and legislation relating to climate change, much of which set aggressive goals for GHG emissions reductions statewide. Although lead agencies must evaluate climate change and GHG emissions of projects subject to CEQA, the CEQA Guidelines do not require or suggest specific methodologies for performing an assessment or specific thresholds of significance and do not specify GHG reduction mitigation measures. Instead, the guidelines allow lead agencies to choose methodologies and make significance determinations based on substantial evidence, as discussed in further detail below. No State agency has promulgated binding regulations for analyzing GHG emissions, determining their significance, or mitigating significant effects in CEQA documents. Thus, lead agencies exercise their discretion in determining how to analyze GHGs.

Addressing GHG emissions generation impacts requires an agency to make a determination as to what constitutes a significant impact. The amendments to the CEQA Guidelines specifically allow lead agencies to determine thresholds of significance that illustrate the extent of an impact and are a basis from which to apply mitigation measures. This means that each agency is left to determine whether a project's GHG emissions would have a "significant" impact on the environment. The guidelines direct that agencies are

to use “careful judgment” and “make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate” a project’s GHG emissions (14 California Code of Regulations § 15064.4(a)).

Agencies throughout the State have drafted or adopted varying threshold approaches and guidelines for analyzing 2020 operational GHG emissions in CEQA documents. The different thresholds include compliance with a qualified GHG reduction strategy, performance-based reductions, numeric bright-line thresholds, and efficiency-based thresholds. The California Supreme Court decision in the *Centers for Biological Diversity et al. v. California Department of Fish and Wildlife (CDFW)*, the Newhall Land and Farming Company (November 30, 2015, Case No. S217763) confirmed that when an “agency chooses to rely completely on a single quantitative method to justify a no significance finding, CEQA demands the agency research and document the quantitative parameters essential to that method.”

The Supreme Court also opined in a footnote to its decision that an agency needs to “consider the project’s effects on meeting longer term emissions reduction targets” (i.e., post-2020). The topic of whether a GHG emissions analysis must conform to the 2050 reduction target (40 percent of 1990 emissions by 2030 and 80 percent of 1990 emissions by 2050) expressed in Governor Brown’s EO B-30-15 and Governor Schwarzenegger’s EO S-03-05 is currently before the Supreme Court in the *Cleveland National Forest Foundation v. San Diego Association of Governments* (hereafter SANDAG) case. On July 13, 2017, the California Supreme Court rendered a 6-1 decision holding that SANDAG’s EIR did not violate CEQA “by declining to explicitly engage in an analysis of the consistency of projected 2050 greenhouse gas emissions with the goals in [a 2005] executive order [the 2005 EO].”

As noted earlier, AB 32 is a legal mandate requiring that statewide GHG emissions be reduced to 1990 levels by 2020 and efficiency-based thresholds represent the rate of emission reductions needed to achieve a fair share of California’s GHG emissions reduction target established under AB 32. In adopting AB 32, the legislature determined the necessary GHG reductions for the State to make in order to sufficiently offset its contribution to the cumulative climate change problem to reach 1990 levels. AB 32 is the only legally mandated requirement for the reduction of GHG. As such, compliance with AB 32 is the current adopted basis upon which an agency can base its significance threshold for evaluating a project’s GHG impacts. However, it is acknowledged that EOs S-03-05 and B-30-15, SB 375, and proposed legislation will ultimately result in GHG emissions reduction targets for 2030, 2040, and 2050.

On September 28, 2010, the SCAQMD recommended an interim screening level numeric bright-line threshold of 3,000 metric tons of CO₂e annually and an efficiency-based threshold of 4.8 metric tons of CO₂e per service population (residents plus employees) per year in 2020 and 3.0 metric tons of CO₂e per service population per year in 2035. These efficiency-based thresholds were developed as part of the SCAQMD GHG CEQA Significance Threshold Working Group. The working group was formed to assist the SCAQMD’s efforts to develop a GHG significance threshold and is composed of a wide variety of stakeholders. The numeric bright line and efficiency-based thresholds were developed to be consistent with CEQA requirements for developing significance thresholds; are supported by substantial evidence; and provide guidance to CEQA practitioners and lead agencies to determine whether GHG emissions from a project are significant.

In guidance provided by the SCAQMD's GHG CEQA Significance Threshold Working Group in September 2010, SCAQMD considered a tiered approach to determine the significance of residential and commercial projects. The draft tiered approach is outlined in meeting minutes dated September 29, 2010.

- Tier 1.** If the project is exempt from further environmental analysis under existing statutory or categorical exemptions, there is a presumption of less than significant impacts with respect to climate change. If not, then the Tier 2 threshold should be considered.
- Tier 2.** Consists of determining whether or not the project is consistent with a GHG reduction plan that may be part of a local general plan, for example. The concept embodied in this tier is equivalent to the existing concept of consistency in CEQA Guidelines Section 15064(h)(3), 15125(d) or 15152(a). Under this Tier, if the proposed project is consistent with the qualifying local GHG reduction plan, it is not significant for GHG emissions. If there is not an adopted plan, then a Tier 3 approach would be appropriate.
- Tier 3.** Establishes a screening significance threshold level to determine significance. The Working Group has provided a recommendation of 3,000 metric tons (MT) of CO₂e per year for mixed-use projects.
- Tier 4.** Establishes a service population efficiency threshold to determine significance. The Working Group has provided a recommendation of 4.1 MT of CO₂e per year for plans based on statewide service population.

The City has not adopted a qualified GHG reduction plan. Therefore, GHG emissions generated by the implementation of the Specific Plan were evaluated based on the SCAQMD's recommended Tier 4 significance threshold of 4.1 MT of CO₂e per service population per year. The Tier 4 efficiency level is based on a 2035 target date, selected to be consistent with the GHG reduction target date of SB 375. This EIR evaluates buildout of the Specific Plan in 2035 making the Tier 4 efficiency level the most appropriate threshold for the proposed Specific Plan.

Though this analysis evaluates all generated emissions based on the SCAQMD threshold, operational GHG emissions generated by implementation of the Specific Plan would ultimately be addressed by future legislative actions. The CARB Climate Change Scoping Plan and the November 2013 study, *Estimating Policy-Drive Greenhouse Gas Emissions Trajectories in California: The California Greenhouse Gas Inventory Spreadsheet (GHGIS) Model*, completed by the Energy Analysis and Environmental Impacts Department associated with the University of California, Berkeley, under direction of CARB, established that GHG emissions are cumulative in nature and the majority of GHG emission reductions will be driven by State-guided legislative actions. Therefore, the test for local CEQA practices concerning GHG project analysis is whether local action and project mitigation will result in reasonable local fair-share of GHG reductions over time, and which show "substantial progress" toward the long-term State reduction targets. In result, the Specific Plan was evaluated for compliance with State and local climate plans and regulations to assess the Specific Plan's contribution to the local fair-share GHG reduction.

Study Methodology

The analysis is based on the methodologies recommended by the California Air Pollution Control Officers Association [CAPCOA] (2008) *CEQA and Climate Change* white paper and focuses on CO₂, N₂O, and CH₄ as these are the GHG emissions that onsite development would generate in the largest quantities.

CO₂, CH₄, and N₂O emissions were calculated to identify the magnitude and nature of the Specific Plan's potential GHG emissions and environmental effects. The analysis focuses on CO₂, CH₄, and N₂O because these make up 98.9 percent of all GHG emissions by volume and are the GHG emissions that implementation of the Specific Plan would emit in the largest quantities. Fluorinated gases, such as HFCs, PFCs, and SF₆, were also considered for the analysis, but because the Specific Plan involves residential and commercial development, the quantity of fluorinated gases would not be significant since fluorinated gases are primarily associated with industrial processes. Emissions of all GHGs are converted into their equivalent GWP in MT CO₂e. Small amounts of other GHGs (such as chlorofluorocarbons [CFCs]) would also be emitted; however, these other GHGs would not substantially add to the total GHG emissions. Calculations are based on the methodologies discussed in the CAPCOA *CEQA and Climate Change* white paper and included the use of the California Climate Action Registry *General Reporting Protocol*. GHG emissions associated with the project were calculated using CalEEMod version 2016.3.1 as recommended by the SCAQMD.

4.5.4 ENVIRONMENTAL IMPACTS

Threshold 4.5-1: Would implementation of the Specific Plan generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Because of the global nature of climate change, it is generally the case that an individual project is of insufficient magnitude by itself to influence climate change or result in a substantial contribution to the global GHG inventory. GHG impacts are recognized as cumulative impacts. Often, estimates of GHG emissions are presented in CO₂e, which weight each gas by its global warming potential. Expressing GHG emissions in CO₂e takes the contribution of all GHG emissions to the greenhouse effect and converts them to a single unit equivalent to the effect that would occur if only CO₂ were being emitted.

Construction of the future development within the Specific Plan would generate temporary GHG emissions primarily due to the operation of construction equipment and truck trips. Site preparation and grading typically generate the greatest amount of emissions due to the use of grading equipment and soil hauling.

Operational emissions related to the Specific Plan include area sources, including consumer products, landscape maintenance, and architectural coating; emissions from waste, emissions from water and wastewater use, and mobile source. For mobile sources, the estimate of total daily trips associated with the Specific Plan was based on vehicle trip data provided in the traffic study (Kimley-Horn, 2018).

Further, as GHG emissions will ultimately be guided by future State legislative actions, operational emissions generated by implementation of the Specific Plan were also qualitatively evaluated based on the potential to demonstrate compliance with the long-term State reduction targets. Development that

would occur under full buildout (new development) of the Specific Plan was assessed based on the capacity to effectively reduce sources of GHG emissions from the operation of developments within the Specific Plan area.

Table 4.5-2, *Annual Greenhouse Gas Emissions*, combines the construction, operational, and mobile GHG emissions associated with the Specific Plan. As shown, annual emissions from implementation of the Specific Plan would total approximately 9.1 MT of CO₂e per service population. Under a worst-case scenario, these emissions would substantially exceed the 4.1 MT CO₂e per year threshold.

Emission Source	Project Emissions (MT CO₂e)
Area	81
Energy	2,395
Solid Waste	328
Water	447
Mobile	17,159
Total	20,410 metric tons
Service Population	2,242 ^a
Total/Service Population	9.1 MT CO ₂ e/service population/year
SCAQMD Threshold	4.1 MT CO ₂ e/service population/year
Exceeds Threshold?	Yes
a. Service population accounts for total residents and employees generated under implementation of the Specific Plan.	

No development within the Specific Plan area has been proposed as a part of the Project. It should be noted that future development projects within the Specific Plan area would undergo CEQA review, at which time any measures necessary to address GHG emissions would be identified. MM 4.2-1 through MM 4.2-3, in Section 4.2, Air Quality, would also reduce project-related operational GHG emissions. MM 4.2-1 would require the inclusion of EV charging stations and MM 4.2-2 would require future development to encourage vanpool/rideshare programs, which would reduce mobile source GHG emissions. MM 4.2-3 would require future development within the Specific Plan area mitigate air quality and GHG emissions impacts during the development review process. Mitigation measures may include energy efficiency measures, water efficiency measures, encouragement of alternatively fueled vehicles, facilitation of ride-sharing programs, among others.

Further, development within the Specific Plan area would locate a mix of residential, commercial (retail and office), and other land uses proximate to nearby public transportation. Increased use of public transportation, walking, and biking would help reduce mobile GHG emissions from vehicle trips. The Specific Plan would be consistent with the policies and initiatives of State GHG reduction programs as well as the regional RTP/SCS (see further details under Threshold 4.5-2). Development within the Specific Plan area would be constructed in accordance with the California Green Building Standards, which require energy efficiency, water efficiency, and material conservation and resource efficiency. With compliance with State and regional GHG reduction policies and demonstration of fair share reduction of GHG

emissions over time, implementation of the Specific Plan would not conflict with the State’s 2030 GHG reduction goals and would be in compliance with the goals set forth in AB 32.

In addition, development within the Specific Plan area would be required to comply with Title 24 of the California Code of Regulations, which include measures to ensure new development has solar-ready roofs, and energy and water efficient building design, appliances, and fixtures. Furthermore, future development within the Specific Plan area would be required to comply with the City’s AB 341 commitments to increase solid waste diversion to 50 percent within the City. However, GHG emissions would exceed SCAQMD thresholds; therefore, impacts would be significant and unavoidable.

Impact Summary: **Threshold 4.5-1: *Significant and Unavoidable Impact.*** Despite consistency with the policies and initiatives of State GHG reduction programs as well as the regional RTP/SCS strategies, implementation of the Specific Plan would exceed growth projections for the area in the RTP/SCS and result in an increase of GHG emissions that would exceed the SCAQMD’s significance criteria.

Threshold 4.5-2: **Would implementation of the Specific Plan conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gas emissions?**

As discussed in Threshold 4.5-1, operational GHG emissions associated with buildout of the Specific Plan would substantially exceed proposed SCAQMD thresholds. However, future development within the Specific Plan area would be able to achieve emissions reductions with the following considerations:

- Future legislative actions and policies provided in CARB’s Scoping Plan would be responsible for guiding GHG reductions for new development in accordance with State goals;
- Future development within the Specific Plan area would increase local transit access and would help reduce mobile sources of local GHG emissions within the Specific Plan area; and
- Buildout of the Specific Plan would be consistent with State GHG Reduction Programs as well as the regional RTP/SCS.

With the above conditions, the future development within the Specific Plan would demonstrate compliance with the State’s GHG reduction targets, which would help reduce potential GHG emissions generated by development within the Specific Plan.

As discussed, no specific development projects are identified in the Specific Plan. Although overall operational GHG emissions associated with the Specific Plan would exceed applicable Scoping Plan thresholds, any project proposed within the Specific Plan area would be required to undergo project-specific CEQA review, including analysis of potential operational emissions. Any necessary mitigation would be identified at the time and would be guided by the policies and strategies of the Scoping Plan, which would result in future emissions reductions.

Further emissions reductions would be achieved as development within the Specific Plan area would increase local transit access to future residents and employees within the area. Implementation of the Specific Plan would develop a mix of land uses, including housing, retail, and other development where

residents and employees would be within 0.25 mile of public transportation. There are eight bus stops that serve three different bus routes along Red Hill Avenue within the Specific Plan area, and five bus stops within 0.25 of the Specific Plan area. A majority of the operational emissions generated by the Specific Plan would be from mobile sources (i.e., vehicle use). Development within the Specific Plan area would locate a mix of residential, commercial (retail and office), and other land uses proximate to nearby public transportation. Increased use of public transportation, walking, and biking would help reduce mobile GHG emissions from vehicle trips. Therefore, the Specific Plan demonstrates compliance with and contribution towards the State’s GHG emission reduction goals.

In addition, development conditions under the proposed Specific Plan would be consistent with local and State programs for reducing GHG emissions, as further discussed in Table 4.5-3, *Specific Plan Consistency with State Programs for Reducing GHG Emissions*.

Policy	Project Consistency
<p>Fuels AB 2076 and AB 1007: 26% petroleum displacement (via biofuels) by 2022, and 30% by 2030 (applied to both gasoline and diesel)</p>	<p>Consistent Fuel manufacturers in the Specific Plan implement State requirements for biofuels and therefore, would not interfere with the State’s implementation of these laws.</p>
<p>Heavy Duty Vehicles (HDV) a. Medium Heavy Duty Vehicles (MHD) and Heavy-Heavy Duty (HHD) vehicle hybridization: 0.5 MT CO₂e reduction in 2020 achieved with 1.3% increase in fuel efficiency of conventional engines (rather than introducing hybrid market shares) b. System-wide HDV efficiency: 3.5 MT CO₂e reduction in 2020 achieved with 9.5% decrease in VMT across all vehicle classes</p>	<p>Consistent As vehicles age and new vehicles are purchased, an incremental portion of the residents, guests, employees, and service contractors within the Specific Plan would purchase new vehicles from the car manufacturer’s fleet of vehicles that are compliant with stated future fuel efficiency requirements.</p>
<p>Other Transportation High-speed rail: 1 MT CO₂e reduction in 2020 achieved by 75% increase in rail energy use (as electricity) with simultaneous 18% decrease in in-State aviation energy use.</p>	<p>Consistent Not applicable to the mixed-use development within the Specific Plan area. Implementation of the Specific Plan would not interfere with the State’s implementation of the high-speed rail.</p>
<p>Stationary Sector a. Baseline energy use: Integrated Energy Policy Report (IEPR) base case plus Navigant PGT net energy mid-market savings from 2015-2024 (Swamy, 2013), with extrapolations to 2050 b. AB 758/Energy efficiency strategic plan (CPUC, 2008): i. Residential new construction: 23% more efficient than 2010 baseline in 2011, 40% in 2015, 53% in 2020 (applied to both electricity and natural gas) ii. Residential retrofits: 20% more efficient than 2010 baseline in 2015, 40% in 2020 (applied to both</p>	<p>Consistent Future development within the Specific Plan would be designed to comply with and would exceed as feasible Title 24 energy standards for residential uses and commercial uses. The net-zero energy mandatory requirements for post-2020 residential and post-2030 commercial construction would not be applicable to the individual projects completed prior to 2020. Development completed after 2020 would be subject to and comply with</p>

Table 4.5-3. Specific Plan Consistency with State Programs for Reducing GHG Emissions	
Policy	Project Consistency
<p>electricity and natural gas)</p> <p>iii. Commercial new construction: 60% more efficient than 2010 baseline in 2020 (applied to both electricity and natural gas; used averages of 2020 and 2030 values in 2025: 36% for electricity, 37% for natural gas)</p> <p>iv. Zero Net Energy (ZNE): Sum of electricity and natural gas primary energy consumed by buildings is offset by distributed solar photovoltaic</p> <p>v. Residential new construction: 100% of buildings are ZNE by 2020</p> <p>vi. Residential retrofits: No ZNE buildings</p> <p>vii. Commercial new construction: 100% of new buildings are ZNE by 2030</p> <p>viii. Commercial retrofits: 50% of buildings are ZNE by 2030 (continued trend to 100% of buildings by 2050)</p>	<p>applicable Title 24 requirements in place at the time a project is proposed. New development within the Specific Plan area would be more energy efficient than the older buildings.</p>
<p>Electricity Sector</p> <p>a. Imports: ramped down to 0% by 2025; otherwise fossil generation goes negative before 2020</p> <p>b. Combined Heat and Power Systems (CHP): AB 32 Scoping Plan for CHP (increase by 30,000 GWh in 2020; total capacity of 15.1 GW) and Governor’s CHP goal (6.5 GW new CHP by 2030; total capacity of 15.3 GW): because capacity factor of CHP was revised significantly in Scenario 1, there was not enough electricity demand remaining after other generation types accounted for in these goals. Note: had to reduce CHP capacity slightly to 15.1 GW by 2040 to prevent remaining fossil generation from falling below zero</p> <p>c. 12 GW of renewable distributed generation by 2020 (25,000 GWh), all in form of PC. This counted toward ZNE goals, which only overtakes this total in 2030</p> <p>d. 8 GW of new utility-scale renewables by 2020: Part of meeting RPS target</p> <p>e. Local targets for renewables > 33%: Increased State RPS target from 33% to 37% to simulate meeting these commitments</p> <p>f. 1,325 MW energy storage by 2020 (investor-owned utility target): Scaled up to 1,900 MW to represent statewide target (IOUs are ~70% of State electricity generation), achieved by building storage equal to 0.55% of gross demand assuming an arbitrary 10% capacity factor (~1.600 GWh/yr)</p>	<p>Consistent</p> <p>These measures are not directly applicable to the Specific Plan. However, future development within the Specific Plan would comply with CALGreen and Title 24 standards, which would increase building energy efficiency. Therefore, the Specific Plan does not interfere with the State’s target of developing 12 GW of renewable distributed generation.</p>

Table 4.5-3. Specific Plan Consistency with State Programs for Reducing GHG Emissions	
Policy	Project Consistency
<p>g. Nuclear: Diablo Canyon relicensed through 2045, then offline</p> <p>h. Carbon Capture and Sequestration (CCS): One 300 MW IGCC/CSS coal plant online in 2020 (based on HECA plant in Bakersfield, CA). Methodology for implementing this in a model was changed, so capacity could now be specified precisely in target years.</p> <p>i. Natural gas: After storage balance of load-following generation (~3.5%) was supplied by SC NG, and remaining fossil generation was supplied by CC NG: ~16% in 2010, tapering to almost zero by 2020, then varying up to 7% through 2050.</p>	
<p>Water</p> <p>a. 20 by 20: 20% water reduction in residential and commercial sectors by 2020</p> <p>b. Water use efficiency, recycling, pumping, and treatment efficiency, and urban runoff re-use: additional 3.9 MT reduction CO₂e achieved through 2020 water use savings of 32.5 relative to baseline in residential and commercial sectors</p>	<p>Consistent</p> <p>Future development within the Specific Plan area would implement the 20% reduction in indoor water use as required by Title 24 Part 11, or the requirements in effect at the time of proposed development.</p>
<p>Waste</p> <p>a. AB 341: 75% waste diversion in 2020 reduced direct and indirect emissions by 4.5 MT CO₂e (consistent with expected 20-30 MT CO₂e reductions in 2020, where 80% of emissions are generated outside of California)</p> <p>b. Zero net emissions by 2035: achieved by forcing biogenic component of landfills to 100%</p>	<p>Consistent</p> <p>Future development projects within the Specific Plan area would be required to comply with solid waste diversion requirements in effect at the time of proposed development.</p>
<p>High Global Warming Potential Gases</p> <p>a. Hydrofluorocarbon (HFC) phase out: 50% of HFC eliminated by 2035 and 100% eliminated by 2050</p> <p>b. Foam recovery and destruction, fire suppressants, and residential refrigerant retirement: established 0.5 MT CO₂e reduction in 2020, implemented by reducing HFC usage 2.5% in 2020</p> <p>c. Additional reductions in mobile sources, leak tests, refrigerant recovery and Federal ban: reduction unknown; assume additional 0.5 MT CO₂e in 2020, implemented by reducing HFC usage an additional 2.5% in 2020 (total reduction of 5%)</p>	<p>Not Applicable</p> <p>Not applicable to the mixed-use development in the Specific Plan area.</p>

Policy	Project Consistency
<p>Cap and Trade Local reductions beyond State/Federal activities: For 90 cities reviewed in a California Polytechnic State University Study, 44% of actions in CAPs were incremental to State and Federal rules, accounting for 8.2 MT CO₂e reductions in 2020.</p>	<p>Not Applicable The City does not contain a project level checklist for determining project consistency. However, the City defers to the goals and policies of the regional AQMP which contains policies similar to those identified above that are detailed in this table (Table 4.5-3).</p>

Tustin has not adopted a local CAP or alternative GHG Reduction Plan, and there are no General Plan policies that directly address citywide levels of GHG. Additionally, Orange County has not adopted a regional GHG Reduction Plan or other form of climate plan. The County refers to the regulations in the AQMP regarding GHG reduction strategies. The initiatives and strategies in the AQMP are guided by the growth projections and development strategies provided in the 2016-2040 RTP/SCS. Future development within the Specific Plan area would comply with CalGreen Building Standards, which include measures to reduce emissions. Development within the Specific Plan area would also comply with SCAQMD Rule 1113 that limits ROG_s from building architectural coatings. Table 4.5-4, *Consistency with Applicable 2016-2040 RTP/SCS GHG Emission Reduction Strategies*, identifies the Specific Plan’s consistency with relevant goals and strategies of the 2016-2040 RTP/SCS.

Reduction Strategy	Project Consistency
Land Use Actions and Strategies	
<p>Focus new growth around transit The 2016-2040 RTP/SCS land use pattern reinforces the trend of focusing growth in the region’s High Quality Transit Areas (HQTAs). Concentrating housing and transit in conjunction concentrates roadway repair investments, leverages transit and active transportation investments, reduces regional life cycle infrastructure costs, improves accessibility, avoids greenfield development, and has the potential to improve public health and housing affordability. HQTAs provide households with alternative modes of transport that can reduce VMT and GHG emissions.</p>	<p>Consistent The Specific Plan would establish a comprehensive plan for the area that would include a complementary mix of land uses including residential, retail, and commercial that would build upon the area’s current land use, transportation, and infrastructure opportunities. Three bus lines run along Red Hill Avenue; eight stops are located within the Specific Plan area; and, 5 bus stops are located within one-quarter mile of the Specific Plan area. This would incentivize modes of transport that reduce both VMT and GHG emissions.</p>
<p>Plan for growth around livable corridors The Livable Corridors strategy seeks to create neighborhood retail nodes that would be walking and biking destinations by integrating three different planning components:</p> <ol style="list-style-type: none"> 1. Transit improvements. 2. Active transportation improvements (i.e. improved safety for walking and biking). 	<p>Consistent The Specific Plan area is in an urban area and includes commercial and residential uses. Future development within the Specific Plan area would be transit-oriented and three bus routes currently traverse the site, which provides for public access to retail, commercial uses, and services throughout the City of Tustin. As such, residential and commercial uses would have accessibility to public transit.</p>

Table 4.5-4. Consistency with Applicable 2016-2040 RTP/SCS GHG Emission Reduction Strategies	
Reduction Strategy	Project Consistency
3. Land use policies that include the development of mixed-use retail centers at key nodes and better integrate different types of land uses.	
<p>Provide more options for short trips 38 percent of all trips in the SCAG region are less than three miles. The 2016-2040 RTP/SCS provides two strategies to promote the use of active transport for short trips. Neighborhood Mobility Areas are meant to reduce short trips in a suburban setting, while “complete communities” support the creation of mixed-use districts in strategic growth areas and are applicable to an urban setting.</p>	<p>Consistent The Specific Plan would allow for a complementary mix of land uses including residential, retail, and commercial that would capitalize on the Specific Plan area’s current land use, transportation, and infrastructure opportunities, including the bus routes that currently traverse the Specific Plan area. As such, alternative means of transportation (i.e., biking, walking, and busing) would be available for accessibility throughout the Specific Plan area.</p>
Transportation Strategies	
<p>Preserve our existing transit system Ensuring that the existing transportation system is operating efficiently is critical for the success of HQTAs, Livable Corridors, and other land use strategies outlined in the 2016-2040 RTP/SCS.</p>	<p>Consistent The Specific Plan area is in an area surrounded by existing development. Implementation of the Specific Plan would allow for the development of vacant lots in the Specific Plan area near existing transit roadways; however, construction is not expected to result in temporary roadblocks.</p>
Transit Initiatives	
Develop first-mile/last-mile strategies on a local level to provide an incentive for making trips by transit, bicycling, walking, or neighborhood electric vehicle or other ZEV options.	<p>Consistent Several bus routes currently operate along Red Hill Avenue through the Specific Plan area, which would incentivize greater use of alternative transportation to access public transit.</p>
Other Initiatives	
<p>Reduce emissions resulting from a project through implementation of project features, project design, or other measures.</p> <p>Incorporate design measures to reduce energy consumption and increase use of renewable energy.</p>	<p>Consistent Future development projects within the Specific Plan area would comply with CalGreen Building Standards, which include measures to reduce emissions. MM 4.2-1 would require the inclusion of EV charging stations and MM 4.2-2 would encourage vanpool/rideshare programs to reduce mobile source GHG emissions. MM 4.2-3 would require future development to analyze and mitigate GHG impacts during the development review process. Mitigation measures may include energy efficiency measures, water efficiency measures, encouragement of alternatively fueled vehicles, facilitation of ride-sharing programs, among others.</p>
Source: Southern California Association of Governments, <i>2016-2040 Regional Transportation Plan/Sustainability Communities Strategy (Chapter 5, The Road to Greater Mobility and Sustainable Growth)</i> , April 2016.	

As shown in Tables 4.5-3 and 4.5-4, implementation of the Specific Plan would not conflict with State regulations to reduce GHG emissions or with the policies and initiatives of the 2016-2040 RTP/SCS.

Impact Summary: **Threshold 4.5-2: *Less Than Significant Impact*.** Implementation of the Specific Plan would not interfere with the implementation of SCAG’s 2016-2040 RTP/SCS, or CARB’s Scoping Plan consistent with AB 32.

4.5.5 CUMULATIVE IMPACTS

Because of the global nature of climate change, most projects will not result in GHG emissions that are individually significant. Therefore, it is accepted as very unlikely that any individual development project would have GHG emissions of a magnitude to directly impact global climate change and the impact of the Specific Plan is considered on a cumulative basis. Please refer to Threshold 4.5-1. The Specific Plan’s cumulative contribution of GHG emissions would exceed SCAQMD’s 4.1 MT CO₂e per year threshold, and the Specific Plan’s cumulative GHG impacts would also be cumulatively considerable and potential impacts are considered significant and unavoidable.

4.5.6 MITIGATION PROGRAM

Standard Conditions

No standard conditions have been identified for greenhouse gas emissions.

Mitigation Measures

Refer to MM 4.2-1 through MM 4.2-3 in Section 4.2, Air Quality.

4.5.7 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Despite consistency with the policies and initiatives of State GHG Reduction Programs as well as the regional RTP/SCS, implementation of the Specific Plan would result in a substantial increase of GHG emissions that would exceed the SCAQMD’s significance criteria. This is considered a significant and unavoidable impact.

4.6 Hazards and Hazardous Materials

This Section describes the potential hazards (other than geologic and flood hazards) associated with the Specific Plan area, infrastructure, activities, and materials that could impact human health and the environment. The analysis is based on regulatory database searches performed by Kimley-Horn and Associates, Inc. Kimley-Horn retained Environmental Data Resources, Inc. (EDR) to provide current regulatory database information compiled by a variety of Federal and State regulatory agencies. In addition, Kimley-Horn performed a regulatory database search of the Department of Toxic Substances Control Envirostor website (<http://www.envirostor.dtsc.ca.gov/public/>) and the State Water Resources Control Board's Geotracker website (<http://geotracker.waterboards.ca.gov/>) to identify hazardous material regulated facilities within or proximate to the Specific Plan area. This information is included in Appendix D of this Program EIR.

4.6.1 REGULATORY SETTING

The management of hazardous materials and hazardous waste is regulated by various Federal, State, and local agencies. Programs are administered through Federal agencies including the U.S. EPA, and State agencies within the California Environmental Protection Agency (CalEPA) including the California Department of Toxic Substances Control (DTSC).

Federal

Toxic Substances Control Act/Resource Conservation and Recovery Act/Hazardous Solid Waste Act

The Federal Toxic Substances Control Act of 1976 and Resource Conservation and Recovery Act (RCRA) established a program administered by the U.S. EPA that regulates generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA was amended in 1984 by the Hazardous and Solid Waste Act, which affirmed and extended the “cradle to grave” system of regulating hazardous wastes, meaning that all hazardous wastes are tracked and strictly regulated from generation to disposal. Hazardous waste generators are required to report use or transport of hazardous wastes to the U.S. EPA. Generators range from small producers such as dry cleaners and automobile repair facilities to larger producers such as hospitals and manufacturing operations.

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)/Superfund Amendments and Reauthorization Act

The Federal Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), commonly known as the Superfund Act, was enacted by Congress on December 11, 1980. This law (U.S. Code Title 42, Chapter 103) provides broad Federal authority to respond directly to releases or threatened releases of hazardous substances that may endanger public health or the environment. CERCLA establishes requirements concerning closed and abandoned hazardous waste sites; provides for liability of persons responsible for releases of hazardous waste at these sites; and establishes a trust fund to provide for cleanup when no responsible party can be identified. There are no Superfund sites within or near the Specific Plan area.

Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) and the National Priorities List

The U.S. EPA also maintains the Comprehensive Environmental Response Compensation (CERCLIS) and Liability Information System list. This list contains sites that are either proposed to be or on the National Priorities List (NPL), as well as sites that are in the screening and assessment phase for possible inclusion on the NPL. The NPL is a list of the worst hazardous waste sites that have been identified by Superfund. There are no NPL sites within the Specific Plan area.

Emergency Planning and Community Right-to-Know Act

The Federal Emergency Planning and Community Right-To-Know Act (EPCRA) was enacted to inform communities and residents of chemical hazards in their area. Businesses are required to report the locations and quantities of chemicals stored on site to both State and local agencies. EPCRA requires the U.S. EPA to maintain and publish a digital database list of toxic chemical releases and other waste management activities reported by certain industry groups and Federal facilities. This database, known as the Toxic Release Inventory, gives the community more power to hold companies accountable for their chemical management.

Hazardous Materials Transportation Act

The U.S. Department of Transportation (DOT) receives authority to regulate the transportation of hazardous materials from the Hazardous Materials Transportation Act, as amended and codified (49 U.S.C. 5101 et seq.). The DOT is the primary regulatory authority for the interstate transport of hazardous materials and establishes regulations for safe handling procedures (i.e., packaging, marking, labeling, and routing).

In California, Section 31303 of the California Vehicle Code states that any hazardous material being moved from one location to another must use the route with the least travel time. This, in practice, means major roads and highways, although secondary roads are permitted to be used for local delivery. These policies are enforced by both the California Highway Patrol and Caltrans.

Occupational Safety and Health Administration (OSHA)

Congress passed the Occupational and Safety Health Act (OSHA) to ensure worker and workplace safety. Their goal was to make sure employers provide their workers a place of employment free from recognized hazards to safety and health, such as exposure to toxic chemicals, excessive noise levels, mechanical dangers, heat or cold stress, or unsanitary conditions. To establish standards for workplace health and safety, OSHA also created the National Institute for Occupational Safety and Health as the research institution for the Occupational Safety and Health Administration. The Administration is a division of the U.S. Department of Labor that oversees the administration of OSHA and enforces standards in all states. OSHA standards are listed in Title 29 CFR Part 1910.

OSHA's Hazardous Waste Operations and Emergency Response Standard applies to five groups of employers and their employees. This includes any employees who are exposed or potentially exposed to hazardous substances (including hazardous waste) and who are engaged clean-up operations; corrective actions; voluntary clean-up operations; operations involving hazardous wastes at treatment, storage, and disposal facilities; and emergency response operations.

State of California

California Environmental Protection Agency

CalEPA has jurisdiction over hazardous materials and wastes at the State level. The California Department of Toxic Substances Control (DTSC) is the department of CalEPA responsible for implementing and enforcing California's own hazardous waste laws, which are known collectively as the Hazardous Waste Control Law. The DTSC regulates hazardous waste in California primarily under the authority of the Federal RCRA and the California Health and Safety Code (primarily Division 20, Chapters 6.5 through 10.6, and Title 22, Division 4.5). Although similar to RCRA, the California Hazardous Waste Control Law and its associated regulations define hazardous waste more broadly and regulate a larger number of chemicals. Hazardous wastes regulated by California but not by the U.S. EPA are called "non-RCRA hazardous wastes." Other laws that affect hazardous waste are specific to handling, storage, transportation, disposal, treatment, reduction, cleanup, and emergency planning. Government Code Section 65962.5 (commonly referred to as the Cortese List) includes DTSC-listed hazardous waste facilities and sites, Department of Health Services lists of contaminated drinking water wells, sites listed by the State Water Resources Control Board (SWRCB) as having underground storage tank leaks and have had a discharge of hazardous wastes or materials into the water or groundwater, and lists from local regulatory agencies of sites that have had a known migration of hazardous waste/material.

The enforcement of directives from DTSC is handled at the local level, in this case, the Orange County Health Care Agency, Environmental Health Division (OCHCA-EH). The Santa Ana Regional Water Quality Control Board (RWQCB) also has the authority to implement regulations regarding the management of soil and groundwater investigation.

Unified Hazardous Waste and Hazardous Materials Management Regulatory Program

The Unified Hazardous Waste and Hazardous Materials Management Regulatory Program (Unified Program) requires the administrative consolidation of six hazardous materials and waste programs (Program Elements) under one agency: Certified Unified Program Agency (CUPA). The Program Elements consolidated under the Unified Program are: (1) Hazardous Waste Generator and Onsite Hazardous Waste Treatment Programs; (2) Aboveground Petroleum Storage Tanks (Spill Prevention Control and Countermeasure Plan); (3) Underground Storage Tank (UST) Program; (4) Hazardous Materials Release Response Plans and Inventory Program (Hazardous Materials Disclosure or "Community-Right-To-Know"); (5) California Accidental Release Prevention Program; and (6) Uniform Fire Code Plans and Inventory Requirements. The Unified Program is intended to provide relief to businesses complying with the overlapping and sometimes conflicting requirements of formerly independently managed programs. The Unified Program is implemented at the local government level by CUPAs. The CUPA with jurisdiction over Tustin is the OCHCA-EH (CalEPA, 2017).

California Occupational Safety and Health Administration

The California Occupational Safety and Health Administration (CalOSHA) is the primary agency responsible for worker safety in the handling and use of chemicals in the workplace. CalOSHA standards are generally more stringent than Federal regulations. The employer is required to monitor worker exposure to listed hazardous substances and notify workers of exposure (8 CCR §§ 337-340). The regulations specify requirements for employee training, availability of safety equipment, accident-prevention programs, and hazardous substance exposure warnings.

California Department of Forestry and Fire Protection (CAL FIRE)

The California Department of Forestry and Fire Protection (CAL FIRE) has mapped fire threat potential throughout California. CAL FIRE ranks fire threats based on the availability of fuel and the likelihood of an area burning (based on topography, fire history, and climate). The rankings include no fire threat, moderate, high, and very high fire threats.

California Fire Code

The 2016 California Fire Code (CCR Title 24 Part 9) sets forth requirements including those for building materials and methods pertaining to fire safety and life safety, fire protection systems in buildings, emergency access to building, handling, and storage of hazardous materials.

Regional and Local

The Specific Plan's consistency with applicable safety goals and policies of the General Plan are addressed in *Table 4.8-1* of Section 4.8, *Land Use and Planning*.

City of Tustin General Plan Land Use Element

The Land Use Element of the *City of Tustin General Plan* includes goals and policies related to hazards and hazardous materials that are applicable to the Specific Plan Project. The purpose of the Land Use Element is to describe present and planned land use activity, and to address issues concerning the relationship between land uses and environmental quality, potential hazards, and social and economic objectives.

City of Tustin General Plan Conservation/Open Space/Recreation Element

The Conservation/Open Space/Recreation Element of the *City of Tustin General Plan* deals primarily with the preservation of natural resources, such as water, soils, minerals, and animal life.

City of Tustin General Plan Public Safety Element

The purpose of the Public Safety Element is to identify and address those natural or man-made characteristics which exist in or near the City which represent a potential danger to the safety of the citizens, sites, structures, public facilities, and infrastructure. The Element establishes policies to minimize the danger to residents, workers, and visitors, and identifies actions needed to deal with crisis situations. The Public Safety Element specifically addresses flooding; seismically induced conditions including surface rupture, ground shaking, ground failure, and seiche; slope instability leading to mudslides and landslides; subsidence and other geologic hazards; wildland/urban interface fires; and evacuation routes.

Tustin City Code

The Tustin City Code addresses hazards, including hazardous materials and waste. Article 9, Chapter 9A, Section A9907 (Conditions of Approval for Hazardous Waste Facility) of the Tustin City Code requires a hazardous waste facility prior to operation within the City prepare an emergency response plan and a risk assessment for approval by the City of Tustin Community Development Department. The California Fire Code is adopted as Article 8, Chapter 1, Section 8100 (Building and Construction Codes Adopted by Reference) as part of the Building Regulations, of the Tustin City Code.

Orange County Fire Authority

The Orange County Fire Authority (OCFA) enforces local codes and ordinances to ensure that fire safety exists in facilities and occupancies to minimize the threat to life and property. OCFA is tasked with responding to both emergency and non-emergency hazardous materials incidents. Haulers and user of hazardous materials in the City are listed with the OCFA and are regulated under the County of Orange.

City of Tustin Emergency Operations Plan

The Emergency Operation Plan provides guidance for the City's response to emergency situations from natural disasters, technological incidents, and National security emergencies. This Plan identifies actions to be taken by the City to prevent disasters where possible, reduce the vulnerability of residents to any disasters, protect citizens from the effects of disasters, respond effectively to the actual occurrence of disasters, and provide for recovery in the aftermath of an emergency. More specifically, it is the planning basis for response to a hazardous material incident in the City is the Orange County Hazardous Materials Area Plan (OCHMAP). The OCHMAP is executed within the City under the Orange County-City Hazardous Material Emergency Response Authority, a joint powers agency. The OCHMAP describes procedures for the effective and efficient allocation response to a hazardous materials emergency. It establishes an emergency organization, assigns tasks, specifies policy and general procedures, and provides coordination of planning for all phases of emergency planning for a hazardous materials emergency.

4.6.2 ENVIRONMENTAL SETTING

Within the Specific Plan Area

Table 4.6-1, *EDR Listings within the Specific Plan Area*, provides information regarding database listings that are currently present within the Specific Plan boundaries and have open cases with the California State Water Resources Control Board GeoTracker or the DTSC. There are several other gas stations and facilities that generate or dispose of hazardous waste within the Specific Plan area; however, these facilities are not identified in the databases to have any open cases associated with hazardous material spills, violations or incidents and therefore are not included in Table 4.6-1.

Listing Agency (database)	Site Name/Address	Descriptions	Status
RCRA-SQG, CHMIRS, FINDS, ECHO, LUST, UST, SWEEPS UST, CA FID UST, HIST CORTESE,	Red Hill and El Camino Mobil (also under the names of Mobil #18-H7Q, Irvine Fuel Exchange, Calvetti Inc. and Circle K Stores) (13872 Red Hill Ave.)	GeoTracker database (http://geotracker.waterboards.ca.gov/ accessed June 26, 2017) identifies the site is an open remediation case. Potential contaminants of concern are gasoline, MTBE, TBA and other fuel oxygenates. Potential media of concern is listed as other groundwater (uses other than drinking water). Review of the records for this site suggests ongoing monitoring and remediation of the site. A letter dated April 27, 2017 to the RWWCB from Blaes Environmental Management, Inc, summarizes the first quarter 2017 waste discharge requirements compliance for the site. It describes the ozone injection remediation activities for the site.	Ongoing
RCRA-SQG, ENVIROSTOR, FINDS, ECHO, EMI, HAZNET, DRYCLEANERS	Carioca Cleaners (also under the name of VAASU LLC CDBA-PARA) (13844 Red Hill Ave.)	Envirostor database (https://www.envirostor.dtsc.ca.gov/public/ accessed June 26, 2017) identifies the site is an evaluation case. In January 2001, the OCHCA-EH proposed to enter into a Remedial Action Agreement with the owner of the facility. No other information is available for this site.	Unknown
RCRA-SQG, ENVIROSTOR, FINDS, ECHO, EMI, HAZNET	RH Cleaners (14591 Red Hill Ave.)	GeoTracker database (http://geotracker.waterboards.ca.gov/ accessed June 26, 2017) identifies the site is an open site assessment. The potential contaminants of concern are tetrachloroethylene (PCE) and trichloroethylene (TCE). The potential media of concern is listed as other groundwater (uses other than drinking water), soil, and soil vapor. It appears from the review of the records for this site that there has been on-going monitoring and remediation for this site. In a recent letter dated June 12, 2017, the RWQCB approved an Interim Remedial Action Plan for Vapor Intrusion Risk Mitigation for the site. The letter states there is possible vapor intrusion risk related to the former dry cleaning operations at the site.	Ongoing
RCRA-SQG, FINDS, ECHO, LUST, UST, SWEEPS UST, HIST UST, CA FID UST, EMI, HAZNET	Gene Rogers Chevron (also under the name Chevron #9-0422, Tustin Valero Service) (14501 Red Hill Ave.)	GeoTracker database (http://geotracker.waterboards.ca.gov/ accessed June 26, 2017) identifies the site is an open remediation case. The potential contaminants of concern are gasoline, MTBE, TBA and other fuel oxygenates. The potential medias of concern are listed as aquifer used for drinking water supply, soil, well used for drinking water supply. It appears from the review of the records for this site that there has been on-going monitoring and remediation for this site. In a letter dated June 1, 2017, the OCHCA-EH approved a workplan to conduct a 7-day soil vapor extraction pilot test at the site.	Ongoing
FINDS =; LUST; UST = Underground Storage Tanks; EMI; HIST AUTO STATION; HAZNET; SWEEPS; Cortese; ERNS; HIST UST; Source: EDR, 2017.			

As previously addressed, the OCHCA-EH is the local CUPA for the City and is responsible for overseeing hazardous waste regulations at a local level. The closure of a case is dependent on the land use at the time of closure. For example, if the facility is a gas station at the time of closure, then the requirements and conditions for remediation are based on that site as a gas station. There are multiple hazardous materially regulated facilities within the Specific Plan area with known or unknown history of contamination. The contamination status of each property within the Specific Plan area is required to be reevaluated, if and when the site changes land use in the future. In addition to the facilities listed in Table 4.6-1, future development on a site with a current or former hazardous materially regulated facility would be evaluated to determine if there is a contamination risk to the proposed land use.

Other Environmental Concerns

Asbestos-Containing Materials (ACM)

Asbestos, a natural fiber used in the manufacturing of different building materials, has been identified as a human carcinogen. Most friable (i.e., easily broken or crushed) asbestos-containing materials (ACM) were banned in building materials by 1978. By 1989, most major manufacturers had voluntarily removed non-friable ACM (i.e., flooring, roofing, and mastics/sealants) from the market. These materials, however, were not banned completely. The Specific Plan area includes existing development from and prior to the 1960s; therefore, the presence of ACM is likely in some structures.

Lead-Based Paint

Lead-based paint has been identified by OSHA, the U.S. EPA, and the Department of Housing and Urban Development (HUD) as a potential health risk to humans, particularly children, based on its effects to the central nervous system, kidneys, and bloodstream. The risk of lead-based paint has been classified by HUD based upon the age and condition of the painted surface. The Specific Plan area includes existing development from and prior to the 1960s; therefore, the presence of lead-based paint is likely in some structures.

Radon

Radon is a radioactive gas which has been identified as a human carcinogen. Radon gas is typically associated with fine-grained rock and soil, and results from the radioactive decay of radium. Sections 307 and 309 of the Indoor Radon Abatement Act of 1988 (IRAA) directed the U.S. EPA to list and identify areas of the U.S. with the potential for elevated indoor radon levels. U.S. EPA's Map of Radon Zones (EPA 402 R 93 071) assigns each of the 3,141 counties in the U.S. to one of three zones based on radon potential:

- Zone 1 counties have a predicted average indoor radon screening level greater than 4 picocuries per liter (pCi/L).
- Zone 2 counties have a predicted average indoor radon screening level between 2 and 4 pCi/L.
- Zone 3 counties have a predicted average indoor radon screening level less than 2 pCi/L.

Based on such factors as indoor radon measurements, geology, aerial radioactivity, and soil permeability; the U.S. EPA has identified Orange County as Zone 3 (i.e., a predicted average indoor radon screening level less than 2 pCi/L). Based on the radon potential in Orange County, radon is not considered an environmental concern.

4.6.3 THRESHOLDS OF SIGNIFICANCE

The following significance criteria are from CEQA Guidelines Appendix G. The Specific Plan would result in a significant impact if it would:

- Threshold 4.6-1** Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.
- Threshold 4.6-2** 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.
- Threshold 4.6-3** Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.
- Threshold 4.6-4** Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment.
- Threshold 4.6-5** Impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan.

As addressed in Section 1.5, *Summary of Effects with No Impact*, the City has determined that the Specific Plan would not have a significant impact on the following thresholds and that no further analysis is required in the Program EIR:

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

4.6.4 ENVIRONMENTAL IMPACTS

Threshold 4.6-1:	Would implementation of the Specific Plan create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?
Threshold 4.6-2:	Would implementation of the Specific Plan 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?

Exposure of the public or the environment to hazardous materials can occur through transportation accidents; environmentally unsound disposal methods; improper handling of hazardous materials or hazardous wastes (particularly by untrained personnel); and/or emergencies, such as explosions or fires. The severity of these potential effects varies by type of activity, concentration and/or type of hazardous materials or wastes, and proximity to sensitive receptors.

The types of uses and facilities allowed in the Specific Plan area may generate, store, use, distribute or dispose of hazardous materials such as oils, solvents, paints, diesel fuel, fertilizers and household chemicals. Table 4.6-2, *Hazardous Material Usage Within the Specific Plan Area*, summarizes typical hazardous material types by land use category. Implementation of the Specific Plan would not create a significant impact through the transport, use or disposal of hazardous materials since all uses and facilities are required to comply with all applicable Federal, State and regional regulations which are intended to avoid impacts to the public or environment. If during the individual development review process, the City determines that a prospective user may generate inordinate quantities or unusual hazardous waste material, the proposed development may be subject to further review prior to approval.

Land Use Designation	Operations/Activities	Hazardous Materials
Residential	Multiple-family dwellings	Limited quantities of household chemicals, paints, pesticides, petroleum, oil, lubricants, thinners, fertilizers and solvents.
Retail	Retail and service oriented land uses.	Aerosols, cleaners, corrosives, fuels, heating oils, household chemicals, ignitable, paints, pesticides, petroleum, oil, lubricants, thinners and solvents.
Office	Commercial office buildings accommodating professional and/or administrative services.	Heavy metals, household chemicals, pesticides, pharmaceuticals and radiological sources.

Implementation of the Specific Plan could create a significant hazard to the public or the environment as a result of potential existing contamination. There are multiple hazardous materially regulated facilities within the Specific Plan area with known or unknown history of contamination. The contamination status of each property within the Specific Plan area is required to be reevaluated, if and when the individual site changes land use. The evaluation is dependent on the nature of the proposed land use for each site and type of contamination associated with the current or former hazardous materially regulated facility.

In addition to the facilities listed in Table 4.6-2, each future individual site application proposed, on a site with a current or former hazardous material regulated facility, would need to be evaluated in consultation with OCHCA-EH to determine if there is a contamination risk to the proposed land use. Remediation of a contaminated site to applicable standards for the proposed land use may be required as described in MM 4.6-1. Compliance with all applicable Federal, State and regional regulations, and implementation of MM 4.6-1 would reduce potential impacts to the public or environment to less than significant level

Impact Summary: **Thresholds 4.6-1 and 4.6-2: *Less Than Significant with Mitigation.*** Implementation of the Specific Plan could potentially create a hazard to the public or the environment through exposure to contaminated soil or groundwater, as a result of a previous hazardous material incident at a property within the Specific Plan area. This impact would be mitigated to a level considered less than significant with implementation of MM 4.6-1.

Threshold 4.6-3: **Would implementation of the Specific Plan emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?**

The nearest elementary schools to the Specific Plan area are Benjamin Beswick Elementary School, approximately 300 feet west of Red Hill Avenue, and Marjorie Veeh Elementary School, approximately 650 feet east of Red Hill Avenue. The nearest middle school is C.E. Utt Middle School, approximately 1,900 feet east of Red Hill Avenue. Tustin High School is adjacent to the Specific Plan area. The proposed land uses within the Specific Plan area does not propose any industrial uses which could potentially generate hazardous emissions or involve the handling of hazardous materials, substances, or waste in significant quantities that would have an impact to surrounding schools. The types of hazardous substances that would be routinely handled (e.g., pool chemicals, household cleaners, etc.) are similar to those found in schools and would have no impact on surrounding schools. No significant impacts are anticipated.

Impact Summary: **Threshold 4.6-3: *Less Than Significant.*** The Specific Plan does not propose any industrial uses, which could potentially generate hazardous emissions or involve the handling of hazardous materials, substances, or waste in significant quantities that would have an impact to surrounding schools. As such, this impact would be considered less than significant.

Threshold 4.6-4: **Would the Specific Plan be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?**

The Specific Plan area is not included on a hazardous site list compiled pursuant to California Government Code Section 65962.5 (DTSC, 2017). However, review of regulatory databases through EDR, the California State Water Resources Control Board GeoTracker, and the DTSC Envirostor indicate that there are multiple listings currently present within the Specific Plan area that has or previously had cases associated with hazardous material spills, violations or incidents. As such, the contamination status of

each property with a current or former hazardous materially regulated facility would need to be evaluated, if and, when the site changes land use. Implementation of MM 4.6-1 would reduce potential impacts to the public or environment from a hazardous material site to a less than significant level.

Impact Summary: **Thresholds 4.6-4: *Less Than Significant with Mitigation.*** The Specific Plan could potentially create a hazard to the public or the environment from a hazardous material site within the Specific Plan. This impact would be mitigated to a level considered less than significant with implementation of MM 4.6-1.

Threshold 4.6-5: Would implementation of the Specific Plan impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan?

Implementation of the Specific Plan would not impair or physically interfere with an adopted emergency response or evacuation plan, including the City of Tustin Emergency Operations Plan, which was revised in April 2014. The purpose of the Emergency Operations Plan is to provide guidance for the City’s response to emergency situations from natural disasters, technological incidents, and National security emergencies. The Emergency Operations Plan describes procedures for the effective and efficient allocation response to a hazardous materials emergency. It establishes an emergency organization, assigns tasks, specifies policy and general procedures, and provides coordination of planning for all phases of emergency planning for a hazardous materials emergency. No revisions to the adopted Emergency Operations Plan, would be required as a result of implementation of the Specific Plan. Primary access to all major roads would be maintained during construction of future developments within the Specific Plan area. Impacts would be less than significant. Emergency services and access is further described in Section 4.11, *Public Services*.

Impact Summary: **Threshold 4.6-5: *Less Than Significant.*** Implementation of the Specific Plan would not impair or physically interfere with an adopted emergency response or evacuation plan, including the City of Tustin Emergency Operations Plan.

4.6.5 CUMULATIVE IMPACTS

Impacts associated with hazardous materials are often site-specific and localized. The database search documents the findings of various governmental database searches regarding properties with known or suspected releases of hazardous materials or petroleum hydrocarbons and serves as the basis for defining the cumulative impacts study area. Although some of the cumulative projects and other future projects associated with buildout of the surrounding communities could have potential impacts associated with hazardous materials, the environmental concerns associated with hazardous materials are typically site-specific.

Projects are required to address any issues related to hazardous materials or wastes. Projects must adhere to applicable regulations for the use, transport, and disposal of hazardous materials and implement mitigation in compliance with Federal, State, and local regulations to protect against site contamination by hazardous materials. Compliance with all applicable Federal, State, and local regulations related to hazardous materials would ensure that the routine transport, use, or disposal of hazardous materials would

not result adverse impacts. Any demolition activities associated with projects that effect asbestos or lead-based paint would also occur in compliance with SCAQMD Rule 1403 and the CalOSHA Construction Safety Orders, which would ensure that hazardous materials impacts would be less than significant. Additionally, site-specific investigations would be conducted at sites where contaminated soils or groundwater could occur to minimize the exposure of workers and the public to hazardous substances.

4.6.6 MITIGATION PROGRAM

Mitigation Measures

MM 4.6-1 Prior to issuance of grading permits, a human health risk evaluation shall be prepared by a qualified environmental professional in consultation with Orange County Health Care Agency, Environmental Health Division (OCHCA-EH) for any individual site application proposed on a site with a current or former hazardous materially regulated facility to determine if there is a contamination risk to the proposed land use. Remedial activities, if necessary, may be required, in consultation with OCHCA-EH.

4.6.7 LEVEL OF SIGNIFICANCE AFTER MITIGATION

With implementation of the Mitigation Program set forth in this EIR, potential impacts related to hazards and hazardous materials would be reduced to a level considered less than significant.

4.7 Hydrology and Water Quality

This Section of the Program EIR addresses potential impacts of implementation of the Specific Plan on hydrology and water quality, describes the regulatory and environmental setting, and discusses mitigation measures to reduce impacts where applicable. Identification of hydrologic and drainage impacts that could result from implementation of Specific Plan are provided.

4.7.1 REGULATORY SETTING

Federal

Clean Water Act

The Clean Water Act (33 U.S.C. § 1251 et seq., formerly the Federal Water Pollution Control Act of 1972), was enacted with the intent of restoring and maintaining the chemical, physical, and biological integrity of the “Waters of the United States (U.S.)”. In 1972, the Clean Water Act was amended to require National Pollutant Discharge Elimination System (NPDES) permits for the discharge of pollutants to “Waters of the U.S.”¹ from any point source.² In 1987, the Clean Water Act was further amended to require that the U.S. EPA establish regulations for permitting municipal and industrial stormwater discharges under the NPDES permit program. Final regulations regarding stormwater discharges were issued on November 16, 1990, and require that municipal separate storm sewer system (MS4) discharges and industrial (including construction) stormwater discharges to surface waters be regulated by an NPDES permit. NPDES permit requirements relevant to the Specific Plan are discussed later in this EIR Section.

The Clean Water Act also requires states to adopt water quality standards for receiving water bodies and to have those standards approved by the U.S. EPA. Water quality standards consist of designated beneficial uses for a particular receiving water body (e.g., wildlife habitat, agricultural supply, fishing), along with the water quality criteria necessary to support those uses. Water quality criteria are prescribed concentrations or levels of constituents (such as lead, suspended sediment, and fecal coliform bacteria) or narrative statements that represent the quality of water that support a particular use. Because the State of California was unable to develop these standards for priority toxic pollutants, the U.S. EPA promulgated the California Toxics Rule in 1992 (40 *Code of Federal Regulations* [CFR] 131.38), which fills this gap. As a separate Rule, the California Toxics Rule is discussed further below under State regulations.

When water quality issues compromise the designated beneficial uses of a particular receiving water body, Section 303(d) of the Clean Water Act requires the identification and listing of that water body as “impaired”. Once a water body has been deemed impaired, a Total Maximum Daily Load (TMDL) must be developed for the impairing pollutant(s). A TMDL is an estimate of the total load of pollutants from point, non-point, and natural sources that a water body may receive without exceeding applicable water quality

¹ “Waters of the U.S.” include all waters that have, are, or may be used in interstate or foreign commerce (including sightseeing or hunting), including all waters subject to the ebb and flow of the tide and all interstate waters including interstate wetlands (33 CFR 328.3).

² Point sources are discrete water conveyances such as pipes or man-made ditches.

standards (plus a “margin of safety”). Once established, the TMDL allocates the loads among the water body’s current and future pollutant sources.

Federal Emergency Management Agency (FEMA)

FEMA’s primary missions are to reduce the loss of life and property and protect the nation from all hazards, including flooding. FEMA is responsible for administering the National Flood Insurance Program (NFIP). The NFIP enables property owners in participating communities to purchase insurance as protection against flood losses in exchange for State and community floodplain management regulations that reduce future flood damages. In communities that participate in the NFIP, mandatory flood insurance purchase requirements apply to all properties within Zone A, which are communities subject to a 100-year flood event. In addition to providing flood insurance and reducing flood damages through floodplain management regulations, the NFIP identifies and maps the floodplains of Flood Insurance Rate Maps (FIRM).

State of California

Porter-Cologne Water Quality Control Act

California’s Porter-Cologne Water Quality Control Act of 1970 (Porter-Cologne Act) grants the State Water Resource Control Board (SWRCB) and the Regional Water Quality Control Board’s (RWQCB) power to protect surface water and groundwater quality and is the primary vehicle for implementing California’s responsibilities under the Federal Clean Water Act. The SWRCB is divided into nine regions, each overseen by a RWQCB. The SWRCB is responsible for protecting California’s surface waters and groundwater supplies.

Each RWQCB must formulate and adopt a Water Quality Control Plan (Basin Plan) for its region. The Basin Plan must conform to the policies set forth in the Porter-Cologne Act and established by the SWRCB in its State Water Policy. The Basin Plan establishes beneficial uses for surface and groundwater in the region, and sets forth narrative and numeric water quality standards to protect those beneficial uses. Basin plans are updated every three years and provide the basis of determining waste discharge requirements, taking enforcement actions, and evaluating clean water grant proposals. The Porter-Cologne Act also states that an RWQCB may include water discharge prohibitions applicable to particular conditions, areas, or types of waste within its regional plan. The Porter-Cologne Act is also responsible for implementing Clean Water Act Sections 401 and 402 and 303(d) to SWRCB and RWQCBs.

Water Quality Orders (SWRCB)

The SWRCB has adopted an NPDES General Permit for construction activities, known as the Construction General Permit (Construction General Permit). The current Construction General Permit became effective on July 1, 2010. Where projects would disturb one or more acres of soil, or where a project would disturb less than one acre but is a part of larger development plan that totals one or more acres, the NPDES permitting process requires coverage under the Construction General Permit. The Construction General Permit requires the development of a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP must contain a site map(s) which shows the construction site perimeter, existing and proposed buildings, lots, roadways, stormwater collection and discharge points, general topography both before and after construction, and drainage patterns across a project site. The SWPPP must list Best Management

Practices (BMPs) that the discharger would use to protect stormwater runoff and the placement of said BMPs. Additionally, the SWPPP must contain a Construction Site Monitoring Program to demonstrate that a site complies with the Construction General Permit. Depending on the construction site risk level, the Construction Site Monitoring Program includes varying levels of visual monitoring and water quality sampling and analysis.

The Construction General Permit also includes the following requirements and evaluation criteria:

- Rainfall Erosivity Waiver: This option allows a small construction site (>1 and <5 acres) to self-certify if the rainfall erosivity value (R value) for the site's given location and time frame compute to be less than or equal to 5.
- Technology-Based Numeric Action Levels: The Construction General Permit includes NALs (numeric action levels) for pH and turbidity.
- Risk-Based Permitting Approach: The Construction General Permit establishes three levels of risk possible for a construction site. Risk is calculated in two parts: Project Sediment Risk, and Receiving Water Risk.
- Effluent Monitoring and Reporting: The Construction General Permit requires effluent monitoring and reporting for pH and turbidity in stormwater discharges. The purpose of this monitoring is to determine whether NALs and effluent limits for active treatment systems are exceeded.
- Receiving Water Monitoring and Reporting: The Construction General Permit requires some Risk Level 3 dischargers with direct discharges to surface waters to conduct receiving water monitoring whenever their effluent exceeds specified receiving water monitoring triggers.
- Rain Event Action Plan: The Construction General Permit requires certain sites to develop and implement a Rain Event Action Plan (REAP) that must be designed to protect all exposed portions of the site within 48 hours prior to any likely precipitation event.
- Annual Reporting: The Construction General Permit requires all projects that are enrolled for more than one continuous three-month period to submit information and annually certify that their site is in compliance with these requirements. The primary purpose of this requirement is to provide information needed for overall program evaluation and public information.
- Certification/Training Requirements for Key Project Personnel: The Construction General Permit requires that key personnel (e.g., SWPPP preparers, inspectors, etc.) have specific training or certifications to ensure their level of knowledge and skills are adequate to ensure their ability to design and evaluate project specifications in compliance with Construction General Permit requirements.

Regional and Local

Orange County Storm Water Program 2003 Drainage Area Management Plan (DAMP)

Section 402(p) of the Clean Water Act, as amended by the Water Quality Act of 1987, requires that municipal NPDES Permits include requirements (1) to essentially prohibit non-storm water discharges into municipal storm sewers and (2) to control the discharge of pollutants from municipal storm drains to the maximum extent practicable. In response to this requirement, the Orange County Drainage Area Management Plan (DAMP) was developed in 1993, which has been updated several times in response to

requirements associated with NPDES permit renewals (County of Orange et al. 2003). The City is a permittee covered by the requirements of this permit.

The main objectives of the Orange County DAMP are to fulfill the Permittees' commitment to present a plan that satisfies NPDES permit requirements and to evaluate the impacts of urban stormwater discharges on receiving waters. Orange County DAMP elements include (1) the establishment of public outreach and educational programs, management strategies, and interagency coordination; (2) continuing participation in the Regional Research/Monitoring Program that is being conducted with the neighboring counties, the Southern California Coastal Waters Research Project, and three Southern California Regional Boards; (3) the establishment of BMPs aimed at managing project-induced hydrologic effects; and (4) the improvement of water quality throughout the region.

Stormwater drainage systems are required to be constructed in accordance with low impact development (LID) features and infiltration/biotreatment best management practices (BMPs) identified in the DAMP, which outlines structural and nonstructural BMPs to meet these goals. The DAMP identifies the following six minimum control measures required under the Municipal Permit: public outreach, public involvement, illicit discharge detection and elimination, construction site runoff, existing development, new development and redevelopment, and municipal operations.

General Waste Discharge Requirements for Discharges to Surface Waters Which Pose an Insignificant (de minimus) Threat to Water Quality (Dewatering Permit)

The Santa Ana RWQCB issued Order No. R8-2003-0061 and Amendments to NPDES Permit No. CAG998001 (Dewatering Permit) to regulate the discharge of dewatering wastes from construction, subterranean seepage, and other similar types of discharges considered to have "de minimus" impacts on water quality within the jurisdictions covered by the County permit. Where needed, to obtain coverage under this permit, an applicant must submit a Notice of Intent (NOI) and data establishing the chemical characteristics of the dewatering discharge. A standard monitoring and reporting program is included as part of the permit. For dewatering activities that are not covered by the Construction General Permit, Waste Discharge Requirements, and an individual NPDES permit must be obtained from the applicable RWQCB.

City of Tustin General Plan Land Use Element

The Land Use Element of the *City of Tustin General Plan* includes goals and policies related to hydrology and water quality that are applicable to the Specific Plan Project. The purpose of the Land Use Element is to describe present and planned land use activity, and to address issues concerning the relationship between land uses and environmental quality, potential hazards, and social and economic objectives. The Specific Plan's consistency with applicable goals and policies of the General Plan are addressed in Section 4.8, *Land Use and Planning*.

City of Tustin Conservation/Open Space/Recreation Element

The Conservation/Open Space/Recreation Element of the *City of Tustin General Plan* deals primarily with the preservation of natural resources, such as water, soils, minerals, and animal life. The Specific Plan's consistency with applicable General Plan goals and policies is provided in Section 4.8, *Land Use and Planning*.

Tustin City Code

Article 8, Chapter 9, Section 8923 (Erosion Control and Water Quality Requirement Systems) of the Tustin City Code requires erosion and sediment control provisions to maintain water quality during construction. Article 4, Chapter 9, Section 4902 (Control of Urban Runoff) requires new developments and significant redevelopments to adhere to design guidelines from the Orange County DAMP and any conditions and requirements established by the City Community Development Department and Public Works Department, which are reasonably related to the reduction or elimination of pollutants in stormwater runoff from a project site.

Article 9, Chapter 7 (Water Efficient Landscapes) of the Tustin City Code requires new or rehabilitated landscape projects to comply with the landscape water use standards in Section 9704.

4.7.2 ENVIRONMENTAL SETTING

Watershed

The Specific Plan area is in the Newport Bay Watershed in the central portion of Orange County. The watershed is defined by the foothills of the Santa Ana Mountains to the east and the San Joaquin Hills to the west and southwest. The total area of the watershed is approximately 154 square miles. There are four sub-watersheds that make up the Greater Newport Bay Watershed: Peters Canyon Wash, Upper San Diego Creek, Lower San Diego Creek, and Newport Bay. The Specific Plan area is in the Peters Canyon Wash sub-watershed (EPA, 2017).

The Peters Canyon Wash sub-watershed and its tributaries collectively drain into the northeastern end of the Upper Newport Bay. The Peters Canyon Wash is the largest sub-watershed within the Newport Bay Watershed with San Diego Creek accounting for approximately 77 percent of the freshwater flow into the Newport Bay (Orange County, 2017).

Storm Drain Facilities

Regional drainage facilities are owned and operated by Orange County Public Works, Flood Division (OCPW). Local drainage facilities are owned and operated by the City, as shown in Exhibit 4.7-1, *Existing Storm Drain System*. The Specific Plan area lies within a hydromodification zone, as defined in the *Stormwater Quality Technical Guidance* document prepared by the County of Orange. The existing County and City storm drain infrastructure is identified in Section 4.14, *Utilities and Service Systems*.

Surface Water Quality

There are no permanent surface water features proximate to the Specific Plan area. Peters Canyon Wash and Lower Peters Canyon Retarding Basin intermittently carry water. Peters Canyon Wash flows through the East Tustin area and is located approximately 1.5 miles east of the Specific Plan area. The Wash is currently in a natural state. The Wash eventually flows into Upper Newport Basin. Lower Peters Canyon Retarding Basin is in the northern portion of East Tustin. Irvine-El Modena channel is the closest wash to the Specific Plan area, and is located approximately 0.25 mile to the north.

The Specific Plan area lies within a hydromodification zone, as defined in the *Stormwater Quality Technical Guidance* document. The purpose of hydromodification management is to incorporate hydrologic controls within a proposed development such that post-development 2-year peak flows do not exceed pre-development conditions. Reducing hydromodification can protect and restore the downstream receiving waters. Receiving waters for the Specific Plan area are Peters Canyon Channel, San Diego Creek, and Newport Bay. Water quality impairments for Peters Canyon Channel, Reach 1 of the San Diego Creek, Upper Newport Bay, and Lower Newport Bay are shown in Table 4.7-1, *Water Quality Impairments*.

Water Body	Contaminant	Total Maximum Daily Load (TMDL) Status; Completion Date for Proposed TMDLs
Peters Canyon Channel	DDT (Dichlorodiphenyltrichloroethane)	Still Required; 2019
	Indicator Bacteria	Still Required; 2021
	Toxaphene	Still Required; 2019
	pH	Still Required; 2019
San Diego Creek Reach 1	Benthic Community Effects	Still Required; 2027
	DDT (Dichlorodiphenyltrichloroethane)	U.S. EPA approved TMDL: 2013
	Malathion	Still Required; 2027
	Toxicity	Still Required; 2025
	Nutrients	U.S. EPA approved TMDL: 1999
	Indicator Bacteria	Still Required; 2019
	Sedimentation/Siltation	U.S. EPA approved TMDL: 1999
	Selenium	Still Required; 2007
Toxaphene	Required, 2019	
Upper Newport Bay	Chlordane	U.S. EPA approved TMDL: 2013
	Copper	Still Required, 2019
	DDT (Dichlorodiphenyltrichloroethane)	U.S. EPA approved TMDL: 2013
	Indicator Bacteria	U.S. EPA approved TMDL: 2013
	Malathion	Still Required; 2027
	Nutrients	U.S. EPA approved TMDL: 1999
	PCBs (Polychlorinated biphenyls)	U.S. EPA approved TMDL: 2013
	Pesticides	U.S. EPA approved TMDL: 1999
	Toxicity	Still Required, 2027
	Sedimentation/Siltation	Approved
Lower Newport Bay	Chlordane	U.S. EPA approved TMDL: 2013
	Copper	Still Required, 2019
	DDT (Dichlorodiphenyltrichloroethane)	U.S. EPA approved TMDL: 2013
	Indicator Bacteria	U.S. EPA approved TMDL: 2000
	Nutrients	U.S. EPA approved TMDL: 1999
	PCBs (Polychlorinated biphenyls)	U.S. EPA approved TMDL: 2013
	Pesticides	Approved
	Toxicity	Still Required; 2019

Source: SWRCB, 2017.

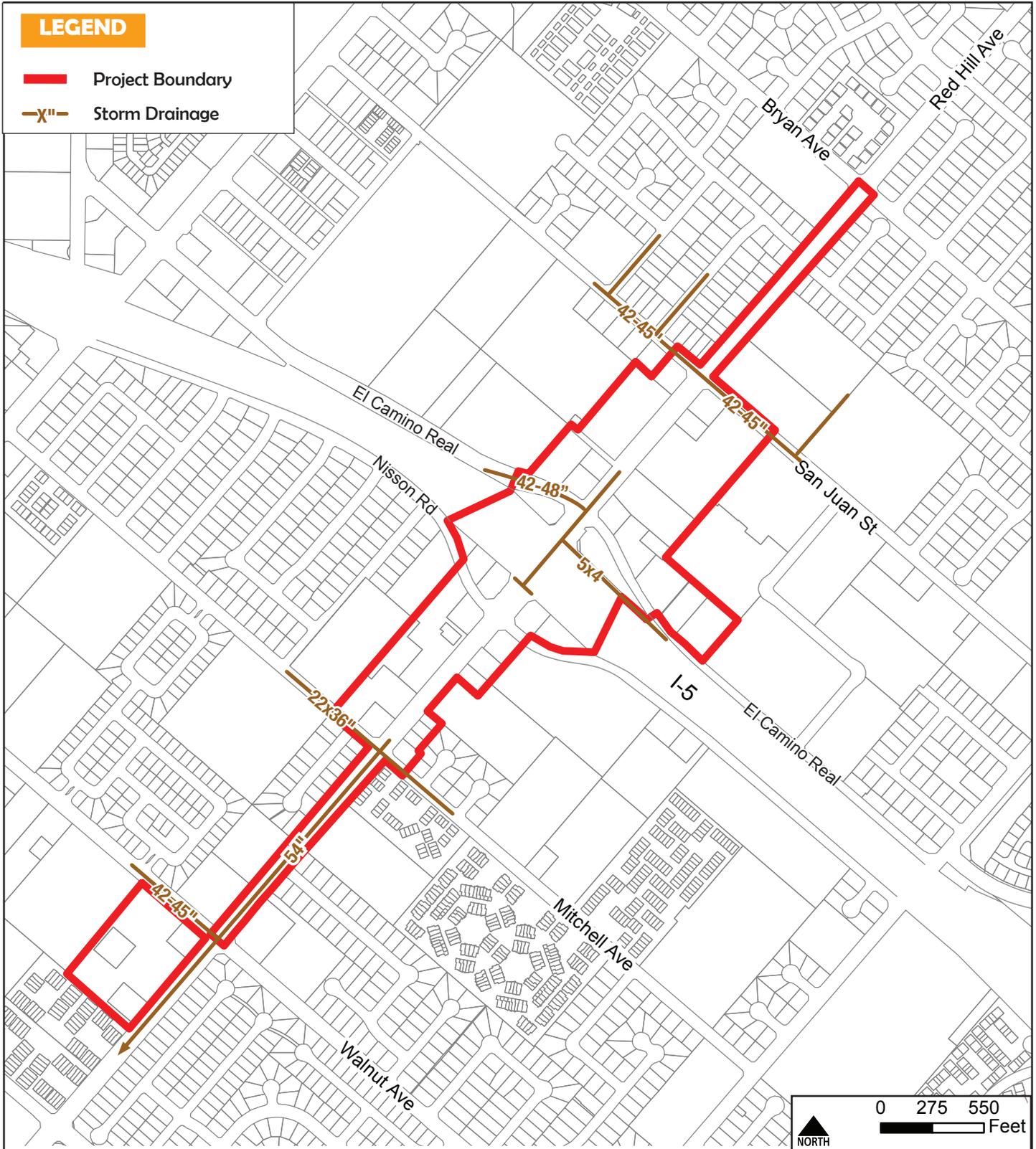


EXHIBIT 4.7-1: Existing Storm Drain System
 Red Hill Avenue Specific Plan

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Groundwater

The Specific Plan area is in the coastal plain/Orange County Groundwater Basin (Groundwater Basin). The Groundwater Basin is managed by the Orange County Water District (OCWD) and underlies the northern half of Orange County. The Groundwater Basin covers an area of approximately 350 square miles and is bordered by the Coyote and Chino Hills to the north, the Santa Ana Mountains to the northeast, and the Pacific Ocean to the southwest. The Groundwater Basin's full volume is approximately 66 million acre-feet (AF) (Arcadis, 2016). The General Plan EIR identifies that the depth of the groundwater table ranges from sea level at the foot of the County Santa Ana Mountains to approximately 40 feet below sea level in East Tustin.

Recharging water into the Basin through natural and artificial means supports pumping from the Basin. The Basin's primary source of recharge is flow from the Santa Ana River, which is diverted into recharge basins and its main Orange County tributary, Santiago Creek. There are no recharge basins located in the City. Other sources of recharge water include natural infiltration, recycled water, and imported water. Natural recharge consists of subsurface inflow from local hills and mountains, infiltration of precipitation and irrigation water, recharge in small flood control channels, and groundwater underflow to and from Los Angeles County and the ocean (Arcadis, 2016).

Recycled water for recharge is from two sources. The main source of recycled water is from the OCWD's Groundwater Replenishment System and is recharged in the surface water system and the Talbert Seawater Barrier. The second source of recycled water is the Leo J. Vander Lans Treatment Facility which supplies water to the Alamitos Seawater Barrier (Arcadis, 2016).

Annual groundwater basin overdraft is the quantity by which production of groundwater supplies exceeds natural replenishment of groundwater supplies during a water year (Arcadis, 2016). The annual overdraft for 2015-2016 was 141,000 AF. The accumulated overdraft as of June 2016 was 379,000 AF (OCWD, 2016).

To maintain groundwater quality, OCWS conducts an extensive monitoring program that serves to manage the Groundwater Basin's groundwater production, control groundwater contamination, and complies with all required laws and regulations. Salinity is a significant water quality problem in many parts of Southern California, including Orange County. Salinity is a measure of the dissolved mineral in water including both total dissolved solids (TDS) and nitrates. TDS currently has a California Secondary Maximum Contaminant Level (MCL) of 500 milligrams per liter (mg/L). The portions of the Groundwater Basin with the highest levels are generally located in the cities of Irvine, Tustin, Yorba Linda, Anaheim, and Fullerton. There is also a broad area in the central portion of the Groundwater Basin where TDS ranges from 500 to 700 mg/L. Sources of TDS include the water supplies used to recharge the Groundwater Basin and from on-site wastewater treatment systems, also known as septic systems. The TDS concentration in the Groundwater Basin is expected to decrease over time as the TDS concentration of Groundwater Replenishment System water used to recharge the Groundwater Basin is approximately 50 mg/L (Arcadis, 2016).

Nitrates are one of the most common and widespread contaminants in groundwater supplies, originating from fertilizer use, animal feedlots, wastewater disposal systems, and other sources. The MCL for nitrate in drinking water is set at 10 mg/L. OCWD regularly monitors nitrate levels in groundwater and works with producers to treat wells that have exceeded safe levels of nitrate concentrations. OCWD manages

the nitrate concentration of water recharged by its facilities to reduce nitrate concentrations in groundwater. This includes the operation of the Prado Wetlands, which was designed to remove nitrogen and other pollutants from the Santa Ana River before the water is diverted to be percolated into OCWD's surface water recharge system (Arcadis, 2016). The City has an active groundwater treatment project that helps to reduce certain constituents in their groundwater supply prior to service to customers (OCWD, 2016).

4.7.3 THRESHOLDS OF SIGNIFICANCE

The following significance criteria are from CEQA Guidelines Appendix G. The Specific Plan would result in a significant impact related to hydrology and water quality if it would:

- | | |
|------------------------|--|
| Threshold 4.7-1 | Violate any water quality standards or waste discharge requirements. |
| Threshold 4.7-2 | Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a new 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 planned uses for which permits have been granted). |
| Threshold 4.7-3 | 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 which would result in a substantial erosion or siltation on- or off-site. |
| Threshold 4.7-4 | 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 which would result in flooding on- or off-site. |
| Threshold 4.7-5 | Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. |
| Threshold 4.7-6 | Otherwise substantially degrade water quality. |

As addressed in Section 1.5, *Summary of Effects with No Impact*, the City has determined that the Specific Plan would not have a significant impact on the following thresholds and that no further analysis is required in the Program EIR:

- 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.
- Place within a 100-year flood hazard area structures which would impede or redirect flood flows.
- 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.
- Be subject to inundation by seiche, tsunami, or mudflow

4.7.4 ENVIRONMENTAL IMPACTS

Threshold 4.7-1:	Would implementation of the Specific Plan violate any water quality standards or waste discharge requirements?
Threshold 4.7-6:	Would implementation of the Specific Plan otherwise substantially degrade water quality?

As discussed above, the Specific Plan area lies within a hydromodification zone. Receiving waters for the Specific Plan area consist of Peters Canyon Channel, San Diego Creek, and Newport Bay. Hydromodification would likely be a minimal concern since current regulations allow for discharge up to the current existing condition, which is developed in the Specific Plan. In addition, the receiving waters have several water quality impairments and several TMDLs as defined by the SWRCB (see Table 4.7-1). As part of its stormwater discharge permit with the SWRCB, the City must enforce development regulations consistent with the *Stormwater Quality Technical Guidance* document to limit discharge of TMDL pollutants. The TMDL pollutants for the combined receiving water include metals, nutrients, other organics, pesticides, pathogens, and siltation.

Construction activities would loosen soils or remove stabilizing vegetation and expose areas of loose soil. These areas, if not properly stabilized during construction, could be subject to increased stormwater runoff and impact water quality. In compliance with NPDES regulations, the State of California requires that any construction activity disturbing one acre or more of soil comply with the Construction General Permit. The permit requires development and implementation of a SWPPP and monitoring plan, which must include erosion-control and sediment-control BMPs that would meet or exceed measures required by the Construction General Permit to control potential construction-related pollutants (SC 4.7-1). Categories of BMPs that are included in SWPPPs include:

- Erosion controls: cover and/or bind soil surface, to prevent soil particles from being detached and transported by water or wind. Erosion control BMPs include mulch, soil binders, and mats.
- Sediment controls: filter out soil particles that have been detached and transported in water. Sediment control BMPs include barriers, and cleaning measures such as street sweeping.
- Wind erosion controls: the aims and methods of wind erosion are similar to those of erosion control described above.
- Tracking controls: tracking control BMPs minimize the tracking of soil offsite by vehicles; for instance, stabilizing construction roadways and entrances/exits.
- Non-storm water management: prohibit the discharge of materials other than stormwater, such as discharges from the cleaning, maintenance, and fueling of vehicles and equipment. Non-storm water management BMPs also prescribe conducting various construction operations, including paving, grinding, and concrete curing and finishing, in ways that minimize non-storm water discharges and contamination of any such discharges.
- Waste and materials management: management of materials and wastes to avoid contamination of stormwater. Waste and materials management BMPs include spill prevention and control, stockpile management, and management of solid wastes and hazardous wastes.

Prior to issuance of any grading permits for any development project within the Specific Plan area, a Water Quality Management Plan (WQMP) would be submitted for review and approval to the City of Tustin Public Works Department. A preliminary WQMP would be submitted as part of the entitlement process for development projects; the preliminary WQMP would outline the required quantities of stormwater required to be treated and the appropriate treatment methods. A final WQMP would be submitted as part of final construction documents to identify the BMPs for the project (SC 4.7-2).

As an urbanized area, opportunities for large-scale water quality improvements (such as stormwater basins) within the Specific Plan area are limited. BMPs are structural or engineered devices and systems used to treat stormwater runoff before it is discharged into a drainage system (storm drain or channel). New developments would incorporate Low Impact Development (LID) principles in their design as part of the WQMP requirements. Compliance of SC 4.7-1 and SC 4.7-2 would reduce water quality impacts that could result from implementation of the Specific Plan to a less than significant level.

Impact Summary: **Thresholds 4.7-1 and 4.7-6: *Less Than Significant.*** Implementation of the Specific Plan would have the potential to adversely impact water quality in downstream receiving waters through discharge of runoff that contains various pollutants of concern. However, compliance with the WQMP and NPDES permit would provide for the protection of surface water quality by avoiding and/or minimizing pollutant runoff into surface waters. Therefore, Specific Plan impacts to water quality would be less than significant.

Threshold 4.7-2: **Would the Specific Plan substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a new 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 planned uses for which permits have been granted?)**

The Specific Plan area is an urbanized environment that is primarily impervious. Because the area is primarily impervious, it does not contribute significantly to groundwater recharge. Implementation of the Specific Plan would not significantly change the amount of impervious surfaces in the Specific Plan area. Therefore, implementation of the Specific Plan would not interfere substantially with groundwater recharge.

As stated above, the City receives approximately 74 percent of its water from underlying groundwater in the Lower Santa Ana Groundwater Basin. It is projected that the water demand in the City in 2040 would be 12,238 AF. Projected water supply for the City is anticipated to be 11,626 AF of groundwater and 612 AF of purchased or imported water for a total of 12,238 AF. According to the East Orange County Water District Urban Water Management Plan which serves this part of the City, inclusive of the Specific Plan area, the available water supply can meet projected demand due to diversified supply and conservation measures.

General Plan buildout of the Specific Plan area forecasts an increase of approximately 617,000 sf of non-residential uses. The Specific Plan’s estimated buildout potential is 325,000 sf of non-residential

development and 500 dwelling units. As discussed in further detail in Section 4.14, *Utilities and Service Systems*, based on the 2015 rate (122 gallons per capita per day), the estimated 1,520 residents and 722 employees would generate an additional water demand of approximately 273,524 gallons per day or 306.4 acre-feet per year (afy). In comparison, buildout under the existing General Plan land use designations would result in an estimated increase of 1,371 employees, which would generate an additional water demand of approximately 167,262 gallons per day or 187.4 afy. While there would be an increase in the water demand over the anticipated General Plan buildout, according to the demand and supply of water assumed in the Urban Water Management Plan (discussed further in Section 4.14, *Utilities and Service Systems*), buildout of the proposed Specific Plan would be served from existing entitlements and new or expanded water entitlements would not be needed (Valenzuela, 2017).

Development projects in the Specific Plan area would be required to identify water use and water availability. In addition, any new development would be required to comply with Federal, State, and local plans, policies, and regulations, including the City of Tustin’s Water Efficient Ordinance.

Impact Summary: **Threshold 4.7-2: *Less Than Significant.*** Implementation of the Specific Plan would not significantly change the amount of impervious surfaces in the Specific Plan area and therefore, not interfere with groundwater recharge. The Project would not deplete groundwater supplies or interfere with groundwater recharge. Project impacts would be less than significant

Threshold 4.7-3:	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 which would result in a substantial erosion or siltation on- or off-site.
Threshold 4.7-4:	Would implementation of the Specific Plan 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 which would result in flooding on- or off-site?
Threshold 4.7-5:	Would implementation of the Specific Plan create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?

Because of the predominately developed nature of the Specific Plan area, it is anticipated that the storm drain system would largely maintain the same existing drainage patterns and connectivity. Construction within the Specific Plan area would not substantially increase or change the overall drainage areas from existing to the proposed condition. However, individual drainage areas could be slightly altered.

Overall, it is anticipated that the Specific Plan will result in the conveyance of a similar amount of water to the storm drain system. Consequently, hydromodification measures may not be required but BMPs would be required to treat the drainage associated with the impervious areas. MM 4.7-1 requires an applicant to prepare a hydrology and hydraulics analysis demonstrating that the existing condition flow rates are not exceeded by Project flow rates. As addressed in MM 4.7-1, future development would be required to apply for encroachment permits through the City for connection into the City storm drain

infrastructure. Compliance with Federal, State, and local regulation including SCs 4.7-1, -2, and -3 and implementation of MM 4.7-1 and MM 4.7-2 would mitigate potential significant impacts to a less than significant level.

Impact Summary: **Thresholds 4.7-3, 4.7-4 and 4.7-5: *Less Than Significant With Mitigation*.** Storm drainage can be provided to development sites within the Specific Plan area without significantly impacting infrastructure in the City.

4.7.5 CUMULATIVE IMPACTS

The area over which cumulative impacts to hydrology and water quality are considered is the Newport Bay Watershed. The Newport Bay Watershed spans most of the cities of Tustin, Irvine, Santa Ana, Lake Forest, and Newport Beach; portions of several other cities; and portions of unincorporated Orange County. Substantial growth is anticipated within the Newport Bay Watershed in the next few decades; as parts of the watershed are already urbanized, growth is expected to be a mix of development and redevelopment. New development and redevelopment projects would result in some increases in impervious surfaces, and thus could generate increased runoff from the affected project sites. Future development in the Newport Bay Watershed would prepare and implement WQMPs specifying BMPs, including low impact development BMPs, that would minimize runoff from those sites and reduce contamination of runoff with pollutants. Therefore, related projects are not expected to cause substantial increases in runoff and are not expected to require construction of substantial new or expanded municipal storm drain systems.

Future development would be required to prepare and implement SWPPPs and/or WQMPs identifying BMPs to be used for the construction phases of projects to minimize runoff, erosion, and stormwater pollution. Therefore, related projects are not expected to cause substantial increases in stormwater pollution. The implementation of the Specific Plan would require that each individual future project within the Specific Plan area be evaluated to identify site-specific drainage, flooding, water consumption, and runoff. With the incorporation of the Specific Plan Project mitigation measures, implementation of the Specific Plan would not contribute to cumulative impacts related to water quality, drainage pattern runoff, and flooding. Cumulative impacts would be less than significant, and Specific Plan impacts would not be cumulatively considerable.

4.7.6 MITIGATION PROGRAM

Standard Conditions

SC 4.7-1 Prior to the issuance of grading permits for any development projects under the Red Hill Avenue Specific Plan that would disturb more than one acre, the project applicant shall submit to the Department of Public Works an approved copy of the Storm Water Pollution Prevention Plan (SWPPP) and Notice of Intent (NOI) to comply with the General Permit for Construction Activities, confirming to the Current National Pollutant Discharge Elimination System (NPDES) requirements. The SWPPP shall be made part of the construction program. This SWPPP shall detail measures and practices that would be in effect during construction to minimize the individual project's impact on water quality and stormwater runoff volumes. The plan shall incorporate all necessary Best Management Practices (BMPs) and other City requirements to eliminate polluted runoff

until all construction work for the future development is completed. The SWPPP shall include treatment and disposal of all dewatering operation flows and for nuisance flows during construction.

SC 4.7-2 Prior to issuance of grading permits for any development projects under the Red Hill Avenue Specific Plan, the project applicant shall prepare and submit a Water Quality Management Plan (WQMP) for the project, subject to the approval of the Department of Public Works. The WQMP shall include appropriate BMPs and low impact development (LID) techniques to ensure project runoff is adequately treated.

SC 4.7-3 Projects within the Specific Plan area would be subject to conditions imposed by the City of Tustin Community Development Department and the Public Works Department in accordance with Section 4902 (Control of Urban Runoff) of the Tustin City Code which requires the project applicant to provide all drainage facilities necessary for the removal of surface water from a site and to protect off-site properties from a project's water runoff. The storm drain system must be designed in accordance with the standards of the Orange County Flood Division.

Mitigation Measures

MM 4.7-1 Prior to issuance of any grading or building permits for any development projects under the Red Hill Avenue Specific Plan, the project applicant shall prepare and submit to the Department of Public Works a hydrology and hydraulics analysis demonstrating that the existing condition flow rates are not exceeded by the proposed project flow rates.

MM 4.7-2 Prior to issuance of any grading or buildings permits for any development projects under the Red Hill Avenue Specific Plan that do not have a direct connection to the City's existing storm drain system, shall provide to the Department of Public Works hydraulic analyses of the downstream storm drain system that demonstrate no significant impacts to the City storm drain infrastructure.

4.7.7 LEVEL OF SIGNIFICANCE AFTER MITIGATION

With implementation of the Mitigation Program set forth in this Program EIR, potential impacts to hydrology and water quality would be reduced to a level considered less than significant.

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4.8 Land Use and Planning

This EIR Section describes the land use conditions for the Specific Plan area and discusses potential land use impacts that could result from implementation of the Specific Plan. Descriptions and analysis are substantially based on the City of Tustin General Plan and Tustin City Code. Pursuant to State CEQA Guidelines Section 15125(a), the discussion is based on the conditions of the site when the Notice of Preparation (NOP) was published in April 2017.

4.8.1 REGULATORY SETTING

Regional and Local

Southern California Association of Governments (SCAG)

SCAG is a council of governments representing Orange, Los Angeles, Riverside, San Bernardino, Ventura, and Imperial counties. SCAG is the Federally recognized Metropolitan Planning Organization for this region. SCAG is a regional planning agency and a forum for addressing regional issues concerning transportation, the economy, community development, and the environment. SCAG is also the regional clearinghouse for projects requiring environmental documentation under Federal and State law. In this role, SCAG reviews proposed development and infrastructure projects to analyze their impacts on regional planning programs. As the Southern California region's Metropolitan Planning Organization, SCAG cooperates with the SCAQMD, Caltrans, and other agencies in preparing regional planning documents.

Regional Transportation Plan/Sustainable Communities Strategy

The *2016-2040 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS)* was adopted in April 2016 (SCAG, 2016). Major themes in the 2016-2040 RTP/SCS include integrating strategies for land use and transportation; striving for sustainability; protecting and preserving existing transportation infrastructure; increasing capacity through improved systems managements; providing more transportation choices; leveraging technology; responding to demographic and housing market changes; supporting commerce, economic growth, and opportunity; promoting the links between public health, environmental protection, and economic opportunity; and incorporating the principles of social equity and environmental justice.

The SCS outlines a development pattern for the region, which, when integrated with the transportation network and other transportation measures and policies, would reduce GHG emissions from transportation (excluding goods movement). Land use strategies to achieve the region's targets include planning for new growth around high quality transit areas, and livable corridors, and creating neighborhood mobility areas to integrate land use and transportation and plan for more active lifestyles (SCAG 2016).

City of Tustin General Plan

Land Use Element. The General Plan Land Use Element provides guidance regarding the ultimate pattern of development and provides development allocations for land uses throughout the City of Tustin (City). It presents goals and policies pertaining to how existing development is to be maintained

and enhanced and how new development is to be implemented. It is based on and correlates the policies from all the elements in the General Plan into a set of coherent development policies. The Land Use Element policies serve as the central organizing element for the City's General Plan. Cumulatively, the Land Use Element's policies directly affect the establishment and maintenance of the neighborhoods, districts, corridors, and open spaces that distinguish and contribute to Tustin's livability, vitality and image.

2013-2021 Housing Element. Development of housing in the City is guided by the goals, objectives and policies contained in the Housing Element. The 2013-2021 Housing Element is an update and revision of the 2006-2014 Housing Element and consists of new technical data, revised goals, updated policies, and a series of programs and implementing measures. It examines current housing needs, estimates future housing needs, and establishes goals, policies, and programs pertaining to those needs. Housing programs are responsive to current and future needs. They are also established within the context of available community, State, and Federal economic and social resources and realistic quantified housing objectives. The element is designed to facilitate attainment of the City's Regional Housing Needs Allocation (RHNA), and to foster the availability of housing affordable to all income levels to the extent possible given Tustin's constraints. To achieve its housing goals, the City encourages the development of additional housing units in locations identified in the Land Use Element and the Housing Element.

Conservation/Open Space/Recreation Element. The Conservation Element contains goals and policies that further the protection and maintenance of the State's natural resources such as water, soils, wildlife, minerals, and other natural resources, and prevents their wasteful exploitation, degradation, and destruction. The Open Space Element includes goals and policies concerned with managing all open space areas, including undeveloped lands and outdoor recreation areas. Specifically, the Open Space Element identifies open space that is left undeveloped for public health and safety reasons and open space that is used for the preservation of natural resources, for the managed production of resources, and for outdoor recreation. The Recreation Element identifies planned park and recreation facilities designed to support the recreational needs of Tustin's population.

Circulation Element. The Circulation Element governs the long-term mobility system of the City. The goals and policies in this element are closely correlated with the Land Use Element and are intended to provide the best possible balance between the City's future growth and land use development, roadway size, traffic service levels, and community character. The Element also establishes a hierarchy of transportation routes with specific development standards described for each category of roadway.

Public Safety Element. The primary goal of the Safety Element is to reduce the potential risk of death, injuries, property damage, and economic and social dislocation resulting from natural and human-induced hazards. The Safety Element recognizes and responds to public health and safety risks. The element specifically addresses coastal hazards, geologic hazards, seismic hazards, flood hazards, wildland and urban fire hazards, hazardous materials, aviation hazards, and disaster planning. The element also includes policies and programs that minimize potential impacts from hazards.

Noise Element. The Noise Element is a tool for including noise control in the planning process to maintain compatible land use with environmental noise levels. The element identifies noise sensitive land uses and noise sources, and defines areas of noise impacts for the purpose of developing policies to

ensure the residents will be protected from excessive noise intrusion. The Noise Element includes goals and policies aimed at ensuring that adequate measures for regulating noise-generating activities and land uses are provided.

4.8.2 ENVIRONMENTAL SETTING

On-Site Land Uses

The approximately 43-acre Specific Plan area, inclusive of approximately 7 acres of rights-of-way, is predominately developed. The area includes commercial, neighborhood retail shopping center, professional office, residential, and motel uses, and an institutional use, as well as approximately 3.65 acres of vacant land (see Table 3-1, *Existing Land Uses*, in Section 3.0, *Project Description*). Commercial and retail uses in the center and southern part of the Specific Plan area have large building footprints to accommodate large surface parking lots whereas the buildings in the southeast portion of the Specific Plan area are located adjacent to Red Hill Avenue with landscaped setback areas. Based on the land use analysis, the Specific Plan area contains approximately 296,446 square feet of non-residential uses and 21 dwelling units.

On-Site General Plan and Zoning Designations

The land use designations for the Specific Plan area include a mix of commercial and professional office designations (Exhibit 3-4, *Existing General Plan Land Use Designations*). The City of Tustin General Plan land use designation for the Specific Plan area is primarily “Community Commercial (CC)” (approximately 90.8 percent of the Specific Plan area); “Planned Community Commercial/ Business (PCCB)” (approximately 7.2 percent of the Specific Plan area); and, Professional Office (PO) (approximately 2.0 percent of the Specific Plan area).

The CC designation is intended to provide for the development of retail, professional office, and service-oriented business serving a community-wide area and population.

The Planned Community Commercial/Business (PCCB) designation has a maximum FAR of 1.5. The PCCB designation allows a mix of commercial and office uses such as hotel/motels, commercial centers, research and development, and professional offices.

The Professional Office (PO) designation has a maximum FAR of 0.8. The PO designation provides areas of development of primarily professional offices and other supporting uses. Also included are small convenience or service commercial activities intended to meet the needs of on-site employees.

Zoning districts in the Specific Plan area are mainly of commercial and some professional office zones (Exhibit 3-5, *Existing Zoning Districts*). Retail Commercial (C1) and Central Commercial (C2) zones account for over 93 percent of the acreage within the Specific Plan area. Additional zoning designations within the Specific Plan area include Commercial General (CG) and Professional (PR).

Surrounding Land Uses

North of I-5. Land uses located adjacent to the Specific Plan area north of Interstate 5 (I-5) are characterized by residential uses (a mixture of attached single-family and multi-family units), and Tustin

High School, C.E. Utt Middle School, and Marjorie Veeh Elementary School. The General Plan and Zoning land use designations are as follows:

Location	General Plan	Zoning
North of Bryan Ave.	Low Density Residential (LDR), High Density Residential (HDR), Public/ Institutional (PI)	Single Family Residential District (R1), Multiple Family Residential District (R3), Suburban Residential District (R4), Public and Institutional (PI), Planned Development (PD)
East of Red Hill Ave.	Low Density Residential (LDR), High Density Residential (HDR), Public/ Institutional (PI)	Single Family Residential District (R1), Duplex Residential District (R2), Public and Institutional(PI)
West of Red Hill Ave.	High Density Residential (HDR), Low Density Residential (LDR), Public/ Institutional (PI)	Multiple Family Residential (R3), Public and Institutional (PI)

South of I-5. Land uses located adjacent to the Specific Plan area, south of I-5 include residential uses, Frontier Park, and Benjamin Beswick Elementary School. The General Plan and Zoning land use designations are as follows:

Location	General Plan	Zoning
South of Walnut Ave.	Planned Community Residential (PCR), Low Density Residential (LDR), High Density Residential (HDR), Public/Institutional (PI)	Planned Community Residential (PC RES), Multiple Family Residential District (R3), Suburban Residential District (R4)
East of Red Hill Ave.	Low Density Residential (LDR), High Density Residential (HDR)	Single Family Residential District (R1), Multiple Family Residential (R3), Suburban Residential District (R4), Planned Community (PC), Commercial General Planned Unit Development (CG PUD)
West of Red Hill Ave.	Medium Density Residential (MDR), Low Density Residential (LDR), Public/ Institutional (PI)	Single Family Residential District (R1), Duplex Residential District (R2), Multiple Family Residential (R3), Public and Institutional (PI)

4.8.3 THRESHOLDS OF SIGNIFICANCE

The following significance criteria are from CEQA Guidelines Appendix G. The Specific Plan would result in a significant impact on land use and planning if it would:

- Threshold 4.8-1** Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the Project (including, but not limited to the general plan, specific plan, local coastal program or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect.

As addressed in Section 1.5, *Summary of Effects with No Impact*, the City has determined that the Specific Plan would not have a significant impact on the following thresholds, and that no further analysis is required:

- Physically divide an established community.
- Conflict with any applicable habitat conservation plan or natural community conservation plan.

4.8.4 ENVIRONMENTAL IMPACTS

Threshold 4.8-1: **Would implementation of the Specific Plan conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the Specific Plan (including, but not limited to the general plan, specific plan, local coastal program or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?**

General Plan Consistency

Properties in the Specific Plan area have the following General Plan land use designations: Community Commercial (CC) on approximately 90 percent of the properties; Planned Community Commercial/Business (PCCB) on approximately 8 percent of the properties; and Professional Office (PO) on approximately 2 percent of the properties.

The Specific Plan requires a General Plan Amendment to update the Land Use Map to show the boundaries of the Specific Plan, and to update the General Plan Land Use Element and other related conforming amendments to General Plan exhibits to ensure that the Specific Plan and the General Plan, as amended, are internally consistent.

The Specific Plan’s new development potential is 325,000 square feet of additional non-residential development and 500 dwelling units. The Specific Plan assumes 395 additional dwelling units and 175,000 additional square feet of non-residential uses north of I-5 and 105 additional dwelling units and 150,000 additional square feet of non-residential uses south of I-5 (see Table 3-4, *Red Hill Avenue Specific Plan Development Estimates*, in Section 3.0, *Project Description*).

An analysis of the Specific Plan’s consistency with the applicable goals and policies of the General Plan is provided in Table 4.8-1, *General Plan Consistency Analysis*. The analysis concludes that the Specific Plan would be consistent with the applicable goals and policies of the City’s General Plan. Therefore, implementation of the Specific Plan would not result in significant conflicts related to relevant Tustin General Plan goals and policies.

Zoning Consistency

The Project requires a zoning amendment to create the “Red Hill Avenue Specific Plan (SP-13)”. The adoption of the zoning amendment would correct any inconsistencies between proposed and existing zoning within the Specific Plan area. Therefore, with the adoption of Specific Plan and proposed zone changes, no significant impacts would occur.

Impact Summary: ***Less Than Significant Impact.*** Implementation of the Specific Plan would not conflict with applicable land use policies and no mitigation is required.

4.8.5 CUMULATIVE IMPACTS

The Specific Plan is consistent with applicable land use goals and policies. Although other changes in land use plans and regulations may have occurred with past and present projects in the area and may be necessary for individual future projects, such changes have been, and would be, required to demonstrate consistency with General Plan and other City policies such that no significant adverse cumulative impact has occurred or would occur from such changes. Given that the proposed Specific Plan would be consistent with the land use policies of the applicable plans upon adoption of the Specific Plan, the Specific Plan would not combine with any past, present, or reasonably foreseeable future projects to cause a significant adverse cumulative land use impact based on a conflict with a plan or policy. Any associated physical impacts are covered in the individual topic Sections of this Program EIR. It is also anticipated that regional growth would be subject to review for consistency with adopted land use plans and policies by the County of Orange, City of Tustin, and other cities in Orange County, in accordance with the requirements of CEQA, the State Zoning and Planning Law, and the State Subdivision Map Act, all of which require findings of plan and policy consistency prior to approval of entitlements for development. Therefore, no significant cumulative impacts associated plans and policies are anticipated. In addition, the contribution of the Specific Plan to any such cumulative impacts would be less than significant because present and probable future projects are consistent with applicable plans, policies, and regulations. The Specific Plan would not contribute to any cumulative impacts associated with plan or policy inconsistency.

4.8.6 MITIGATION PROGRAM

Standard Conditions

No standard conditions and requirements are applicable to the Specific Plan.

Mitigation Measures

No mitigation measures are required.

4.8.7 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Impacts would be less than significant.

Table 4.8-1 - General Plan Consistency Analysis	
Applicable City of Tustin General Plan Goals and Policies	Project Consistency
Land Use Element	
Land Use Goal 1: Provide for a well-balanced land use pattern that accommodates existing and future needs for housing, commercial and industrial land, open space and community facilities and services, while maintaining a healthy, diversified economy adequate to provide future City services.	
LU Policy 1.1: Preserve the low-density quality of Tustin's existing single-family neighborhoods while permitting compatible multi-family development to meet regional housing needs where best suited from the standpoint of current development, accessibility, transportation, and public facilities.	Consistent: Land uses adjacent to the Specific Plan area and north of I-5 include a mix of single-family and multi-family residences; Pine Tree Park; and Tustin High School. Land uses adjacent to the Specific Plan area and south of I-5 include low-, medium-, and high-density residences and Frontier Park. The Specific Plan would allow for 500 additional residential units in an integrated mixed-use environment with connections to existing parks by limiting intensity near residential and through the retention of a primarily commercial character in the Specific Plan area.
LU Policy 1.2: Provide for and encourage the development of neighborhood-serving commercial uses in areas of Tustin presently underserved by such uses. Encourage the integration of retail or service commercial uses on the street level of office projects.	Consistent: The Specific Plan would allow for mixed-use developments with commercial retail and/or office on the ground floor and either residential or office uses on upper floors in a vertical mixed-use environment or commercial/office uses and residential uses in a horizontal mixed-use setting on a single development site. Freestanding commercial/office uses may continue to be the dominant pattern within the Specific Plan area.
LU Policy 1.3: Facilitate the development of vacant and underutilized freeway parcels with commercial uses where appropriate and compatible with surrounding uses to capitalize on their freeway access and visibility.	Consistent: See response to LU Policy 1.2.
LU Policy 1.5: Encourage compatible and complementary infill of previously by-passed parcels in areas already predominately developed.	Consistent: See response to LU Policy 1.2.
LU Policy 1.6: Ensure an adequate supply of commercial and industrial land within the City of Tustin for potential commercial and industrial expansion and development.	Consistent: See response to LU Policy 1.2. Industrial uses are not proposed within the Specific Plan area. This action would not preclude the provision of adequate industrial sites within the City.
LU Policy 1.7: As part of the City's attraction to business and industry, provide adequate sites to house future employees.	Consistent: The Specific Plan would allow for up to 500 additional dwelling units in the existing commercial district.

Table 4.8-1 - General Plan Consistency Analysis

<p align="center">Applicable City of Tustin General Plan Goals and Policies</p>	<p align="center">Project Consistency</p>
<p>LU Policy 1.8: Provide incentives to encourage lot consolidation and parcel assemblage to provide expanded opportunities for coordinated development and redevelopment.</p>	<p>Consistent: The Specific Plan encourages the consolidation of real property within the Specific Plan area as a way of maximizing its development and redevelopment potential. Consolidation of lots is considered a benefit to be considered in the allocation of residential units. At the discretion of the Community Development Director, additional height and residential unit allocations may be granted if a project substantially meets the Specific Plan findings for Residential Allocation Reservation.</p>
<p>LU Policy 1.10: Ensure that the distribution and intensity of land uses are consistent with the Land Use Plan and classification system.</p>	<p>Consistent: Adoption of the Specific Plan Project requires a General Plan Amendment to update the General Plan Land Use Element Land Use Map to show the boundaries of the Specific Plan, and a General Plan Amendment to update to the General Plan Land Use Element and other related conforming amendments to General Plan exhibits to ensure that the Specific Plan and the General Plan, as amended, are internally consistent.</p>
<p>LU Policy 1.11: Where feasible, increase the amount and network of public and private open space and recreational facilities which will be adequate in size and location to be usable for active or passive recreation as well as for visual relief.</p>	<p>Consistent: The City identifies parkland acreage requirements by multiplying the number of dwelling units by the parkland acres per unit based on the established density categories in the Tustin City Code. If future residential units are subject to the Quimby Act, the total amount of new parkland within the Specific Plan area would be approximately 3.35 acres. The Tustin City Code also notes that dedication of land may be required by the City for a condominium, stock cooperative, or community apartment project which exceeds 50 dwelling units, regardless of the number of parcels. Therefore, the City may require the dedication of land or payment of in-lieu fees regardless of where the future residential development projects within the Specific Plan are subdivisions.</p>
<p>Land Use Goal 2: Ensure that future land use decisions are the result of sound and comprehensive planning.</p>	
<p>LU Policy 2.1: Consider all General Plan goals and policies, including those in other General Plan elements, in evaluating proposed development projects for General Plan consistency.</p>	<p>Consistent: This table (Table 4.8-1, <i>General Plan Consistency Analysis</i>), evaluates the proposed Specific Plan’s consistency with relevant General Plan policies.</p>
<p>LU Policy 2.2: Maintain consistency between the Land Use Element, Zoning Ordinances, and other City ordinances, regulations and standards.</p>	<p>Consistent: See response to LU Policy 1.10. Adoption of the Specific Plan includes a zoning amendment to change the designation to “Red Hill Avenue Specific Plan (SP-13)”.</p>

Table 4.8-1 - General Plan Consistency Analysis	
Applicable City of Tustin General Plan Goals and Policies	Project Consistency
LU Policy 2.4: Encourage citizen participation in planning and development of land use programs.	Consistent: As a part of the development of the Specific Plan, the City held two Community Workshops to gain input from the community, and for attendees to learn about the planning process, Specific Plan goals and objectives, and the Project.
Land Use Goal 3: Ensure that new development is compatible with surrounding land uses in the community, the City's circulation network, availability of public facilities, existing development constraints and the City's unique characteristics and resources.	
LU Policy 3.6: Regulate development in identifiable hazardous areas or in areas that are environmentally sensitive.	Consistent: As discussed in Section 4.6, <i>Hazards and Hazardous Materials</i> , implementation of the Specific Plan could potentially create a hazard to the public or the environment through exposure to or transport of contaminated soil or groundwater because of a previous hazardous material incident at identified properties within the Specific Plan. This impact would be mitigated to a level considered less than significant with MM 4.6-1 and compliance with applicable local, State, and Federal regulations.
LU Policy 3.7: Encourage the preservation and enhancement of public vistas, particularly those seen from public places.	Consistent: The Specific Plan area is generally flat and divided by I-5. There are some distant views of the Santa Ana Mountains to the east and the San Gabriel Mountains to the north. However, these views are limited and often obstructed by existing development. The City of Tustin General Plan EIR determined that buildout, consistent with the General Plan, would not result in the obstruction of existing public or scenic views.
LU Policy 3.8: Encourage consolidation of parking and reciprocal access agreements among adjacent businesses.	Consistent: Applicants may propose alternative shared parking standards for parcels with a mixed-use development or develop that is used at non-traditional hours as set forth in the Tustin City Code and the Specific Plan.
Land Use Goal 4: Assure a safe, healthy and aesthetically pleasing community for residents and businesses.	
LU Policy 4.1: Mitigate traffic congestion and unacceptable levels of noise, odors, dust and light and glare which affect residential areas and sensitive receptors.	Consistent: As discussed in Section 4.13, <i>Traffic and Transportation</i> , Section 4.9, <i>Noise</i> , Section 4.2, <i>Air Quality</i> , and Section 4.1, <i>Aesthetics and Visual Resources</i> , impacts to traffic congestion, noise, odors, dust, and light and glare resulting from implementation of the Specific Plan would be reduced with implementation of the Mitigation Program.
LU Policy 4.2: Ensure a sensitive transition between commercial or industrial uses and residential uses by means of such techniques as buffering, landscaping and setbacks.	Consistent: The Specific Plan encourages mixed-use development. The Specific Plan Design Criteria discusses multiple uses of transition such as landscaping between parking and buildings; landscaping between Red Hill Avenue and entryways; transitions from heights of adjacent development and buildings on Red Hill Avenue; and landscape buffers between commercial and residential uses. The Project would be required to comply with State and

Table 4.8-1 - General Plan Consistency Analysis	
Applicable City of Tustin General Plan Goals and Policies	Project Consistency
	local health and safety requirements, including the City’s Fire Code and Fire Department Guidelines dictating requirements related to emergency access, fire protection, building construction, and storage and handling of hazardous materials. Potential safety hazards related to hazardous materials are addressed in Section 4.6, <i>Hazards and Hazardous Materials</i> .
LU Policy 4.3: Where mixed uses are permitted, ensure compatible integration of adjacent uses to minimize conflicts.	Consistent: To ensure integration of adjacent uses, the Specific Plan Design Criteria recommend varied building heights to provide visual interest and give the appearance of a collection of smaller structures. The Design Criteria focus on creating convenient access and connections for the residents in the surrounding neighborhoods. Refer to Section 4.1, <i>Aesthetics and Visual Resources</i> , for more information. See also response to Land Use Policy 4.2.
LU Policy 4.4: Encourage the elimination of non-conforming uses and buildings.	Consistent: It is the intent of the Specific Plan to discourage the long-term continuance of existing or to create new non-conforming uses and buildings within the Specific Plan area while providing provisions that permit these uses to expand or redevelop provided certain conditions are met.
LU Policy 4.5: Ensure adequate monitoring of those uses which involve hazardous materials to avoid industrial accidents, chemical spills, fires and explosions.	Consistent: As discussed in Section 4.6, <i>Hazards and Hazardous Materials</i> , the Specific Plan does not propose any industrial uses and, as such, would not potentially generate hazardous emissions or involve the handling of hazardous materials, substances, or waste in significant quantities.
LU Policy 4.6: Maintain and enhance the quality of healthy residential neighborhoods, and safeguard neighborhoods from intrusion by nonconforming and disruptive uses.	Consistent: See response to LU Policy 4.4. The Specific Plan would facilitate compatible land uses in an integrated mixed-use environment with appropriate connections to existing parks by limiting intensity near single-family homes; and through the retention of a primarily commercial character in the Specific Plan area.
Land Use Goal 5: Revitalize older commercial, industrial and residential uses and properties.	
LU Policy 5.1: Encourage and continue the use of redevelopment activities, including the provision of incentives for private development, joint public-private partnerships, and public improvements, in the area.	Consistent: The Specific Plan allows for and encourages the redevelopment of existing commercial, retail, and office uses. All park, open space, and recreational amenities are anticipated to be privately developed as part of future projects.

Table 4.8-1 - General Plan Consistency Analysis	
Applicable City of Tustin General Plan Goals and Policies	Project Consistency
LU Policy 5.2: Provide development incentives to facilitate the consolidation of individual parcels along the City's commercial corridors.	Consistent: See response to LU Policy 1.8.
LU Policy 5.3: Encourage the rehabilitation of existing commercial facades and signage.	Consistent: The Specific Plan includes Design Criteria for the rehabilitation of the existing commercial facades and signage along Red Hill Avenue.
LU Policy 5.8: Improve edge conditions and buffers between older residential neighborhoods and adjacent freeway edges and commercial and industrial uses.	Consistent: See response to LU Policies 1.1 and 1.2.
Land Use Goal 6: Improve urban design in Tustin to ensure development that is both architecturally and functionally compatible, and to create uniquely identifiable neighborhoods, commercial and business park districts.	
LU Policy 6.1: Develop citywide visual and circulation linkages through strengthened landscaping, pedestrian lighting, bicycle trails (where feasible) and public identity graphics along major street corridors.	Consistent: The second guiding principle for the Specific Plan is “improving visual and functional connections and linkages between Red Hill Avenue, surrounding residential neighborhoods, adjacent public and institutional uses, and Interstate 5.” These linkages include pedestrian, bike trails, and roads. Exterior lighting would be designed, arranged, directed, or shielded to contain direct illumination on site, thereby preventing excess illumination and light spillover onto adjoining land uses and/or roadways. Development would also be required to adhere to all applicable City lighting as set forth in Section 9.2, Specific Provisions, Section 9271h.h. Additionally, projects would be required to comply with California’s Building Energy Efficiency Standards for Residential and Nonresidential Buildings, Title 24, Part 6, of the California Code of Regulations, which outlines mandatory provisions for lighting control devices and luminaries. Refer to Section 4.1, <i>Aesthetics and Visual Resources</i> .
LU Policy 6.2: Encourage and promote high quality design and physical appearance in all development projects.	Consistent: The Specific Plan would allow for the redevelopment of existing commercial, retail, and office uses. The purpose of the Specific Plan is to guide future change, promote high quality development, and implement the community’s vision for the area. Chapter 5, Design Criteria, of the Specific Plan, provides a framework for high quality design of development projects within the Specific Plan area. The Design Criteria are proposed to encourage community identity and a sense of place. The guidelines are not intended to limit innovative design but rather provide clear direction.

Table 4.8-1 - General Plan Consistency Analysis	
Applicable City of Tustin General Plan Goals and Policies	Project Consistency
	Refer to Section 4.1, <i>Aesthetics and Visual Resources</i> , for more information about building materials and design.
<p>LU Policy 6.3: Improve the image of major highways through the use of pedestrian amenities, landscaping, lighting, graphics and/or other onsite and streetscape treatments.</p>	<p>Consistent: The Specific Plan’s proposed improvements to Red Hill Avenue consist of provision of on-street bike lanes, reduced lane widths, and landscaped medians where feasible. A consistent streetscape program would also be implemented as a part of the Specific Plan. In its ultimate configuration, Red Hill Avenue would include an 18-foot-wide Flexible Amenity Setback area. A minimum 4-foot wide parkway and 14-foot-wide flexible amenity area (total 18-foot-wide Flexible Amenity Setback) would accommodate a required minimum 4-foot-wide sidewalk, and options for outdoor dining, plaza spaces, and/or enhanced landscape. Areas of special paving are permitted and encouraged in the Flexible Amenity Setback areas. The proposed identity and wayfinding elements for the Specific Plan area would use materials and colors to create a distinct sense of place, while maintaining a traditional look and feel throughout the area (Exhibit 3-11, <i>Gateway Locations</i>).</p>
<p>LU Policy 6.4: Preserve and enhance the City's special residential character and "small town" quality by encouraging and maintaining Tustin's low density residential neighborhoods through enforcement of existing land use and property development standards and the harmonious blending of buildings and landscape.</p>	<p>Consistent: The Specific Plan area is developed primarily with commercial uses. The Project would not impact low-density residential neighborhoods in the surrounding area. For example, the maximum height for buildings within the Specific Plan area would be four stories. Five stories would be permitted subject to building massing and scale requirements set forth in Chapter 5, Design Criteria, of the Specific Plan. However, five stories would not be permitted adjacent to existing single family residential uses. Please refer to the LU Policy 1.1 and LU Policy 4.2 responses.</p>
<p>LU Policy 6.5: Preserve historically significant structures and sites, and encourage the conservation and rehabilitation of older buildings, sites and neighborhoods that contribute to the City's historic character.</p>	<p>Consistent: The Specific Plan area does not include any historically significant structures or sites. A residence, located at 14462 Red Hill Avenue, is identified as a significant resource (Status Code 3S – eligible for the National Register) (City of Tustin, 2003a). This residential property was built in 1915 by the Nisson family, and was noted as significant due to its architecture and association with early Tustin residents. The property is located adjacent to but not within the Specific Plan area. Other than improvements within the Red Hill Avenue right-of-way, no other Specific Plan improvements are proposed adjacent to this residence.</p>

Table 4.8-1 - General Plan Consistency Analysis	
Applicable City of Tustin General Plan Goals and Policies	Project Consistency
LU Policy 6.9: Upgrade the visual quality of edge conditions between industrial and residential uses through street tree planting and on-site landscaping.	Consistent: Industrial uses are not proposed within the Specific Plan area. The Specific Plan Development Standards and Design Criteria recommend proper screening of automobiles from public view and adjacent sensitive land uses through dense landscaping and/or low-profile walls. Please also refer to the LU Policy 6.3 response.
LU Policy 6.10: Reinforce Tustin's image and community identity within the greater Orange County urban area.	Consistent: Chapter 5, Design Criteria, of the Specific Plan, provides a framework for high quality design of development projects within the Specific Plan area. The Design Criteria are proposed to encourage community identity and a sense of place. The Specific Plan proposes streetscape landscaping improvements within the public rights-of-way along Red Hill Avenue, as well as gateway signage enhancements. The streetscape would include parkway plantings adjacent to the street along the entire length of Red Hill Avenue with new landscaped medians, the latter where feasible. The Specific Plan also proposes identity and wayfinding elements that use materials and colors which create a distinct sense of place. The Specific Plan encourages mixed-use development projects. The proposed redevelopment would be integrated with the adjacent community. The land uses would serve the Specific Plan area, surrounding neighbors, and the City.
LU Policy 6.11: Encourage the establishment of unique identity in the City's neighborhoods.	Consistent: As stated in the response to LU Policy 6.1 and Section 4.1, <i>Aesthetics and Visual Resources</i> , the surrounding neighborhoods to the Specific Plan area would not be impacted and would, therefore, retain their distinct character and identity. The design standards in the Specific Plan Design Criteria are maintaining or enhancing the character of development in the immediate neighborhood. Please refer to the Goal 6 land use policies' responses.
Land Use Goal 7: Promote expansion of the City's economic base and diversification of economic activity.	
LU Policy 7.1: Broaden the City's tax base by attracting businesses which will contribute to the City's economic growth and employment opportunities while ensuring compatibility with other General Plan goals and policies.	Consistent: The Specific Plan is a policy and regulatory document proposed to promote revitalization of the area by providing a mixed-use land use program, Design Criteria and a streetscape program to improve jobs/housing balance, improve aesthetics, and promote mobility.
LU Policy 7.2: Capitalize on office and hotel markets through encouraging the development of these uses.	Consistent: Office and motel/hotel uses would be permitted within the Specific Plan area.

Table 4.8-1 - General Plan Consistency Analysis	
Applicable City of Tustin General Plan Goals and Policies	Project Consistency
<p>LU Policy 7.5: (a) Focus retail development into consolidated, economically viable and attractive centers of adequate size and scale which offer a variety of retail goods and amenities; (b) reinforce quality highway and scenic development adjacent to the City's major transportation corridors; and (c) discourage typical strip commercial development.</p>	<p>Consistent: The Specific Plan area is located north and south of I-5 with on-ramps and off-ramps at Red Hill Avenue. It would provide high quality businesses with incentives for the revitalization of vacant or underperforming properties including strip commercial centers which currently exist.</p>
<p>Land Use Goal 8: Ensure that necessary public facilities and services should be available to accommodate development proposed on the Land Use Policy Map.</p>	
<p>LU Policy 8.1: Encourage within economic capabilities, a wide range of accessible public facilities and community services including fire and police protection, flood control and drainage, educational, cultural and recreational opportunities and other governmental and municipal services. Senate Bill (SB) 50, adopted in 1998, prohibits the City from using the inadequacy of school facilities as a basis for denying or conditioning the development of property. SB 50, however, gave school districts new authority to raise school impact mitigation fees. In addition, the voters passed Proposition 1A in November 1998, which provides \$9.2 billion dollars in bonds to construct new or expand existing schools. In summary, school districts have the financial means and legal authority to respond to new development.</p>	<p>Consistent: Applicable development projects would be required to comply with mandated fee programs for public school facilities. Implementation of the Specific Plan would not adversely affect public facilities or community services.</p>
<p>LU Policy 8.3: Coordinate and collaborate with other agencies providing public utility service to Tustin to define area wide and regional needs, projects and responsibilities.</p>	<p>Consistent: Future developments following the implementation of the Specific Plan would coordinate with public utility and service systems, including fire and police, to provide adequate utility and service systems to the Specific Plan area.</p>
<p>LU Policy 8.5: Continue to make incremental improvements to the flood control and drainage system.</p>	<p>Consistent: As discussed in Section 4.14, <i>Utilities</i>, the City and the County of Orange continue to make storm drain improvements. There are existing drainage facilities in the Specific Plan area. Storm drainage can be provided to development sites within the Specific Plan area without significantly impacting infrastructure in the City.</p>

Table 4.8-1 - General Plan Consistency Analysis	
Applicable City of Tustin General Plan Goals and Policies	Project Consistency
LU Policy 8.8: Maintain and improve, where necessary, the City's infrastructure and facilities.	Consistent: Future projects would participate in the provision of infrastructure and facilities, if needed, by constructing new facilities, dedicating land, and/or paying development fees.
Circulation Element	
Circulation Goal 1: Provide a system of streets that meets the needs of current and future inhabitants and facilitates the safe and efficient movement of people and goods throughout the City consistent with the City's ability to finance and maintain such a system.	
CIR Policy 1.8: Limit driveway access on arterial streets to maintain a desired quality of flow.	Consistent: Specific Plan Objective 5-2 is to minimize curb cuts or driveways onto arterial roads and collector streets. Additionally, the use of common or shared driveways between adjacent uses is strongly encouraged.
CIR Policy 1.10: Require that proposals for major new developments include a future traffic impact analysis which identifies measures to mitigate any identified project impacts.	Consistent: The Program EIR assesses the potential traffic impacts associated with development within the Specific Plan area. The City may evaluate future development projects for consistency with the findings of the Program EIR, including traffic.
CIR Policy 1.11: Encourage new development which facilitates transit services, provides for non-vehicular circulation and minimizes vehicle miles traveled.	Consistent: The Specific Plan's mixed-use land use plan is intended to provide a complementary mix of commercial, office and residential uses in an integrated, pedestrian-friendly environment. The proximity of residential uses to employment and commercial centers encourages people to walk or bike to work or shop, rather than drive a vehicle.
CIR Policy 1.13: Minimize effects of transportation noise wherever possible so as to comply with the Noise Element.	Consistent: Potential vehicular noise was evaluated in the Program EIR. No significant impacts are anticipated.
CIR Policy 1.14: Enhance the important role that streetscapes play in defining the character of the City by expanding street planning and design procedure to include aesthetic and environmental concerns, as well as traffic considerations. Develop a circulation system which highlights environmental amenities and scenic areas.	Consistent: The Specific Plan would implement a phased streetscape improvements program focused to enhance the visual appeal and identity of the Red Hill Avenue public realm. Streetscape improvements are proposed to promote attractive and compatible environments for new development. The streetscape would, at a minimum, include parkway plantings adjacent to the street along the entire length of Red Hill Avenue with new landscaped medians, where feasible.
CIR Policy 1.15: Ensure construction of existing roadways to planned widths, as new developments are constructed.	Consistent: Any roadway improvements, including the construction of landscaped medians, would occur within the existing roadway rights-of-way.

Table 4.8-1 - General Plan Consistency Analysis	
Applicable City of Tustin General Plan Goals and Policies	Project Consistency
CIR Policy 1.16: Continue to require dedication of right-of-way and construction of required public improvements on streets adjacent to construction projects at the developer’s expense.	Consistent: See response to CIR Policy 1.15.
Circulation Goal 4: Maximize the efficiency of the circulation system through the use of transportation system management and demand management strategies.	
CIR Policy 4.6: Encourage the promotion of ridesharing through publicity and provision of information to the public.	Consistent: MM 4.2-2, Vanpool/Rideshare Programs , requires that future commercial uses within the Specific Plan area include Codes, Covenants, and Restrictions (CC&Rs) that provide for a voluntary vanpool/shuttle and employee ridesharing programs for which all employees shall be eligible to participate. The voluntary ride sharing program could be achieved through a multi-faceted approach, such as designating a certain percentage of parking spaces for ride-sharing vehicles, designating adequate passenger loading and unloading and waiting areas for ridesharing vehicles, and/or providing a web site or message board for coordinating rides.
Circulation Goal 6: Increase the use of non-motorized modes of transportation.	
CIR Policy 6.1: Promote the safety of pedestrians and bicyclists by adhering to uniform standards and practices, including designation of bicycle lanes, off-road bicycle trails, proper signage, and adequate sidewalk, bicycle lane, and off-road bicycle trail widths.	Consistent: The proposed circulation components of the Specific Plan include revisions to the roadway cross section for Red Hill Avenue to include a striped on-street bike lane the entire length of the Specific Plan area to promote more multimodal travel opportunities. Enhanced bikeway signage would be introduced to promote bike usage and provide directions on how to connect to other bikeways or key points in the City. Enhanced or decorative bike racks are another feature that are encouraged within private developments. The intent of the recommended bikeway system improvements is to provide a safe, non-vehicular way for residents, employees, and students to travel.
CIR Policy 6.2: Maintain existing pedestrian facilities and require new development to provide pedestrian walkways between developments, schools and public facilities.	Consistent: There are existing continuous sidewalks on Red Hill Avenue and cross streets within the Specific Plan area. The Specific Plan proposes improvements to the public realm in the Specific Plan area with an enhanced streetscape that would balance vehicular and pedestrian needs with a Flexible Amenity Setback adjacent to the public right of way with landscaped parkways, street trees, landscaped median, and cohesive street furniture; allowing pedestrians to feel secure; cohesive wayfinding signage throughout the Specific Plan area; and safe, improved pedestrian crossings.

Table 4.8-1 - General Plan Consistency Analysis

Applicable City of Tustin General Plan Goals and Policies	Project Consistency
	The proposed circulation components of the Specific Plan include revisions to the roadway cross section for Red Hill Avenue to include a striped on-street bike lane the entire length of the Specific Plan area to promote more multimodal travel opportunities. Enhanced bikeway signage would be introduced to promote bike use and provide directions on how to connect to other bikeways or key points in the City. Enhanced or decorative bike racks are another feature that may be introduced within private developments.
CIR Policy 6.4: Support and coordinate the development and maintenance of bikeways in conjunction with the County of Orange Master Plan of Countywide Bikeways to assure that local bicycle routes will be compatible with routes of neighboring jurisdictions.	Consistent: The Specific Plan complies with the City of Tustin’s Master Bikeway Plan, which shows the entire extent of Red Hill Avenue within the City limits as a designated or a potential Class II bike lane.
CIR Policy 6.9: Support and coordinate the development and maintenance of bikeways and trails in conjunction with the master plans of the appropriate agencies.	Consistent: The City coordinates the implementation of the City of Tustin’s Master Bikeway Plan with OCTA.
CIR Policy 6.12: Provide for a non-vehicular circulation system that encourages bicycle transportation and pedestrian circulation.	Consistent: See response to CIR Policy 6.1.
Circulation Goal 7: Provide for well-designed and convenient parking facilities.	
CIR Policy 7.1: Consolidate parking, where appropriate, to eliminate the number of ingress and egress points onto arterials.	Consistent: See response to LU Policy 3.8.
CIR Policy 7.2: Provide sufficient off-street parking for all land uses.	Consistent: The Specific Plan’s Land Use Regulations include parking regulations to ensure that future development within the Specific Plan area provides sufficient off-street parking for all land uses.
CIR Policy 7.3: Encourage the efficient use of parking facilities, including provisions for shared use of facilities, smaller vehicles and other provisions to improve the effectiveness of City codes and ordinances.	Consistent: The Specific Plan’s Land Use Regulations provides provisions for the shared use of parking facilities for future developments within the Specific Plan area.

Table 4.8-1 - General Plan Consistency Analysis	
Applicable City of Tustin General Plan Goals and Policies	Project Consistency
CIR Policy 7.4: Reduce use of arterial streets for on-street parking in an effort to maximize traffic flow characteristics of roadways.	Consistent: Parking on or adjacent to Red Hill Avenue on private property or within the Flexible Amenity Setback area would be considered by the City on a case-by-case basis as part of a development application.
Conservation/Open Space/Recreation Element	
COSR Goal 1: Reduce air pollution through proper land use, transportation and energy use planning.	
COSR Policy 1.1: Cooperate with the South Coast Air Quality Management District and the Southern California Association of Governments in their effort to implement provisions of the region's Air Quality Management Plan, as amended.	Consistent: The Program EIR assesses potential air quality impacts associated with development of the Project. Mitigation is proposed as needed.
COSR Policy 1.2: Design safe and efficient vehicular access to commercial land uses from arterial streets to ensure efficient vehicular ingress and egress.	Consistent: Future projects within the Specific Plan area would go through the design review process, as detailed in the Specific Plan, to ensure safe and efficient vehicular access that complies with regulations in the Specific Plan, the Tustin City Code, and other applicable County, State, and Federal regulations.
COSR Policy 1.3: Locate multiple family developments close to commercial areas to encourage pedestrian rather than vehicular travel.	Consistent: The Specific Plan proposes a mix of land uses including commercial, office and residential uses in a pedestrian-friendly environment. The residential development would be in a mixed-use setting with multi-family units.
COSR Policy 1.5: Provide commercial areas that are conducive to pedestrian circulation.	Consistent: Refer to the response to CIR Policy 6.2.
COSR Policy 1.6: Cooperate and participate in regional air quality management plans, programs, and enforcement measures.	Consistent: See response to COSR Policy 1.1.
COSR Policy 1.7: Create the maximum possible opportunities for bicycles as an alternative transportation mode and recreational use.	Consistent: See response to COSR Policy 1.1.
COSR Goal 2: Improve air quality by influencing transportation choices of mode, time of day, or whether to travel and to establish a jobs/housing balance.	
COSR Policy 2.5: Promote all forms of transit serving the City and the urbanized portions of Orange County.	Consistent: Three OCTA bus routes currently serve the Specific Plan area. Transit schedules and frequencies are geared toward commuter needs and would be convenient for Specific Plan residents and patrons to/from the area.

Table 4.8-1 - General Plan Consistency Analysis	
Applicable City of Tustin General Plan Goals and Policies	Project Consistency
COSR Policy 2.6: Encourage non-motorized transportation through the provision of bicycle and pedestrian pathways.	Consistent: See response to CIR Policy 6.2.
COSR Policy 2.7: Encourage employer rideshare and transit incentives programs by local businesses.	Consistent: See response to CIR Policy 4.6.
COSR Policy 2.12: Implement land use policy contained in the Land Use Element toward the end of achieving jobs/housing balance goals.	Consistent: The Specific Plan would allow for 500 additional multi-family residences and 325,000 square feet of additional non-residential uses in a mixed-use setting. See response to CIR 1.11.
COSR Goal 3: Reduce particulate emissions to the greatest extent feasible.	
COSR Policy 3.1: Adopt incentives, regulations, and/or procedures to minimize particulate emissions from paved and unpaved roads, agricultural uses, parking lots, and building construction.	Consistent: Projects within the Specific Plan area would be required to comply with the Mitigation Program set forth in Section 4.2, <i>Air Quality</i> .
COSR Goal 4: Reduce emissions through reduced energy consumption.	
COSR Policy 4.1: Promote energy conservation in all sectors of the City including residential, commercial, and industrial.	Consistent: Projects within the Specific Plan area would be required to comply with the Mitigation Program set forth in Section 4.2, <i>Air Quality</i> , related to operational emission reductions.
COSR Policy 4.2: Promote local recycling of wastes and the use of recycled materials.	Consistent: Construction projects within the Specific Plan area would be required to comply with the Mitigation Program set forth in Section 4.14, <i>Utilities and Service Systems</i> , as well as State-mandated waste reduction requirements imposed on local jurisdictions.
COSR Goal 5: Protect water quality and conserve water supply.	
COSR Policy 5.1: Local drainage courses, channels, and creeks should be improved to protect vegetation and wildlife habitat wherever possible.	Consistent: As discussed in Section 4.7, <i>Hydrology and Water Quality</i> , receiving waters for the Specific Plan area consist of Peters Canyon Channel, San Diego Creek, and Newport Bay. Individual development projects within the Specific Plan area would comply with water quality regulations. Stormwater runoff generated from individual development projects would be managed in accordance with all applicable Federal, State, and local water quality rules and regulations to effectively preclude significant impacts on water quality.

Table 4.8-1 - General Plan Consistency Analysis	
Applicable City of Tustin General Plan Goals and Policies	Project Consistency
COSR Policy 5.2: Protect groundwater resources from depletion and sources of pollution.	Consistent: See response to COSR Policy 5.1. Because the Specific Plan area is primarily impervious, it does not contribute significantly to groundwater recharge.
COSR Policy 5.3: Conserve imported water by requiring water conservation techniques, water conserving appliances, and drought-resistant landscaping.	Consistent: The Specific Plan would adhere to the Tustin City Code Article 9, Chapter 7, Section 9704 which establishes standards for water-efficient landscapes. Therefore, the Specific Plan is consistent with COSR Policy 5.3.
COSR Policy 5.5: Protect water quality by responsible agency support of enforcement of water quality standards for water imported into the County, and to preserve the quality of water in the groundwater basin and streams.	Consistent: See response to COSR Policies 5.1 and 5.2.
COSR Policy 5.6: Coordinate water quality and supply programs with all responsible water agencies, and cooperate and participate in plan preparation and programs.	Consistent: See response to COSR Policies 5.1 and 5.2.
COSR Policy 5.7: Reduce and eliminate contamination of water supply from industrial operations.	Consistent: See response to COSR Policies 5.1 and 5.2. Industrial uses are not proposed within the Specific Plan area.
COSR Goal 8: Conserve and protect significant topographical features, important watershed areas, resources, and soils.	
COSR Policy 8.2: Control erosion during and following construction through proper grading techniques, vegetation replanting, and the installation of proper drainage control improvements.	Consistent: A Water Quality Management Plan and/or SWPPP, which includes site-specific best management practices (BMPs) for erosion and sediment control, would be prepared and implemented for projects within the Specific Plan area. As with all development in the City, projects in the Specific Plan area are required to submit grading plans, which would be accompanied by a soils engineering report, engineering geology report, and drainage calculations, to obtain the required grading permits. To reduce potential impacts, MM 4.4-2 would require that grading be limited to the minimum area necessary, and BMPs be implemented to minimize erosion and fugitive dust.
COSR Policy 8.3: Encourage the practice of proper soil management techniques to reduce erosion, sedimentation, and other soil-related problems.	Consistent: See response to COSR Policy 8.2. Additionally, MM 4.4-1 requires geotechnical evaluations for development projects in the Specific Plan area to identify appropriate engineering design measures to reduce potential impacts. Studies must be done as needed to evaluate slope stability, soil strength, position and adequacy of load-bearing soils, the effect of moisture variation on load-bearing capacity, compressibility, liquefaction, differential settlement, and expansiveness. Please also refer to Section 4.7, <i>Hydrology and</i>

Table 4.8-1 - General Plan Consistency Analysis	
Applicable City of Tustin General Plan Goals and Policies	Project Consistency
	<i>Water Quality.</i> Construction activities could loosen on-site soils or remove stabilizing vegetation and expose areas of loose soil. These areas, if not properly stabilized during construction, could be subject to increased erosion and siltation runoff. Projects would be required to comply with applicable State and local regulations.
COSR Policy 8.5: Review applications for building and grading permits, and applications for subdivision for adjacency to, threats from, and impacts on geological hazards arising from seismic events, landslides, or other geologic hazards such as expansive soils and subsidence areas.	Consistent: Mitigation Measure 4.4-1 requires geotechnical evaluations for any development project in the Specific Plan area to identify appropriate engineering design measures to reduce potential impacts from seismic events and other geologic hazards.
COSR Policy 8.8: Require geotechnical studies for developments that are proposed for steep slopes and where geological instability may be suspected. Where a precise location of the El Modena fault is determined, appropriate building setbacks shall be established per State law.	Consistent: See response to COSR Policy 8.5.
COSR Goal 10: Reduce solid waste produced within City.	
COSR Policy 10.1: Implement policies of the adopted Tustin Source Reduction and Recycling Element and Household Hazardous Waste Management Element.	Consistent: Future development within the Specific Plan area would be reviewed to ensure compliance with policies of the adopted Tustin Source Reduction and Recycling Element and Household Hazardous Waste Management Element.
COSR Goal 11: Conserve energy resources through use of available energy technology and conservation practices.	
COSR Policy 11.1: Encourage the use of new technologies and innovative building design, site design and orientation techniques which minimize energy use by taking advantage of sun/shade patterns, prevailing winds, landscaping, and building materials.	Consistent: Future development within the Specific Plan area would be constructed in accordance with the California Green Business Standards, which require energy efficiency, water efficiency, and material conservation and resource efficiency. Development would also be required to comply with Title 24 building code requirements which include measures related to solar, energy and water efficient building design, appliances, and fixtures.
COSR Policy 11.2: Maintain local legislation to establish, update and implement energy performance building code requirements established under State Title 24 Energy Regulations.	Consistent: The Specific Plan would require adherence to the Title 24 provisions regarding energy efficiency.

Table 4.8-1 - General Plan Consistency Analysis	
Applicable City of Tustin General Plan Goals and Policies	Project Consistency
COSR Goal 12: Maintain and enhance the City's unique culturally and historically significant building sites or features.	
COSR Policy 12.1: Identify, designate, and protect facilities of historical significance, where feasible.	Consistent: As discussed in Section 4.3, <i>Cultural Resources</i> , future development in the Specific Plan area would be reviewed for consistency with the Tustin City Code to protect currently designated and potential historic resources from significant adverse impacts. In addition to the Specific Plan Design Criteria and Tustin City Code, future development would be subject to compliance with the established Federal and State regulatory framework, which is intended to prevent or mitigate potential impacts to historical resources. No historical sites or structures currently exist within the Specific Plan area.
COSR Policy 12.2: Retain and protect significant areas of archaeological, paleontological, or historical value for education and scientific purposes.	Consistent: As discussed in Section 4.3, <i>Cultural Resources</i> , MM 4.3-1 and MM 4.3-2 would protect archaeological, paleontological, and historical resources should resources are discovered during ground disturbing activities.
COSR Policy 12.3: Development adjacent to a place, structure or object found to be of historic significance should be designed so that the uses permitted and the architectural design will protect the visual setting of the historical site.	Consistent: See response to LU Policy 6.5.
COSR Goal 13: Preserve Tustin's archaeological and paleontological resources.	
COSR Policy 13.1: Require a site inspection by certified archaeologists or paleontologists for new development in designated sensitive areas.	Consistent: As discussed in Section 4.3, <i>Cultural Resources</i> , the records search found one archaeological resource within 0.5 miles of the Specific Plan area. The Specific Plan area is not in an area that is considered sensitive for archaeological resources; compliance with MM 4.3-1, as appropriate, would be required. There is low likelihood for paleontological resources or other unique geologic features within the Specific Plan area. The records search determined that surface grading or shallow excavations would likely not uncover significant vertebrate fossil remains; compliance with MM 4.3-2, as appropriate, would be required. California Health and Safety Code Section 7050.5, CEQA Section 15064.5, and Public Resources Code Section 5097.98 mandate the process to be followed in the event of an accidental discovery of any human remains in a location other than a dedicated cemetery.
COSR Policy 13.2: Require mitigation measures where development will affect archaeological or paleontological resources.	Consistent: See response to COSR Policy 13.1.

Table 4.8-1 - General Plan Consistency Analysis	
Applicable City of Tustin General Plan Goals and Policies	Project Consistency
COSR Goal 14: Encourage the development and maintenance of a balanced system of public and private parks, recreation facilities, and open spaces that serves the needs of existing and future residents in the City of Tustin.	
COSR Policy 14.1: Provide Tustin with a full range of recreational and leisure opportunities that reflect the community's current and future population size and demographic character.	Consistent: The Specific Plan does not identify any specific development projects. However, non-residential uses within the Specific Plan area could include restaurants, etc. Additionally, the Specific Plan area is proximate to multiple parks and recreation areas (see Section 4.12, <i>Recreation</i>). Additionally, residential projects would be required to provide recreational amenities for residents.
COSR Policy 14.8: Encourage and, where appropriate, require the inclusion of recreation facilities and open space within future residential, industrial and commercial developments.	Consistent: See response to COSR Policy 14.1.
COSR Goal 18: Ensure that the recreational goals and policies are pursued and realized in an organized, incremental, and cost-effective manner and consistent with the City of Tustin's financial resources and legal authorities and the appropriate responsibilities of other agencies, the private sector, and individual and group users.	
COSR Policy 18.1: Incrementally promote a financially self-supporting system of recreational programs and facilities through various types of user fees and funding opportunities.	Consistent: Applicable projects would be required to comply with Tustin City Code Article 9, Chapter 3, Part 3, Section 9331.d regarding setting aside land or paying park dedication fees.
COSR Policy 18.5: Conserve the City's Quimby Act authority by utilizing, wherever practicable, the City's broad powers to enact and enforce its General Plan, Specific Plan(s), subdivision ordinance and Zoning Ordinance to secure public and private recreation sites, open space, trails, and other related land use objectives of community planning significance.	Consistent: See response to COSR Policy 18.1.
Housing Element	
Housing Supply Goal 1: Provide an adequate supply of housing to meet the need for a variety of housing types and the diverse socio-economic needs of all community residents.	
HE Policy 1.1: Promote the construction of additional dwelling units to accommodate Tustin's share of regional housing needs identified by the Southern California Association of	Consistent: The Specific Plan would allow for the development of 500 additional dwelling units in the Specific Plan area.

Table 4.8-1 - General Plan Consistency Analysis	
Applicable City of Tustin General Plan Goals and Policies	Project Consistency
Governments (SCAG), in accordance with adopted land use policies.	
HE Policy 1.2: Pursue smart growth principles by supporting the construction of higher density housing, affordable housing, and mixed use development (the vertical and horizontal integration of commercial and residential uses) in proximity to transit, services, shopping, schools, senior centers and recreational facilities, where possible.	Consistent: The Specific Plan’s mixed-use land use plan is intended to provide a complementary mix of commercial, office and residential uses in an integrated, pedestrian-friendly environment. The mixed-use concept is intended to introduce housing along with expanding and enhancing commercial opportunities to serve a primarily local customer base.
HE Policy 1.9: Utilize Planned Community Districts and Specific Plans to authorize and promote a variety of lot sizes and housing types.	Consistent: The use of a Specific Plan provides the means to achieve the regulations and policies responding to the vision for this area. See response to HE Policy 1.2.
HE Policy 1.17: Utilize design criteria in evaluating projects to ensure compatibility with surrounding developments, while taking into consideration ways to minimize housing costs.	Consistent: Future development within the Specific Plan would be subject to the requirements in Article 9, Chapter 2, Part 9 of the Tustin City Code in addition to the provisions in the Specific Plan.
Housing Supply Goal 3: Increase the percentage of ownership housing to ensure a reasonable balance of rental and owner-occupied housing within the City.	
HE Policy 3.1: Encourage new housing construction for home-ownership in a mixture of price ranges.	Consistent: The Specific Plan would allow for 500 dwelling units. The Specific Plan does not identify any specific development projects. However, this could include both for-sale and rental housing for different income levels.
Housing Supply Goal 6: Ensure that new housing is sensitive to the existing natural and built environment.	
HE Policy 6.1: Attempt to locate new housing facilities in proximity to services and employment centers thereby enabling walking or bicycling to places of employment.	Consistent: The Specific Plan would promote revitalization of the commercial district by providing a mixed-use land use program, Design Criteria, and a streetscape program to improve jobs/housing balance, improve aesthetics, and promote mobility. Please refer to the response to CIR Policy 6.2.
HE Policy 6.2: Promote energy conservation measures in the design of new housing units and the redevelopment of older housing units.	Consistent: New development and reconstruction of existing uses within the Specific Plan area would be constructed in accordance with the California Green Business Standards, which require energy efficiency, water efficiency, and material conservation and resource efficiency.

Table 4.8-1 - General Plan Consistency Analysis	
Applicable City of Tustin General Plan Goals and Policies	Project Consistency
HE Policy 6.4: Promote water-efficient landscapes, efficient irrigation, and use of permeable paving materials.	Consistent: The Specific Plan would comply with Tustin City Code Article 9, Chapter 7, Section 9704 which establishes standards for water-efficient landscapes.
Public Safety Element	
Public Safety Goal 3: Reduce the risk to the community from geologic and seismic hazards.	
PS Policy 3.1: Require review of soil and geologic conditions by a State-Licensed Engineering Geologist to determine stability prior to the approval of development where appropriate.	Consistent: See response to COSR Policy 8.5.
PS Policy 3.5: Ensure that structures for human occupancy, critical structures, and vital emergency facilities are designed to minimize damage from potential geologic/seismic hazards and avoid functional impairment.	Consistent: Development projects in the Specific Plan area would be required to design all development and associated infrastructure in accordance with applicable California Building Code seismic design standards. The Code contains provisions for earthquake safety based on factors including occupancy type, the types of soil and rock onsite, and the strength of ground motion with specified probability of occurring at the site.
Public Safety Element Goal 4: Reduce the risk to the community's inhabitants from exposure to hazardous materials and wastes.	
PS Policy 4.1: Cooperate with the County to implement applicable portions of the County's proposed Hazardous Waste Management Plan.	Consistent: See response to LU Policy 3.6.
PS Policy 4.3: Transportation of hazardous waste will be minimized and regulated where possible to avoid environmentally sensitive areas and populated, congested, and dangerous routes.	Consistent: See response to LU Policy 3.6.
PS Policy 4.4: Cooperate fully with other local, State, and Federal agencies to efficiently regulate the management of hazardous material and hazardous waste.	Consistent: See response to LU Policy 3.6.
PS Policy 4.9: Cooperate with responsible agencies to ensure that dry cleaners, film processors, auto service establishments and other service businesses generating hazardous waste materials are complying with approved disposal procedures.	Consistent: See response to LU Policy 3.6.

Table 4.8-1 - General Plan Consistency Analysis	
Applicable City of Tustin General Plan Goals and Policies	Project Consistency
PS Policy 4.15: Coordinate with the County of Orange in the implementation of the National Pollution Discharge Elimination System Permits (NPDES) regulations.	Consistent: See responses to COSR Policy 5.1 and COSR Policy 8.2.
Public Safety Goal 5: Reduce the risk to the community's inhabitants from fires or explosions.	
PS Policy 5.2: Encourage the use of fire retardant roofing materials.	Consistent: The Specific Plan would require new developments to adhere to the California Fire and Building Code, which reference the use of fire-retardant materials to reduce fire hazards and severity.
PS Policy 5.4: Enforce building code requirements that assure adequate fire protection.	Consistent: All development within the Specific Plan area would be required to comply with the existing International Fire Code and California Fire and Building Codes in the California Health and Safety Code. These Codes provide the minimum standard which buildings need to meet to be certified for occupancy.
PS Policy 5.6: Cooperate with Orange County Fire Authority to ensure the provision of adequate and cost-effective fire protection services.	Consistent: OCFA requires all applicants to submit a Fire Master Plan prior to the issues of grading or building permits. SC 4.11-1 addresses said requirement.
Public Safety Goal 6: Stabilize demand for law enforcement services.	
PS Policy 6.1: Provide appropriate levels of police protection within the community.	Consistent: The Specific Plan area is in a developed area that is currently served by the Tustin Police Department. The Specific Plan would introduce new residential and commercial uses and increase the population of the City. However, tax-base expansion from development of the Specific Plan would generate funding for the police protection services.
PS Policy 6.2: Periodically evaluate service levels and service criteria.	Consistent: See response to PS Policy 6.1.
PS Policy 6.5: Promote the use of defensible space concepts (site and building lighting, visual observation of open spaces, secured areas, etc.) in project design to enhance public safety.	Consistent: The Police Department reviews development plans for the incorporation of defensible space concepts.

Table 4.8-1 - General Plan Consistency Analysis	
Applicable City of Tustin General Plan Goals and Policies	Project Consistency
Noise Element	
Noise Goal 2: Incorporate noise considerations into land use planning decisions.	
N Policy 2.3: Use noise/land use compatibility standards as a guide for future planning and development.	Consistent: Section 4.9, Noise, identifies and addresses the General Plan’s noise standards including land use compatibility.
N Policy 2.4: Review proposed projects in terms of compatibility with nearby noise-sensitive land uses with the intent of reducing noise impacts.	Consistent: See response to N Policy 2.3.
N Policy 2.5: Require new residential developments located in proximity to existing commercial/industrial operations to control residential interior noise levels as a condition of approval.	Consistent: Future developments within the Specific Plan would be reviewed to ensure compliance with noise requirements.
N Policy 2.6: Require that commercial uses developed as part of a mixed-use project (with residential) not be noise intensive. Design mixed-use structures to prevent transfer of noise from the commercial to the residential use.	Consistent: See response to Noise Policy 2.5.
N Policy 2.7: Require new commercial/industrial operations located in proximity to existing or proposed residential areas to incorporate noise mitigation into project design.	Consistent: Section 4.9, Noise, identifies and addresses potential impacts associated with development within the Specific Plan area. The Specific Plan does not propose industrial uses.

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4.9 Noise

This EIR Section addresses potential impacts of implementing the Red Hill Avenue Specific Plan (Project) on noise and describes the regulatory and environmental settings. Technical data supporting the air quality analysis is included as Appendix E to this Program EIR.

4.9.1 NOISE CRITERIA AND DEFINITIONS

Noise level (or volume) is generally measured in decibels (dB) using the A-weighted sound pressure level (dBA). The A-weighting scale is an adjustment to the actual sound pressure levels to be consistent with that of human hearing response, which is most sensitive to frequencies around 4,000 Hertz (about the highest note on a piano) and less sensitive to low frequencies (below 100 Hertz).

Sound pressure level is measured on a logarithmic scale with the 0 dBA level based on the lowest detectable sound pressure level that people can perceive (an audible sound that is not zero sound pressure level). Based on the logarithmic scale, a doubling of sound energy is equivalent to an increase of 3 dBA, and a sound that is 10 dBA less than the ambient sound level has no effect on ambient noise. Because of the nature of the human ear, a sound must be about 10 dBA greater than the ambient noise level to be judged as twice as loud. In general, a 3 dBA change in the ambient noise level is noticeable, while 1 to 2 dBA changes generally are not perceived. Quiet suburban areas typically have noise levels in the range of 40 to 50 dBA, while areas adjacent to arterial streets are typically in the 50 to 60+ dBA range. Normal conversational levels are usually in the 60-65 dBA range, and ambient noise levels greater than 65 dBA can interrupt conversations.

Noise levels from point sources, such as those from individual pieces of machinery, typically attenuate (or drop off) at a rate of 6 dBA per doubling of distance from the noise source. Noise levels from lightly traveled roads typically attenuate at a rate of about 4.5 dBA per doubling of distance. Noise levels from heavily traveled roads typically attenuate at about 3 dBA per doubling of distance. Noise levels may also be reduced by intervening structures; generally, a single row of buildings between the receptor and the noise source reduces noise levels by about 5 dBA, while a solid wall or berm reduces noise levels by 5 to 10 dBA. The manner in which homes in California are constructed generally provides a reduction of exterior-to-interior noise levels of approximately 20 to 25 dBA with closed windows.

In addition to the instantaneous measurement of sound levels, the duration of sound is important since sounds that occur over a long period of time are more likely to be an annoyance or cause direct physical damage or environmental stress. One of the most frequently used noise metrics that considers both duration and sound power level is the equivalent noise level (Leq). The Leq is defined as the single steady A-weighted level that is equivalent to the same amount of energy as that contained in the actual fluctuating levels over a period of time (essentially, the average noise level). Typically, Leq is summed over a one-hour period. L_{max} is the highest RMS (root mean squared) sound pressure level within the measurement period and L_{min} is the lowest RMS sound pressure level within the measurement period.

The time period in which noise occurs is also important since nighttime noise tends to disturb people more than daytime noise. Community noise is usually measured using Day-Night Average Level (Ldn), which is the 24-hour average noise level with a 10 dBA penalty for noise occurring during nighttime (10:00 PM to 7:00 AM) hours, or Community Noise Equivalent Level (CNEL), which is the 24-hour average

noise level with a 5 dBA penalty for noise occurring from 7:00 PM to 10:00 PM and a 10 dBA penalty for noise occurring from 10 PM to 7 AM. Noise levels described by Ldn and CNEL typically do not differ by more than 1 dBA. In practice, CNEL and Ldn are often used interchangeably.

The relationship between peak hourly Leq values and associated Ldn/CNEL values depends on the distribution of traffic over the entire day. There is no precise way to convert a peak hour Leq to Ldn or CNEL. However, in urban areas near heavy traffic, the peak hour Leq is typically 2-4 dBA lower than the daily Ldn/CNEL. In less heavily developed areas, such as suburban areas, the peak hour Leq is often roughly equal to the daily Ldn/CNEL. For rural areas with little nighttime traffic, the peak hour Leq will often be 3-4 dBA greater than the daily Ldn/CNEL value. The Specific Plan area is in a developed area of the City; therefore, the Ldn/CNEL in the area would be roughly equal to the peak hour Leq.

Vibration refers to groundborne noise and perceptible motion. Vibration is a unique form of noise because its energy is carried through buildings, structures, and the ground, whereas noise is simply carried through the air. Thus, vibration is generally felt rather than heard. Some vibration effects can be caused by noise; e.g., the rattling of windows from passing trucks. This phenomenon is caused by the coupling of the acoustic energy at frequencies that are close to the resonant frequency of the material being vibrated. Typically, groundborne vibration generated by manmade activities attenuates rapidly as distance from the source of the vibration increases. The ground motion caused by vibration is measured as particle velocity in inches per second and is referenced as vibration decibels (VdB) in the U.S.

The background vibration velocity level in residential areas is usually around 50 VdB. The vibration velocity level threshold of perception for humans is approximately 65 VdB. A vibration velocity of 75 VdB is the approximate division between barely perceptible and distinctly perceptible levels for many people. The range of interest is from approximately 50 VdB, which is the typical background vibration velocity level, to 100 VdB, which is the general threshold where minor damage can occur in fragile buildings. Most perceptible indoor vibration is caused by sources within buildings such as operation of mechanical equipment, movement of people, or the slamming of doors. Typical outdoor sources of perceptible groundborne vibration are construction equipment, steel-wheeled trains, and traffic on rough roads.

4.9.2 REGULATORY SETTING

Federal

Occupational Safety and Health Administration

Under the Occupational Safety and Health Act of 1970 (29 U.S.C. § 651 et seq.), the U.S. Department of Labor, Occupational Safety and Health Administration (OSHA) adopted regulations (29 CFR § 1910.95) designed to protect workers against the effects of occupational noise exposure. These regulations identify limits on noise exposure levels as a function of the amount of time during which the worker is exposed. The regulations further specify requirements for a hearing conservation program (§ 1910.95(c)), a monitoring program (§ 1910.95(d)), an audiometric testing program (§ 1910.95(g)), and hearing protection (§ 1910.95(i)). There are no Federal laws governing community noise.

State of California

California Building Code

Title 24 of the California Code of Regulations contains standards for allowable interior noise levels associated with exterior noise sources. The standards apply to new hotels, motels, dormitories, apartment houses, and dwellings other than detached single-family residences. The standards require interior noise level attributable to exterior sources not exceed 45 dBA CNEL in any habitable room. Multi-family residential structures proposed where the CNEL would exceed 60 dBA requires an acoustical analysis showing that the proposed building design would achieve the prescribed allowable interior noise standard.

Regional and Local

City of Tustin General Plan Noise Element

California Government Code Section 65302(g) requires that a Noise Element be included in the General Plan of cities and counties. The General Plan Noise Element identifies sources of noise and provides objectives and policies designed to incorporate noise control in the planning process. It requires protection of sensitive receptors from excessive noise associated with transportation and non-transportation activities. The three main goals of the Noise Element are to require the use of noise control measures to reduce the impact from transportation related noise; to incorporate noise consideration into land use planning decisions; and to develop measures to control non-transportation noise impacts. To ensure that different land uses are developed in compatible noise environments, the City’s Noise Element establishes noise guidelines for land use planning, shown in Table 4.9-1, *General Plan Noise Element Noise Standards*.

Land Use	Noise Standard	
	Interior ^{a, b}	Exterior
Residential: single-family, multi-family, duplex, mobile home	45 dBA CNEL	65 dBA CNEL ^c
Residential: transient lodging, hotels, motels, nursing homes, hospitals	45 dBA CNEL	65 dBA CNEL ^c
Private office, church sanctuaries, libraries, boardrooms, conference rooms, theaters, auditoriums, concert halls, meeting rooms, etc.	45 dBA Leq (12)	--
Schools	45 dBA Leq (12)	67 dBA Leq (12) ^d
General offices, reception, clerical, etc.	50 dBA Leq (12)	--
Bank lobby, retail store, restaurant, typing pool, etc.	55 dBA Leq (12)	--
Manufacturing, kitchen, warehousing, etc.	65 dBA Leq (12)	--
Parks, playgrounds	--	65 dBA CNEL ^d
Golf courses, outdoor spectator sports, amusement parks	--	70 dBA CNEL ^d
Note: Leq (12) = A-weighted equivalent sound level averaged over a 12-hour period (usually the hours of operation) a. Noise standard with windows closed. Mechanical ventilation shall be provided per UBC requirements to provide a habitable environment. b. Indoor environment excluding bathrooms, toilets, closets, and corridors. c. Outdoor environment limited to rear yard of single-family homes, multi-family patios, and balconies (with a depth of 6 feet or more) and common recreation areas. d. Outdoor environment limited to playground areas, picnic areas, and other areas of frequent human use		

Tustin City Code

The Tustin City Code establishes the City’s standards, guidelines, and procedures concerning the regulation of operational noise. These are described specifically in Article 4, Chapter 6, Noise Control. The Code presents permissible noise intrusion levels by land use, as shown in Table 4.9-2, *City of Tustin Exterior Noise Standards*. These standards are not to be exceeded for a cumulative period of 30 minutes in any hour, by 5 dBA for a cumulative period of 15 minutes in an hour, by 10 dBA for a cumulative period of 5 minutes in any hour, by 15 dBA for a cumulative period of 1 minute in any hour, or by 20 dBA for any period of time. When the ambient noise already exceeds these standards, the allowable noise shall be increased to reflect the ambient noise accordingly.

Land Use Category	Time Period	Noise Level
Residential	7 AM to 10 PM	55 dBA
	10PM to 7 AM	50 dBA
Commercial	Anytime	60 dBA
Industrial	Anytime	70 dBA
Institutional (e.g., hospitals, convalescent homes, schools, libraries, churches)	Anytime	55 dBA
Mixed Use	Anytime	60 dBA
Non-Urban	Anytime	70 dBA

Section 4615 of the Tustin City Code contains interior noise standards for residential land uses shown in Table 4.9-3, *City of Tustin Interior Noise Standards*.

Land Use Category	Time Period	Noise Level
Residential	7AM to 10 PM	55 dBA
	10 PM to 7 AM	45 dBA
Mixed Use (residential uses only)	7 AM to 10 PM	55 dBA
	10 PM to 7 AM	45 dBA

The Tustin City Code recognizes that some forms of noise are required for urban development and maintenance, and are difficult to control. Tustin City Code Section 4616(2), exempts noise sources associated with construction, repair, remodeling, or grading of any real property between the hours of 7:00 AM and 6:00 PM Monday through Friday and the hours of 9:00 AM and 5:00 PM on Saturdays, excluding City observed holidays. The exemption also applies to “trucks, vehicles, and equipment that are making or are involved with material deliveries, loading or transfer of materials, equipment service, maintenance of any devices or appurtenances to any construction project in the City.”

4.9.3 ENVIRONMENTAL SETTING

The primary off-site noise sources in the Specific Plan area are motor vehicles (e.g., automobiles, buses, and trucks) along I-5 and Red Hill Avenue. Motor vehicle noise is of concern because it is characterized by a high number of individual events, which often create sustained noise levels. Ambient noise levels would be expected to be highest during the daytime and rush hour unless congestion slows speeds substantially.

To determine ambient noise levels in the Specific Plan area, three 15-minute noise measurements were taken between 8:08 AM and 9:13 AM on June 14, 2017. Exhibit 4.9-1, *Noise Measurement Locations*, shows the locations of noise measurements. Noise Measurement 1 was taken to represent the ambient noise level at the northeast end of the Specific Plan area; Noise Measurement 2 was taken to represent the ambient noise level in the middle of the Specific Plan area; and, Noise Measurement 3 was taken to represent the ambient noise level in the southwest portion of the Specific Plan area. The primary noise source was vehicular traffic on Red Hill Avenue. Table 4.9-4, *Noise Monitoring Results*, lists the ambient noise levels (Leqs) measured at these locations.

Measurement Location	Measurement Location	Sample Times	Approximate Distance to Red Hill Avenue Centerline	Leq [15] (dBA) ^a
1	San Juan St. west of Red Hill Ave.	8:08 AM – 8:23 AM	180 feet	60.8
2	Red Hill Ave. southwest of I-5	8:32 AM – 8:47 AM	40 feet	70.0
3	Red Hill Ave. southwest Specific Plan area (north of Walnut Ave.)	8:58 AM – 9:13 AM	40 feet	70.0

a. The equivalent noise level (Leq) is defined as the single steady A-weighted level that is equivalent to the same amount of energy as that contained in the actual fluctuating levels over a period of time (essentially, the average noise level). For this measurement, the Leq was over a 15-minute period (Leq [15]).

Note: Field measurements were taken on June 14, 2017 field using ANSI Type II Integrating sound level meter.

Sensitive Receptors

Noise exposure goals for various types of land uses reflect the varying noise sensitivities associated with those uses. Noise-sensitive land uses typically include residences, hospitals, schools, guest lodging, libraries, and parks. Land uses surrounding the Specific Plan area include single-family and multi-family residential development and schools and park (adjacent to Bryan and Red Hill Avenue). In addition, the Specific Plan would allow for residential development. Commercial buildings, which are not typically considered noise-sensitive, are located within the Specific Plan area. The nearest sensitive receptors are residences approximately 50 feet from the Specific Plan area, located along and adjacent to various roadways such as Red Hill Avenue, Mitchell Avenue, San Juan Street, Bryan Avenue, Walnut Avenue, Nissan Road, and El Camino Real.

4.9.4 THRESHOLDS OF SIGNIFICANCE

The following significance criteria are from CEQA Guidelines Appendix G. The Specific Plan would result in a significant impact on the environment if it would:

- Threshold 4.9-1** Expose persons to or generate, noise levels in excess of standards established in the local general plan or noise ordinance or applicable standards of other agencies.
- Threshold 4.9-2** Expose persons to, or generate, excessive groundborne vibration or groundborne noise levels.
- Threshold 4.9-3** Result in a substantial temporary or periodic increase in ambient noise levels in the Project vicinity above levels existing without the project.
- Threshold 4.9-4** Result in a substantial permanent increase in ambient noise levels in the Project vicinity above levels existing without the project.

As addressed in Section 1.5, *Summary of Effects with No Impact*, the City has determined that the Specific Plan would not have a significant impact on the following thresholds and that no further analysis is required:

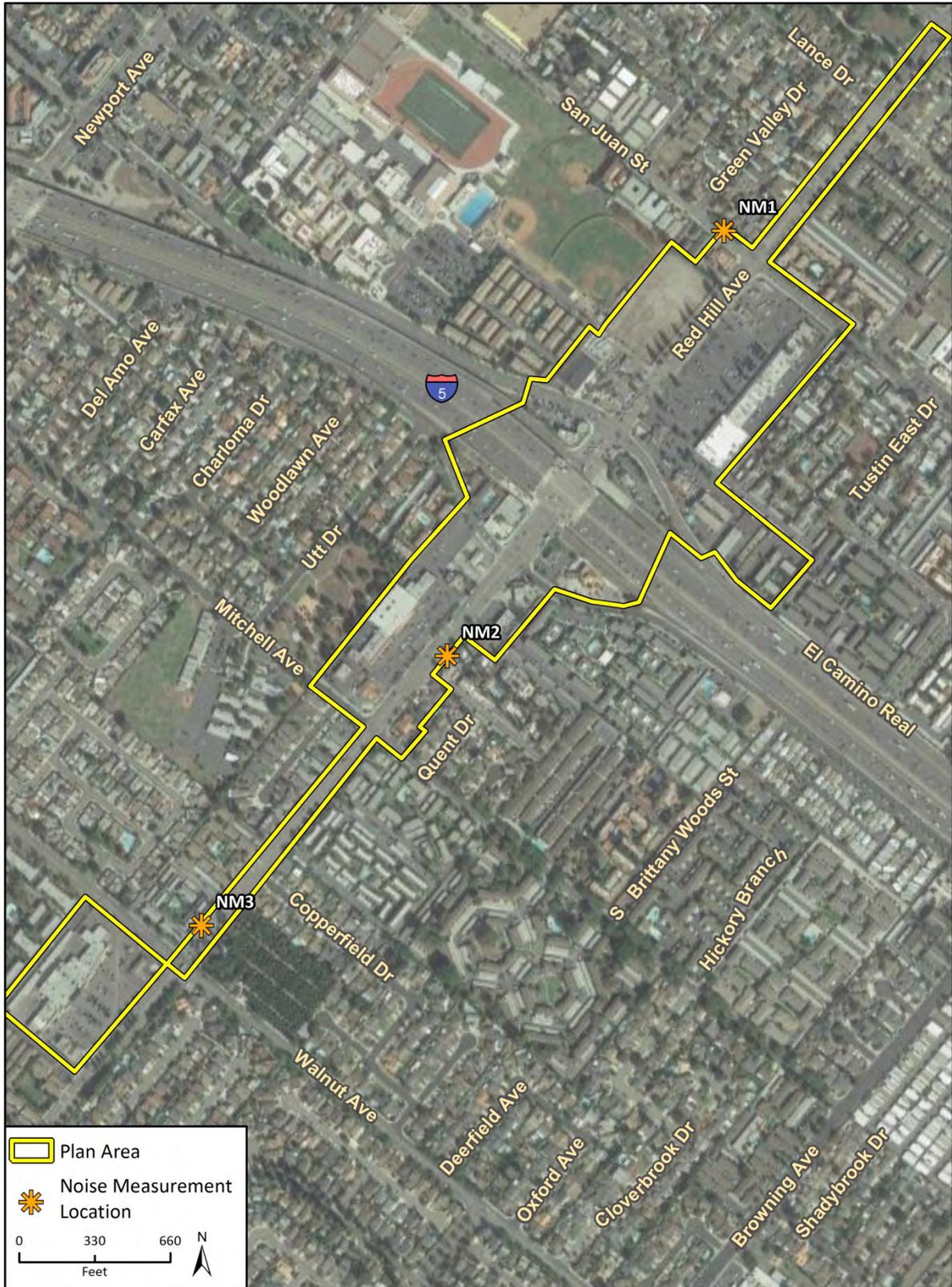
- For a project located within an airport land use compatibility plan or where such a plan has not been adopted, within two miles of a public airport or public use airport, expose people residing or working in the Project area to excessive noise levels.
- For a project located within the vicinity of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

4.9.5 ENVIRONMENTAL IMPACTS

Threshold 4.9-1:	Would implementation of the Specific Plan expose persons to or generate, noise levels in excess of standards established in the local general plan or noise ordinance or applicable standards of other agencies?
Threshold 4.9-3:	Would implementation of the Specific Plan result in a substantial temporary or periodic increase in ambient noise levels in the vicinity of the Specific Plan area above levels existing without the Specific Plan?

Construction Noise

Construction noise levels were estimated using the FHWA Roadway Construction Noise Model. Tustin City Code Section 4617(e) exempts construction noise between the hours of 7:00 AM and 6:00 PM Monday through Friday and the hours of 9:00 AM and 5:00 PM on Saturdays, excluding City observed holidays, and requires that construction noise occur within these hours. Construction noise would be considered significant if it occurred outside of the specified hours per Tustin City Code Section 4616(2).



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Fig 2 Noise Measurements

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Individual projects within the Specific Plan area would generate temporary construction noise that could exceed existing ambient noise levels in the Specific Plan area, but construction noise would be short-term in duration, and would cease with the completion of individual development projects. Noise impacts associated with construction activity are a function of the noise generated by construction equipment, the location and sensitivity of nearby land uses, and the timing and duration of the noise-generating activities. Typical noise levels from individual pieces of heavy construction equipment at a distance of 50 feet from the source range from 73 to 88 dBA L_{max} . Therefore, temporary construction noise could affect noise-sensitive receptors in and near the Specific Plan area, particularly existing and planned residences and schools.

As shown in Table 4.9-5, *Construction Noise Levels*, operation of equipment during various phases of construction could generate Leqs of approximately 74 to 87 dBA at the closest receptors, which are residences 50 feet from the Specific Plan area along and adjacent to various roadways, such as Red Hill Avenue, Mitchell Avenue, and San Juan Street. Such noise levels would exceed ambient noise levels in the area. As indicated in Table 4.9-4 ambient noise levels range from 60.8 to 70.0 dBA and potentially already exceed the City’s 55 dBA daytime standards for residential uses. However, equipment noise levels are based on a standard noise attenuation rate of 6 dBA per doubling of distance from the highest-volume individual pieces of equipment. These estimates do not take into account any intervening structures that would block noise from construction sites; therefore, these estimates represent a conservative assessment of temporary construction noise levels within the Specific Plan area.

Construction Phase	Equipment	Estimated Noise at 50 feet (dBA Lmax)
Demolition	Concrete Saw, Dozer, Excavator	86
Site Preparation	Backhoe, Dozer	84
Grading	Backhoe, Dozer, Grader, Excavator, Scraper	87
Building Construction	Backhoe, Crane, Forklift, Generator, Welder	87
Architectural Coating	Air Compressor	74
Paving	Paver, Roller	82

Note: Construction noise levels modeled with the FHWA Roadway Construction Noise Model (RCNM), Version 1.1.

Section 4, Chapter 6 of the Tustin City Code exempts noise from construction activities between the hours of 7:00 AM and 6:00 PM Monday through Friday, and 9:00 AM and 5:00 PM on Saturdays, excluding City observed Federal holidays and requires construction to occur within these hours. Construction of individual projects within the Specific Plan area would be required to occur within the hours, as specified in the Tustin City Code, per Section 4616(2); refer to SC 4.9-1. Additionally, construction-related noise increases would be temporary in nature, and the operation of each piece of construction equipment would not be constant throughout the construction day, as equipment would be turned off when they are not in use. The typical operating cycle for a piece of construction equipment would involve one or two minutes of full power operation followed by three or four minutes at lower power settings.

As the Specific Plan does not propose site-specific development, the phasing and construction details for each future development would be evaluated on a case-by-case basis. Implementation of MM 4.9-1 would ensure construction noise associated with future development does not exceed 85 dBA Leq¹, through the use of a site-specific noise reduction features. MM 4.9-1 provides Best Management Practices such as noise barriers, using sound dampening mats or blankets on engine compartments of heavy mobile equipment, and limiting haul trips. With implementation of MM 4.9-1 as well as compliance with the Tustin City Code (SC 4.9-1), construction noise impacts would be reduced to a less than significant level.

Operational Noise

Consistent with the General Plan Noise Element (Table 4.9-1) noise impacts at new noise-sensitive receptors within the Specific Plan area would be significant if new residences would be exposed to exterior noise that exceeds 65 dBA CNEL or interior noise that exceeds 45 dBA CNEL. Noise impacts to new commercial/non-residential land uses in the Specific Plan area would be significant if the exterior noise exceeds 67 dBA Leq or interior noise exceeds 50 dBA Leq. Consistent with the Tustin City Code, noise impacts to the nearest sensitive receptors would be significant if implementation of the Specific Plan would result in noise that exceeds 55 dBA Leq from 7:00 AM to 10:00 PM and 50 dBA Leq from 10:00 PM to 7:00 AM.

The Specific Plan Project would allow for up to 500 additional residential units (integrated mixed-use) and 325,000 additional square feet (sf) of new non-residential uses in the Specific Plan area. The primary noise sources from these land uses include landscaping, maintenance activities, mechanical equipment, and delivery and trash hauling.

Heating, Ventilation, and Air Conditioning Equipment

Rooftop-mounted heating, ventilation, and air conditioning (HVAC) equipment serving new development in the Specific Plan area could be located close to existing or new residences. HVAC systems are typically installed with shielding to reduce noise. Noise levels from commercial HVAC systems typically range from 60 to 70 dBA Leq at 15 feet from the source. Based on this noise range, noise-sensitive receptors located as close as 50 feet to HVAC units would not be exposed to equipment noise exceeding 60 dBA Leq, which exceeds the 55 dBA Leq standard as established by the General Plan Noise Element. Existing ambient noise levels along arterial roadways and near sensitive receptors in the Specific Plan area were approximately 61 to 70 dBA Leq (Table 4.9-4). The estimated noise level from HVAC equipment at the nearest existing noise-sensitive receptors would not exceed these measured ambient noise levels.

Delivery and Trash Hauling Trucks

The Specific Plan would increase the number of delivery and trash hauling trucks traveling through the Specific Plan area. The California Motor Vehicle Code establishes maximum sound levels for trucks operating at speeds less than 35 miles per hour (Section 23130) of 86 dBA Leq at 50 feet, equivalent to 92 dBA Leq at 25 feet. However, maximum noise levels generated by passage of medium-duty delivery trucks generally range from approximately 61 to 70 dBA Leq at 25 feet, depending on the speed at which the

¹ National Institute for Occupational Safety and Health (NIOSH), *Criteria for Recommended Standard: Occupational Noise Exposure*, 1998.

truck is driving. Noise from individual trucks moving or idling in the Specific Plan area may be as high as 70 dBA at adjacent properties. However, California State law prohibits trucks from idling for longer than five minutes. Tustin City Code Chapter 3, Section 4313 prohibits the collection of solid waste from within 200 feet of any residences in the City between the hours of 6:00 PM and 7:00 AM and on Federal holidays. Therefore, noise from increased waste delivery would not disturb residences during the hours when people are typically sleeping and more sensitive to noise. Delivery and trash truck trips in the Specific Plan area would be a periodic source of operational noise. However, because trash trucks would be required to comply with the Tustin City Code standards for trash collection vehicles and delivery trucks would be subject to State regulations, there would not be a significant noise impact.

New Residential Units

Due to the existing ambient noise in the Specific Plan area (refer to Table 4.9-4) and traffic noise within the Specific Plan area, potential future residential units could be exposed to exterior noise levels greater than 65 dBA CNEL, which is considered normally incompatible by the City of Tustin General Plan Noise Element. The City requires proposed developments to prepare and submit an acoustical report to demonstrate compliance with the General Plan and to identify all reasonable and feasible measures to satisfy the 65 dBA CNEL exterior noise level standard and 45 dBA CNEL interior noise level standard.

Typical building construction provides a noise reduction of approximately 12 dBA with "windows open" and a minimum 24 dBA noise reduction with "windows closed" (EPA, 1974). However, because exterior noise levels exceed 70 dBA CNEL in areas of the Specific Plan where residential units are proposed, an interior noise analysis based on site-specific architectural floor plans and elevations would be required pursuant to SC 4.9-2, to satisfy the City of Tustin General Plan Noise Element, Table N-3, 45 dBA CNEL interior noise level standard for residential units. With implementation of existing regulations, as implemented through SC 4.9-2, impacts related to development of residential units within the Specific Plan area would be anticipated to be less than significant.

Impact Summary: **Thresholds 4.9-1 and 4.9-3: *Less Than Significant Impact with Mitigation.***
 Construction noise that complies with the required construction hours is exempt from the City's noise standards. Additionally, implementation of MM 4.9-1 and SC 4.9-1 would ensure that construction noise would be reduced to a less than significant level. Stationary noise resulting from implementation of the Specific Plan would be less than significant with implementation of SC 4.9-2.

Threshold 4.9-2: **Would implementation of the Specific Plan expose persons to, or generate, excessive groundborne vibration or groundborne noise levels?**

Construction of individual projects within the Specific Plan area could generate vibration impacts at nearby sensitive receptors. The City has not adopted any thresholds for construction or operational groundborne vibration impacts. Table 4.9-6, *Human Response to Different Levels of Groundborne Vibration*, shows the human response to different levels of groundborne vibration. The vibration thresholds established by the FTA are 65 VdB for buildings where low ambient vibration is essential for interior operations (such as hospitals and recording studios), 72 VdB for residences and buildings where people normally sleep, including hotels, and 75 VdB for institutional land uses with primary daytime use (such as churches and schools). 100 VdB is the threshold where minor damage to fragile buildings may

occur. Vibration would be considered significant if it exceeded the 72 VdB vibration threshold for residential buildings, 75 VdB vibration threshold for institutional land uses, or 100 VdB for fragile buildings. These thresholds apply to “frequent events,” which the FTA defines as vibration events occurring more than 70 times per day. The thresholds for frequent events are considered appropriate because of the scale and duration of proposed construction activity.

Table 4.9-6. Human Response to Different Levels of Groundborne Vibration	
Vibration Velocity Level	Human Reaction
65 VdB	Approximate threshold of perception for many people.
75 VdB	Approximate dividing line between barely perceptible and distinctly perceptible. Many people find that transportation-related vibration at this level is unacceptable.
85 VdB	Vibration acceptable only if there are an infrequent number of events per day.
Source: FTA, <i>Transit Noise and Vibration Impact Assessment</i> , 2006.	

Construction activity associated with implementation of the Specific Plan would be a temporary source of groundborne vibration proximate to the Specific Plan area. Buildings near a construction site respond to vibration to varying degrees ranging from imperceptible effects at the lowest levels, to low rumbling sounds and perceptible vibrations at moderate levels, and up to minor damage at the highest vibration levels. Vibration levels attenuate quickly over distance, so vibration would not be noticeable at receptors outside of the immediate vicinity of construction.

Table 4.9-7, *Vibration Source Levels for Construction Equipment*, lists groundborne vibration levels from various types of heavy construction equipment. Because the Tustin City Code limits the hours of construction, residents would not be exposed to substantial vibration levels exceeding 72 VdB during the hours when people normally sleep. It is unknown whether impact pile drivers would be used for any development within the Specific Plan area. However, vibration levels up to 103 VdB from impact pile drivers would exceed the 100 VdB threshold for fragile buildings, such as the structure at 14462 Red Hill Avenue designated by Tustin as a historic resource. Vibration levels up to 79 VdB would exceed the threshold of 75 VdB for institutional land uses like schools with primary daytime use. The temporary use of impact pile drivers may disturb classes and other educational activities at nearby schools, such as Benjamin Beswick Elementary School and Marjorie Veeh Elementary School. Therefore, vibration impacts would be potentially significant.

MM 4.9-2 would minimize and avoid vibration impacts related to pile-driving. Potential construction vibration impacts would be less than significant with mitigation.

Impact Summary: **Threshold 4.9-2: *Less Than Significant Impact with Mitigation.*** Vibrations related to construction of individual projects within the Specific Plan would be potentially significant. MM 4.9-2 would minimize and avoid vibration impacts related to pile-driving. Therefore, construction vibration impacts would be less than significant with mitigation.

Equipment	Approximate VdB at 50 feet ^a	Approximate VdB at 300 feet ^a
Caisson Drilling	76	55
Hoe Ram	76	55
Impact Pile Driver		
Upper Range	103	79
Typical	95	72
Jackhammer	68	46
Large Bulldozer	76	55
Loaded Trucks	75	53
Small Bulldozer	48	25
Sonic Pile Driver		
Upper Range	96	73
Typical	84	60
Vibratory Roller	85	62

a. Distance to nearest sensitive receptors.
Note: Based on reference data within the FTA *Transit Noise and Vibration Impact Assessment*, 2006.

Threshold 4.9-4: **Would implementation of the Specific Plan result in a substantial permanent increase in ambient noise levels in the vicinity of the Specific Plan area above levels existing without the Specific Plan?**

Project-Related Traffic Noise

The primary source of noise in the Specific Plan area is motor vehicle noise (e.g., automobiles, buses, trucks, and motorcycles) on roadways, including I-5. The City of Tustin General Plan Noise Element includes noise contours that define the noise exposure in specific areas based on existing traffic conditions, train operations, and environmental conditions. According to the Noise Element, the Specific Plan area is exposed to a CNEL over 65 dBA and is identified as an area of special concern because residences are exposed to noise in excess of City standards.

Existing Traffic Noise. The majority of the existing noise in the project area is generated from vehicle sources along Red Hill Avenue. Mobile source noise was modeled using the Federal Highway Administration’s Highway Noise Prediction Model (FHWA RD-77-108), which incorporates several roadway and site parameters. The model does not account for ambient noise levels. The analysis of anticipated noise levels from traffic generated by implementation of the Specific Plan is based on the Traffic Impact Analysis for the Specific Plan (Kimley-Horn, 2018).

Existing traffic noise levels were calculated for Red Hill Avenue as shown in Table 4.9-8, *Existing and Existing Plus Specific Plan Traffic Noise Levels*. As shown in the table, the existing traffic noise levels range from a low of 71.3 CNEL from Bryan Avenue to San Juan Street, to a high of 72.6 CNEL from Nisson Road to Mitchell Avenue. Noise levels during the Existing Plus Project scenario would range from 71.8 dBA CNEL from Bryan Avenue to San Juan Street to 73.4 dBA CNEL from Nisson Road to Mitchell Avenue.

Table 4.9-8. Existing and Existing Plus Specific Plan Traffic Noise Levels

Roadway	Existing Noise Level (dBA CNEL)	Existing + Specific Plan Noise Level (dBA CNEL)	Change	Significant Impact
Red Hill Avenue				
Bryan Avenue to San Juan Street	71.3	71.8	0.5	No
San Juan Street to El Camino Real	72.0	73.3	1.3	No
Nisson Road to Mitchell Avenue	72.6	73.4	0.8	No
Mitchell Avenue to Walnut Avenue	72.2	72.8	0.7	No
Walnut Avenue to Sycamore Avenue	72.3	72.7	0.3	No
Source: Noise modeling is based on traffic data within the <i>Red Hill Specific Plan Traffic Impact Analysis</i> , prepared by Kimley-Horn, 2018.				

An off-site traffic noise impact typically occurs when there is a discernible increase in traffic and the resulting noise level exceeds an established noise standard. In community noise considerations, changes in noise levels greater than 3 dB are often identified as substantial, while changes less than 1 dB will not be discernible to local residents. A 5 dB change is generally recognized as a clearly discernible difference.

As traffic noise levels at sensitive uses likely approach or exceed the City’s Noise Standards (e.g., 65 dBA; refer to Table 4.9-1), a 3.0 dB increase as a result of the Project is used as the threshold. Therefore, the Project would result in a significant noise impact when a permanent increase in ambient noise levels of 3.0 dB occurs upon project implementation and the resulting noise level exceeds the applicable exterior standard at a noise sensitive use.

Table 4.9-8 also show the calculated roadway noise levels under existing traffic levels compared to the condition with the Specific Plan. In comparison to existing traffic noise levels, the highest Project increase would be 1.3 dBA along Red Hill Avenue between San Juan Street and El Camino Real. As implementation of the Specific Plan would not increase traffic noise levels by 3.0 dBA or more, Project operational traffic volumes would not significantly contribute to existing traffic noise in the area. Impacts would be less than significant.

Long-Range Future Traffic Noise. Future scenario noise contours were also calculated for Red Hill Avenue, as shown in Table 4.9-9, *Future Traffic Noise Levels*. As shown in the table, the Long-Range Without Project traffic noise levels range from 71.3 CNEL from Bryan Avenue to San Juan Street, to a high of 72.6 CNEL from Nisson Road to Mitchell Avenue. Noise levels during the Long-Range Plus Project scenario would range from 71.8 dBA CNEL from Bryan Avenue to San Juan Street to 73.4 dBA CNEL from Nisson Road to Mitchell Avenue. In comparison to Long-Range Without Project traffic noise levels, the highest Project increase would be 1.3 dBA along Red Hill Avenue between San Juan Street and El Camino Real. As implementation of the Specific Plan would not increase traffic noise levels by 3.0 dBA or more, future project operational traffic volumes would not significantly contribute to traffic noise in the area. Impacts would be less than significant.

Table 4.9-9. Future Traffic Noise Levels

Roadway	Long-Range Noise Level (dBA CNEL)	Long-Range + Specific Plan Noise Level (dBA CNEL)	Change	Significant Impact
Red Hill Avenue				
Bryan Avenue to San Juan Street	71.3	71.8	0.5	No
San Juan Street to El Camino Real	72.0	73.3	1.3	No
Nisson Road to Mitchell Avenue	72.6	73.4	0.8	No
Mitchell Avenue to Walnut Avenue	72.5	73.1	0.6	No
Walnut Avenue to Sycamore Avenue	72.3	72.7	0.3	No
Source: Noise modeling is based on traffic data within the <i>Red Hill Specific Plan Traffic Impact Analysis</i> , prepared by Kimley-Horn, 2018.				

Impact Summary: **Threshold 4.9-4: Less Than Significant Impact.** Implementation of the Specific Plan would not result in a substantial permanent increase in ambient noise levels in the Specific Plan area.

4.9.6 CUMULATIVE IMPACTS

Cumulative Construction Noise

Future development could occur throughout the Specific Plan area; no project-specific developments are addressed in the Specific Plan. Construction associated with related cumulative projects may also occur in other areas of the City associated with redevelopment of existing developed sites as well as new construction on undeveloped sites. Because construction activities tend to be localized and of limited duration and intensity, construction noise and vibration levels are not anticipated to contribute substantially to the cumulative environment at any given location with the implementation of SC 4.9-1 and MM 4.9-1. Construction-related vibration impacts within the Specific Plan area would be less than significant with the implementation of MM 4.9-2. In addition, construction activities would be subject to compliance with the Tustin City Code requirements and would typically be limited to between the less noise sensitive daytime hours. For these reasons, the Specific Plan’s contribution to cumulative short-term noise or vibration exposure would be considered a less than significant impact.

Cumulative Operational Noise

Cumulative noise impacts describe how much noise levels are projected to increase over existing conditions with the development of the Project and other foreseeable projects. Cumulative noise impacts would occur primarily as a result of increased traffic on local roadways due to buildout of the Specific Plan and other projects in the vicinity. Future development may also result in new noise generators and noise sensitive land uses and potentially increase land use conflicts and hazards associated with noise.

The cumulative mobile noise analysis is conducted in a two-step process. First, the combined effects from both the Specific Plan and other projects are compared. Second, for combined effects that are determined to be cumulatively significant, the Project’s incremental effects are then analyzed. A project’s contribution to a cumulative traffic noise increase would be considered significant when the combined

effect exceeds perception level (i.e., auditory level increase) threshold. The combined effect compares the “cumulative plus Project” condition to “existing” conditions. This comparison accounts for the traffic noise increase generated by the Specific Plan Project combined with the traffic noise increase generated by the cumulative projects.

The following criteria have been used to evaluate the combined effect of the cumulative noise increase.

- **Combined Effects:** The cumulative with Project noise level (“Long-Range With Project” scenario) would cause a significant cumulative impact if a 3 dBA increase over existing conditions occurs and the resulting noise level exceeds the applicable exterior standard at a sensitive land use.

Although there may be a significant noise increase due to the Specific Plan in combination with identified cumulative projects (combined effects), it must also be demonstrated that the Project has an incremental effect. In other words, a significant portion of the noise increase must be due to the Project. The following criteria have been utilized to evaluate the incremental effect of the cumulative noise increase.

- **Incremental Effects:** The “Long-Range With Project” causes a 1 dBA increase in noise over the “Long-Range Without Project” noise level.

A significant impact would result only if both the combined and incremental effects criteria have been met. Noise by definition is a localized phenomenon, and drastically reduces as distance from the source increases. Consequently, only the cumulative development in the Project’s general vicinity would contribute to cumulative noise impacts. Table 4.9-10, *Cumulative Traffic Noise*, presents the traffic noise effects along roadway segments in the Project vicinity for “Existing”, “Long-Range Without Project”, and “Long-Range With Project”, including incremental and net cumulative impacts. First, it must be determined whether the cumulative plus project increase above existing conditions (*Combined Effects*) is exceeded. As indicated in Table 4.9-10, this criterion is not exceeded at any of the roadway segments.

Roadway	dBA @ 100 Feet from Roadway Centerline			Combined Effects	Incremental Effects	Cumulatively Significant Impact?
	Existing	Long-Range Without Project 2035	Long-Range With Project 2035	Difference in dBA Between Existing and Long-Range With Project	Difference in dBA Between Long-Range Without and With Project	
Red Hill Avenue						
Bryan Ave. to San Juan St.	71.3	71.3	71.8	0.5	0.5	No
San Juan St. to El Camino Real	72.0	72.0	73.3	1.3	1.3	No
Nisson Rd to Mitchell Ave.	72.6	72.6	73.4	0.8	0.8	No
Mitchell Ave. to Walnut Ave.	72.2	72.5	73.1	0.9	0.6	No
Walnut Ave. to Sycamore Ave.	72.3	72.3	72.7	0.3	0.3	No
Source: Noise modeling is based on traffic data within the <i>Red Hill Specific Plan Traffic Impact Analysis</i> , prepared by Kimley-Horn, 2018.						

Based on the results shown in Table 4.9-10, the roadway segment along Red Hill Avenue, between San Juan Street and El Camino Real, would have an incremental noise level increase of 1.3 dBA, which is over the 1.0 dBA criteria. However, the combined noise level increase would be 1.3, which is below 3.0 dBA. Therefore, significant mobile noise cumulative impacts would not occur on study area roadway segments, as mobile noise levels would not exceed both the combined and incremental effects criteria.

4.9.7 MITIGATION PROGRAM

Standard Conditions

SC 4.9-1 To ensure compliance with Tustin City Code, grading and construction plans shall include a note indicating that loud noise-generating project construction activities (as defined in Section 4616(2) and Section 4617(e) of the Tustin City Code) shall take place between the hours of 7:00 AM and 6:00 PM on weekdays and from 9:00 AM to 5:00 PM on Saturdays. Loud, noise-generating construction activities are prohibited outside of these hours and on Sundays and City observed Federal holidays.

SC 4.9-2 Development projects are required to meet or exceed the 65 dBA CNEL exterior noise level standard, as defined by Table N-3 of the City of Tustin General Plan Noise Element, and the 45 dBA CNEL interior noise level standard of the City of Tustin General Plan Noise Element, and by Title 24, Part 2, of the California Building Code.

Mitigation Measures

MM 4.9-1 **Construction Noise.** Prior to approval of grading plans, the City of Tustin Building Division shall ensure that plans include Best Management Practices to minimize construction noise. Construction noise Best Management Practices may include the following:

- Construction contractors shall equip all construction equipment, fixed or mobile, with properly operating and maintained mufflers, consistent with manufacturers' standards, and all stationary construction equipment shall be placed so that emitted noise is directed away from the noise sensitive use nearest the construction activity.
- The construction contractor shall locate equipment staging in areas that will create the greatest distance between construction-related noise sources and noise-sensitive receiver nearest to the construction activity.
- The construction contractor shall limit haul truck deliveries to the same hours specified for construction equipment by Tustin City Code Article 4, Chapter 6, Section 4617. The contractor shall design delivery routes to minimize the exposure of sensitive land uses to delivery truck noise.
- Construction activity within 50 feet of occupied noise sensitive uses shall reduce construction noise levels exceeding 85 dBA Leq at nearby sensitive land uses by one or more of the following methods to reduce noise to below 85 dBA Leq:
 1. Install temporary construction noise barriers within the line of site of occupied sensitive uses for the duration of construction activities that could generate noise

exceeding 85 dBA Leq. The noise control barrier(s) must provide a solid face from top to bottom and shall:

- a. Provide a minimum transmission loss of 20 dBA and be constructed with an acoustical blanket (e.g. vinyl acoustic curtains or quilted blankets) attached to the construction site perimeter fence or equivalent temporary fence posts;
 - b. Be maintained and any damage promptly repaired. Gaps, holes, or weaknesses in the barrier or openings between the barrier and the ground shall be promptly repaired; and
 - c. Be removed and the site appropriately restored upon the conclusion of the construction activity.
2. Install sound dampening mats or blankets to the engine compartments of heavy mobile equipment (e.g. graders, dozers, heavy trucks). The dampening materials must be capable of a 5-dBA minimum noise reduction, must be installed prior to the use of heavy mobile construction equipment, and must remain installed for the duration of the equipment use.

MM 4.9-2 Construction Vibration. The following measures shall be implemented by applicants for development within the Red Hill Avenue Specific Plan area to reduce construction vibration at nearby receptors:

- a. Avoid impact pile-driving where possible.
- b. In areas where project construction is anticipated to include pile drivers in close proximity to schools or historic structures, conduct site-specific vibration studies to determine the area of impact and to present appropriate vibration reduction techniques that may include the following:
 - Develop a vibration monitoring and construction contingency plan to identify structures where monitoring should be conducted, set up a vibration monitoring schedule, define structure-specific vibration limits, and address the need to conduct photo, elevation, and crack surveys to document before and after construction conditions.
 - Identify construction contingencies for when vibration levels approach the standards.
 - At a minimum, conduct vibration monitoring during pile-driving activities. Monitoring results may indicate the need for more or less intensive measurements.
 - When vibration levels approach standards, suspend construction and implement contingencies to either lower vibration levels or secure the affected structures.
 - Conduct a post-survey on any structures where either monitoring has indicated high levels or complaints of damage has been made. Make appropriate repairs or compensation where damage has occurred as a result of vibration.

4.9.8 LEVEL OF SIGNIFICANCE AFTER MITIGATION PROGRAM

With implementation of the Mitigation Program set forth in this Program, potential noise impacts would be reduced to a level considered less than significant.

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4.10 Population and Housing

This Section describes the potential effects of implementation of the Specific Plan on population, housing, and employment related to the addition of housing and non-residential uses within the Specific Plan area. The environmental effects of increased population, housing, and employment on factors such as traffic, air quality, and noise are addressed in their respective sections of this Program EIR.

4.10.1 REGULATORY SETTING

State of California

California Housing Element Law

The Housing Element is one of the seven General Plan Elements that are mandated by the State of California (California Government Code § 65580 to § 65589.8). California State law requires that the Housing Element consists of, “an identification and analysis of existing and forecasted housing needs and a statement of goals, policies, quantified objectives, financial resources, and scheduled programs for the preservation, improvement, and development of housing” (Government Code § 65580).

State law requires that each city and county identify and analyze existing and projected housing needs within its jurisdiction and prepare goals, policies, and programs to further the development, improvement, and preservation of housing for all economic segments of the community, commensurate with local housing needs.

Regional and Local

Southern California Association of Governments (SCAG)

SCAG is a Joint Powers Agency established under Sections 6502 et seq. of the *California Government Code*. SCAG is designated as a Council of Governments (COG), a Regional Transportation Planning Agency (RTPA), and a Metropolitan Planning Organization (MPO) for the six-county region of Orange, Los Angeles, Ventura, San Bernardino, Riverside, and Imperial Counties. The region encompasses a population exceeding 18 million persons in an area that encompasses more than 38,000 square miles. As the designated MPO, SCAG is the responsible agency for developing and adopting regional housing, population, and employment growth forecasts for local governments. The City of Tustin is a member of the Orange County Council of Governments, one of the 14 subregional organizations in the SCAG region.

SCAG’s demographic data is developed to enable the proper planning of infrastructure and facilities to adequately meet the needs of anticipated growth in the region. In April 2016, SCAG adopted its *2016-2040 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS)*. Major themes in the 2016 RTP/SCS include integrating strategies for land use and transportation; striving for sustainability; protecting and preserving existing transportation infrastructure; increase capacity through improved systems management; providing more transportation choices; leveraging technology; responding to demographic and housing market changes; supporting commerce, economic growth and opportunity; promoting the links between public health, environmental protection, and economic opportunity; and, incorporating the principles of social equity and environmental justice into the plan. Growth forecasts

contained in the 2016 RTP/SCS for Orange County and the City are used as the basis of analysis for housing, population, and employment forecasts.

Regional Housing Needs Assessment (RHNA)

RHNA is an assessment process performed periodically as part of Housing Element and General Plan updates at the local level. The RHNA process begins with the California Department of Housing and Community Development's (HCD) projection of future statewide housing growth need, and the apportionment of this need of regional councils of governments throughout the State. As the region's designated COG, SCAG is the agency responsible for developing an allocation methodology to allocate the region's assigned share of statewide need to cities and counties by income level.

This "fair share" allocation concept seeks to ensure that each jurisdiction accepts responsibility for the housing needs of its resident population, as well as the jurisdiction's forecasted share of regional housing growth across all income categories. Regional growth needs are defined as the number of units that would have to be added in each jurisdiction to accommodate the forecasted number of households, as well as the number of units that need to be added to compensate for anticipated demolitions and changes to achieve an ideal vacancy rate. SCAG defines a "household" as an occupied dwelling unit.

The current RHNA cycle covers the planning period from October 2013 to October 2021. The housing construction need is determined for four broad household income categories: very low (households making less than 50 percent of area median income), low (50 to 80 percent of area median income), moderate (80 to 120 percent of area median income), and above moderate (more than 120 percent of area median income). The intent of the future needs allocation by income groups is to relieve the undue concentrations of very low-income and low-income households in a single jurisdiction and to help allocate resources in a fair and equitable manner.

City of Tustin General Plan 2014-2021 Housing Element

As required by State Housing Law, the City of Tustin must plan for its share of the region's new housing needs in four State-defined income categories by identifying an adequate supply of land zoned at appropriate densities to accommodate needs in each income category. The RHNA goals do not explicitly require the City to construct the identified housing need but rather seeks to ensure that the City has or plans to add policies, programs, and regulations that will accommodate new housing growth. The Housing Element examines the City's housing needs, as they currently exist, and forecasts future housing needs. It sets a housing plan for addressing the City's identified housing needs, constraints, and resources; including housing goals, policies, and programs. The Specific Plan's consistency with applicable housing goals and policies of the General Plan are addressed in Section 4.8, *Land Use and Planning*.

To address the City's need for very low-income and low-income housing, the City must demonstrate that it has an adequate supply of land for the development of the housing. In terms of evaluating the adequacy of these sites to address the affordability targets established by the RHNA, Housing Element statutes provide for the use of "default densities" to assess affordability.

The *City of Tustin General Plan 2014-2021 Housing Element* was adopted on October 1, 2013. It identifies and addresses existing and forecasted housing needs, and articulates the City’s official policies for:

- Housing affordability
- Rehabilitating substandard housing
- Meeting the existing demand for new housing
- Conserving the existing affordable housing stock

4.10.2 ENVIRONMENTAL SETTING

The Specific Plan area’s demographics are examined in the context of existing and forecasted population and housing for the City and the County. Demographic information used in this analysis include, but are not limited to, the *City of Tustin General Plan 2014-2021 Housing Element*, and demographic information from the California Department of Finance (DOF), the California Economic Development Department, the U.S. Census Bureau, and SCAG.

Population

According to the DOF E-5 City/County Population and Housing Estimates, Orange County has an estimated current population of 3,194,024 residents (DOF, 2017). The City has an estimated current population of 82,372 residents (DOF E-5, 2017). DOF population estimates are derived by multiplying the number of occupied housing units by the current persons per household. The persons per household estimates are based on 2010 Census benchmark data.

Table 4.10-1, *Orange County and Tustin Population Estimates: 2012-2040*, shows population numbers for the County and City, as determined in the 2016 RTP/SCS prepared by SCAG which identifies population, households, and employment for 2012 and 2040. SCAG’s forecasting is based on jurisdictions’ existing land uses and general plan land uses. Population projections are calculated based on household growth and household size. As identified in the table, SCAG forecasted that the population in Orange County would grow by approximately 12.7 percent between 2012 and 2040.

The City has an estimated current population of 82,372 residents (DOF E-5, 2017). According to the SCAG 2016 RTP/SCC Growth Forecast, the City is forecasted to have a population of 83,000 in 2040 which is a population increase of approximately 7.4 percent between 2012 and 2040. Tustin would experience slower population growth when compared to the County.

Location	2012	2040
Orange County	3,071,600	3,461,500
Tustin	77,300	83,000
Source: SCAG RTP/SCS, 2016.		

Housing

As shown in Table 4.10-2, *Orange County and Tustin Housing*, Orange County has an estimated 1,083,563 housing units with an average of 3.05 persons per household (DOF, 2017). The DOF estimates housing units by adding new construction and annexations and subtracting demolitions, and adjusting for units lost or gained by conversions. Annual housing unit change data are supplied to the DOF by local jurisdictions and the U.S. Census Bureau. As reported by the DOF, the vacancy rate is a measure of the availability of housing in a community. It also demonstrates how well the types of units available meet the market demand. A low vacancy rate suggests that households may have difficulty finding housing within their price range; a high supply of vacant units may indicate either the existence of a high number of desired units, or an oversupply of units. The vacancy rate for housing in Orange County is estimated to be 4.9 percent (DOF, 2017).

	Orange County	Tustin
Single-Family Homes: Attached and Detached	676,731	13,262
Multi-Family Homes: Two to more than Five Units	373,324	13,665
Mobile Homes	33,502	909
Total Housing Units	1,083,563	27,836
Vacancy Rate	4.9%	3.2%
Persons per Household	3.05	3.04
Source: Department of Finance, Table 2: E-5, 2017.		

Table 4.10-3, *Orange County and Tustin Household Estimates: 2012-2040*, quantifies households as determined in the 2016 RTP/SCS prepared by SCAG. Household growth rates and household size are estimated by SCAG based on historical trends and the developable capacity from the local jurisdiction's general plan. Households in Orange County are forecasted to increase by approximately 13.6 percent between 2012 and 2040.

Location	2012	2040
Orange County	999,500	1,135,300
Tustin	25,600	27,800
Source: SCAG RTP/SCS, 2016.		

The City has an estimated 27,836 housing units with an average of 3.04 persons per household (DOF, 2017). The vacancy rate for housing in the City is estimated to be 3.2 percent (DOF, 2017). Currently, there are 2 single-family and 19 multi-family residential units in the Specific Plan area. In 2012, the City had an estimated 25,600 households (Table 4.10-3). Households in Tustin are forecasted to increase by approximately 8.6 percent between 2012 and 2040.

SCAG determines total housing need for each community within the SCAG region based on three general factors: (1) the number of housing units needed to accommodate future population and employment growth; (2) the number of additional units needed to allow for housing vacancies; and (3) the number of very low, low, moderate, and above moderate income units needed in the community. Additional factors used to determine the RHNA include tenure, the average rate of units needed to replace housing units demolished, and other factors.

The City’s RHNA allocation for the 2014–2021 period is shown in Table 4.10-4, *Tustin Regional Housing Needs Assessment Allocation: 2014-2021*. The City is required to ensure that sufficient sites planned and zoned for housing are available to accommodate its need and to implement proactive programs that facilitate and encourage the production of housing commensurate with its housing needs.

Income Level	Percent of AMI	RHNA	Percent
Extremely Low ^a .	0-30%	142	12%
Very Low	31- <50%	141	11%
Low	51 – 80%	195	16%
Moderate	81 –120%	224	18%
Above Moderate	>120%	525	43%
Total		1,227	100%

AMI = Area Median Income
a. Pursuant to Government Code Section 65583(a)(1), City’s share of extremely-low income units is 142 (50% of the total Very Low-Income new construction objective).
Source: City of Tustin General Plan 2014-2021 Housing Element

Employment

As shown in Table 4.10-5, *Orange County and Tustin Employment: 2012-2040*, Orange County had 1,526,500 jobs in 2012. According to SCAG projections, jobs are forecasted to increase by nearly 24.4 percent between 2012 and 2040. The City of Tustin had 37,600 jobs in 2012 (Table 4.10-5). According to SCAG projections, jobs in the City are forecasted to increase by nearly 76.6 percent between 2012 and 2040.

	2012	2040
Orange County	1,526,500	1,898,900
Tustin	37,600	66,400

Source: SCAG RTP/SCS, 2016.

Jobs to Housing Balance

SCAG states that “a balance between jobs and housing in a metropolitan region can be defined as a provision of an adequate supply of housing to house workers employed in a defined area (i.e., community or subregion). Alternatively, a jobs/housing balance can be defined as an adequate provision of

employment in a defined area that generates enough local workers to fill the housing supply”. Jobs and housing are considered in balance when a subregion has enough employment opportunities for most people who live there and enough housing opportunities for most of the people who work there. The jobs/housing balance is one indicator of a project’s effect on growth and quality of life in a project area. SCAG uses the jobs/housing ratio to assess the relationship between housing and employment growth.

Alternatively, the 2016-2040 RTP/SCS states “the imbalance of jobs and housing is considered a key contributor to traffic congestion and an impediment to environmental justice” (SCAG, 2016). According to SCAG, improvements in job-housing balance may result in a reduction of transportation congestion and related air quality problems (SCAG, 2016). Communities with more than 1.5 jobs per dwelling unit are considered job-rich and those with fewer than 1.5 jobs per dwelling unit are considered housing-rich. As identified in Table 4.10-6, *Jobs-Housing Balance for Tustin, Orange County, and SCAG Region*, the jobs-to-housing balance is higher in Orange County compared to the SCAG region. Comparing the jobs-to-housing ratio between Orange County and the SCAG region as whole indicates a need for more housing growth in Orange County (City of Tustin, 2013). The jobs-to-housing ratio is highest in the City compared to Orange County and the SCAG region as a whole.

Table 4.10-6. Jobs-Housing Balance for Orange County and Tustin		
Tustin	2012	2040
Jobs	37,600	66,400
Housing Units	25,600	27,800
Jobs/Housing Ratio	1.47	2.39
Orange County	2012	2040
Jobs	1,526,500	1,898,900
Housing Units	999,500	1,135,300
Jobs/Housing Ratio	1.53	1.67

Source: SCAG RTP/SCS, 2016.

4.10.3 THRESHOLDS OF SIGNIFICANCE

The following significance criteria are from the City of Tustin Environmental Checklist. The Specific Plan would result in a significant impact related to population and housing if it would:

Threshold 4.10-1 Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure).

As addressed in Section 1.5, *Summary of Effects with No Impact*, the City has determined that the Specific Plan would not have a significant impact on the following thresholds and that no further analysis is required in the Program EIR:

- Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere.

- Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere.

4.10.4 ENVIRONMENTAL IMPACTS

Threshold 4.10-1:	Would the Specific Plan Project induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?
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As discussed in Section 3.0, *Project Description*, the Specific Plan assumes 500 additional residential units in the Specific Plan area. Of the 500 units, 395 units would be allocated to the Specific Plan area north of I-5 and 105 residential units would be allocated to the Specific Plan area south of I-5 for a total of 500 additional residential units in the Specific Plan area. Population projections were developed based on a generation factor of 3.04 persons per household (DOF, 2017). While non-residential uses, including office uses, are proposed as part of the Specific Plan, it is unknown at this time how many square feet of retail and office uses would be developed. Employment projections assume 450 square feet (sf) of retail per employee, per SCAG's Employment Density Summary Report (SCAG, 2001). SCAG assumes 352 sf of office space per employee. Therefore, 450 sf was used in the calculations below.

Population

Based on 2017 estimates from the DOF, the City has an average household size of 3.04 persons. Assuming 3.04 persons per dwelling unit, the Specific Plan has the potential to generate 1,520 residents at buildout. The estimated population increase of 1,520 new residents is well within the forecasted population increase by SCAG for the City of Tustin of 5,700 residents between 2012 and 2040 (Table 4.10-1) and would represent approximately 26.6 percent of the expected growth.

Housing

SCAG forecasts 27,800 households in the City by 2040. The forecasted increase of households in the City between 2012 and 2040 is 2,200 households (Table 4.10-3). The increase of 500 units represents approximately 23 percent of the housing growth in the City during this time period. The City's Housing Element identifies vacant and underutilized properties within the Specific Plan area that are suitable for residential development. Table H-14 of the Housing Element identifies 13841 Red Hill Avenue as a vacant property suitable for residential development. Table H-15 identifies the property at 13742-13852 Red Hill Avenue as an existing retail shopping center that is underutilized and suitable for residential development.

Employment

The forecasted employment in the City by 2040 is 66,400 jobs (Table 4.10-5). The increase in employment in the City between 2012 and 2040 is forecasted to be 28,800 jobs. Implementation of the Specific Plan would generate both short-term (construction) and long-term jobs associated with development in the Specific Plan area including office and retail uses. Based on SCAG's estimate of employment density, which is the number of employees per square feet of building space, the Specific Plan is anticipated to create 722 new permanent employment opportunities which could include both full-time and part-time employment positions with varying salaries including minimum wage positions. The 722 jobs represent approximately 3 percent of the City's total forecasted increase in employment between 2012 and 2040.

Jobs to Housing Balance

The jobs to housing balance is an indicator of a project's effect on growth and quality of life. The County's job to housing ratio in 2012 was 1.53, while the City's job to housing ratio in 2013 was 1.47 (Table 4.10-6). By 2040, the City is forecasted to become increasingly jobs-rich as a result of economic and demographic forces. Implementation of the Specific Plan would provide housing and employment, and would benefit the overall City jobs to housing ratio. Buildout of the Specific Plan has a job to housing ratio of 1.44 because an estimated 722 jobs and 500 residential units would be added. This is consistent with existing jobs and housing opportunities in the City.

In summary, the Specific Plan's population, housing, and employment growth are within the overall projections for the City and the County. Based on the above-noted significance criteria, the increase in population, housing, and employment would be less than significant.

Impact Summary: **Threshold 4.1-1: *Less Than Significant*.** The Specific Plan's population, housing, and employment growth are within overall SCAG projections for the City of Tustin.

4.10.5 CUMULATIVE IMPACTS

The prior analysis addresses potential impacts in the context of cumulative population, housing and employment growth in the City, County, and SCAG region. Potential impacts are assessed relative to the City's General Plan and regional plans, including SCAG's 2016 RTP/SCS population, housing, and employment projections. SCAG regional growth projections reflect recent and past trends, key demographic and economic assumptions and include local and regional policies. Local justifications participate in the growth forecast development process (SCAG, 2016).

Environmental review is required for individual projects located in the City, in the County, and the SCAG region in order that the potential impacts of each project may be assessed. Project-specific measures would be required, as needed, to reduce significant impacts. Additionally, the Specific Plan area is in a developed area of the City; implementation of the Specific Plan would not extend infrastructure that would induce unanticipated population growth, and would therefore not combine with other related projects to contribute to a cumulative impact with respect to population growth. In summary, implementation of the Specific Plan—when combined with past, present and reasonably foreseeable future projects—would not cumulatively contribute to significant adverse cumulative impacts to population, housing, or employment. Impacts would be less than significant.

4.10.6 MITIGATION PROGRAM

Standard Conditions

No standard conditions are applicable to the Specific Plan.

Mitigation Measures

No mitigation is required.

4.10.7 LEVEL OF SIGNIFICANCE AFTER MITIGATION PROGRAM

The Specific Plan's increase in population, housing, and employment would be within regional projections. No significant impact would occur.

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4.11 Public Services

This Section describes existing public services for the Red Hill Avenue Specific Plan area and identifies and addresses potential impacts related to fire protection, police protection, public schools, and library services.

4.11.1 FIRE PROTECTION AND EMERGENCY MEDICAL SERVICES

Regulatory Setting

California Fire Code

The 2016 California Fire Code (CCR Title 24 Part 9) sets forth requirements including those for building materials and methods pertaining to fire safety and life safety, fire protection systems in buildings, emergency access to building, handling, and storage of hazardous materials.

City of Tustin Fire Code

The 2016 California Fire Code sets forth requirements including those for building materials and methods pertaining to fire safety and life safety, fire protection systems in buildings, emergency access to buildings, and handling and storage of hazardous materials. The City Tustin adopted the 2016 California Fire Code with certain amendments, additions, and deletions, as Article 8, Chapter 1, Section 8104 of the Tustin City Code.

City of Tustin General Plan Public Safety Element

The purpose of the Public Safety Element is to identify and address those natural or man-made characteristics which exist in or near the City which represent a potential danger to the safety of the citizens, sites, structures, public facilities, and infrastructure. The Element establishes policies to minimize the danger to residents, workers, and visitors, and identifies actions needed to deal with crisis situations. The Public Safety Element specifically addresses flooding; seismically induced conditions including surface rupture, ground shaking, ground failure, and seiche; slope instability leading to mudslides and landslides; subsidence and other geologic hazards; wildland/urban interface fires; and evacuation routes. The Specific Plan's consistency with applicable General Plan safety goals and policies is provided in Section 4.8, *Land Use and Planning*.

Environmental Setting

The Orange County Fire Authority (OCFA) is a regional fire service agency that serves 23 cities in Orange County and all unincorporated areas. The OCFA protects over 1,680,000 residents from its 71 fire stations located throughout Orange County. The OCFA consists of 7 divisions, 9 battalions, 71 fire stations, 951 firefighters, 6 executive chiefs, and 248 professional staff members. OCFA Reserve Firefighters work 10 stations throughout Orange County. In addition, the OCFA has 192 authorized reserve firefighters. Response times in the City vary based on the level of emergency; however, the response time goal is for the first unit to arrive on scene in 5 minutes from receipt of the call, 90 percent of the time. Table 4.11-1, *OCFA Fire Stations in Tustin*, identifies the three fire stations within the City; their locations are depicted in Exhibit 4.11-1, *OCFA Fire Stations in Tustin*. OCFA also operates an Emergency Medical Services Section that manages the delivery of medical services by OCFA emergency medical technicians and paramedics.

Table 4.11-1 OCFA Fire Stations in Tustin			
Fire Station	Location	Staffing	Apparatus
Station 21	1241 Irvine Boulevard	3 fire captains 3 fire apparatus engineers 9 firefighters	Medic 21 Engine 21 Engine 21
Station 37	15011 Kensington Park Drive	3 fire captains 3 fire apparatus engineers 3 firefighters	Paramedic Assessment Unit Engine 37
Station 43	11490 Pioneer Way	3 battalion chiefs 3 fire captains 3 fire apparatus engineers 6 firefighters	Medic Engine 43 Battalion 3

Source: OCFA Operations Division 4 Directory.

Thresholds of Significance

The following significance criteria are from the CEQA Guidelines Appendix G. Implementation of the Specific Plan would result in a significant effect on the environment if it would:

Threshold 4.11-1 Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, 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.

Environmental Impacts

The Specific Plan would allow for an increase of up to 500 additional dwelling units, and 325,000 sf of additional non-residential uses. This increase in residential units would incrementally increase the demand for fire apparatus, equipment, performance, and personnel. According to the General Plan, the response time goal for the first unit to arrive on scene is 5 minutes from receipt of the call, 90 percent of the time. The City Has three fire stations of which two are within 0.5 mile of the Specific Plan area: Station Number 21 and Station Number 37.

All new development would be required to comply with the existing International Fire Code and California Fire and Building Codes in the California Health and Safety Code. The California Fire Code is adopted as Article 8, Chapter 1, Section 8100 (Building and Construction Codes Adopted by Reference) as part of the Building Regulations, of the Tustin City Code. In addition, as a standard condition of approval, future development projects would be required to prepare a Fire Master Plan, required by OCFA, prior to the issuance of a building permit (SC 4.11-1).

A Fire Master Plan identifies standard design features, including minimum fire engine access, fire flow requirements, and building construction standards. Fire flow requirements are based upon building size and building construction type. Building construction standards include the use of fire retardant roofing materials. Compliance with all applicable Federal, State, and local regulations would preclude potential impacts to fire protection service.

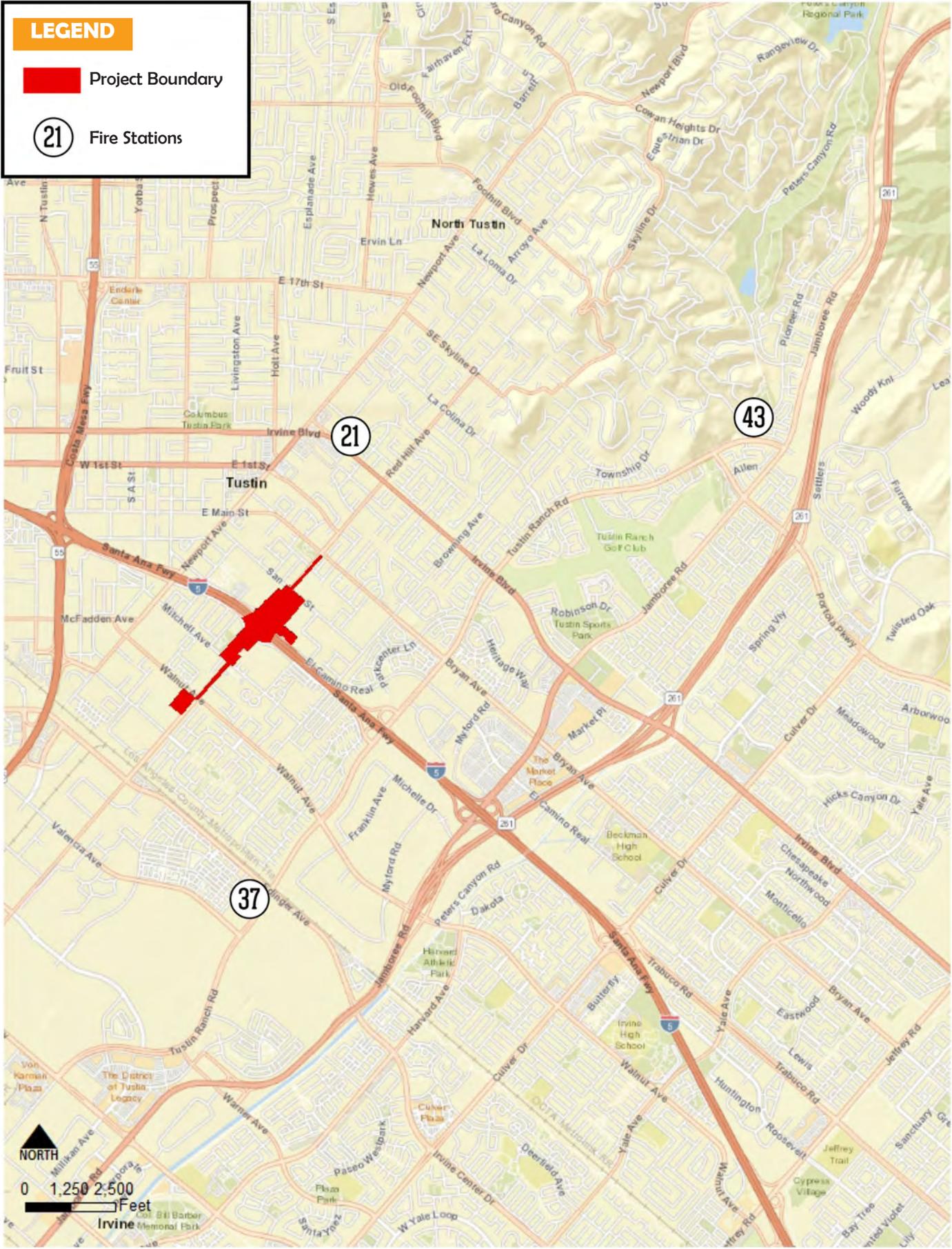


EXHIBIT 4.11-1: OCFA Fire Stations in Tustin
 Red Hill Avenue Specific Plan

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Impact Summary: **Threshold 4.11-1: *Less Than Significant.*** Development within the Specific Plan area can be adequately served by the OCFA.

Cumulative Impacts

The geographic area for cumulative analysis of fire protection services is the service territory for OCFA. Orange County cities and unincorporated areas continue to develop and, in many cases, intensify development, resulting in residential and employment population increases and associated increases in the demand for public services, including fire protection and emergency medical services. The contribution of these projects to area growth is reflected in Tustin projections and has been accounted for in long-range planning efforts on behalf of the County, City, and the agencies providing public services to the area. New residents in the Specific Plan area are expected to increase demand for fire protection services. Future developments would be required to prepare a Fire Master Plan, required by OCFA prior to the issuance of a building permit. In addition, compliance with the existing regulations and standard conditions would ensure adequate access within the Specific Plan area, which further ensures the adequate provision of fire protection and emergency services to residents. Therefore, the Specific Plan's increased demand for fire protection services would not result in significant cumulative impacts.

Mitigation Program

Standard Conditions and Requirements

SC 4.11-1 Prior to the issuance of any grading or building permits for any development project under the Red Hill Avenue Specific Plan, the applicant shall submit a Fire Master Plan to the Orange County Fire Authority for review. Payment of fees and Fire Master Plan approval shall be obtained prior to the issuance of grading or building permits.

Mitigation Measures

No mitigation measures are required relative to fire protection services.

Level of Significance After Mitigation Program

With implementation of the Mitigation Program set forth in the Program EIR, no significant fire protection and emergency services are anticipated.

4.11.2 LAW ENFORCEMENT SERVICES

Regulatory Setting

City of Tustin General Plan Public Safety Element

The Specific Plan's consistency with applicable General Plan safety goals and policies is provided in Section 4.8, *Land Use and Planning*, of this Program EIR.

Environmental Setting

The Tustin Police Department enforces local, State, and Federal laws and provides police service to the City. The Police Department provides emergency police response, non-emergency police response, routine police patrol, traffic violation enforcement, traffic accident investigation, animal control, and

parking code enforcement. Its mission is to make the City and its neighborhoods the most livable and safest in the State by incorporating the components of Community Governance into its daily strategies and activities.

Headquartered at 300 Centennial Way, the Police Department has approximately 100 sworn officers and 55 Civilian Support Personnel. The Police Department works in partnership with other City departments, the residential and business community and other governmental and non-profit agencies to reduce crime, provide a sense of safety and security and improve the quality of life for those who visit, live, and work in Tustin. At this time, there are no specific plans for expansion of police facilities or addition of staff or equipment inventory (Tustin Police Department, 2017).

With a population of 82,700 residents in 2016, the ratio of officers to residents is approximately 1.21 officers per 1,000 residents. The Police Department received 100,764 calls in 2016, 24,017 of those being 9-1-1 calls. According to the General Plan, Police Department's goal response time for emergency calls is 3.5 minutes and 13 minutes for non-emergency calls (Tustin Police Department 2015 and 2016 Biennial Report).

Thresholds of Significance

The following significance criteria is from CEQA Guidelines Appendix G. The Specific Plan would result in a significant impact on the environment if it would:

Threshold 4.11-2 Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, 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 police protection.

Environmental Impacts

General Plan Land Use Goal 3 provides that new developments are compatible with surrounding land uses in the community, including availability of public facilities. Specific Plan implementation would introduce new residential and commercial uses and increase population. Buildout of the Specific Plan would allow for up to 500 additional dwelling units, 325,000 additional sf of non-residential space, and generate an estimated 1,520 new residents and 722 new employees.

Based on the City's current ratio of officers to residents (1.21 officers per 1,000), at buildout of the Specific Plan would result in the need for one additional police officer. The Police Department currently provides police services within the Specific Plan area. Although the Specific Plan would incrementally increase the demand for City police protection services, this demand would not be expected to require the construction of new facilities or the expansion of existing facilities.

The Police Department's operating budget is generated through tax revenues, penalties and service fees, and allowed government assistance. Facilities, personnel, and equipment expansion and acquisition are tied to the City budget process and tax-base expansion. Tax-base expansion from development within the Specific Plan area would generate funding for the police protection services. No significant impacts are anticipated.

Impact Summary: **Threshold 4.11-2: *Less Than Significant.*** The Specific Plan can be served by the Tustin Police Department without adverse effects on police services.

Cumulative Impacts

The geographic area for cumulative analysis of police services is the service territory for Tustin Police Department. The Police Department's operating budget is primarily generated through tax revenues and fees collected from penalties and requested services. Increased property and sales tax from future projects would increase the City's General Fund in rough proportion to population increases, providing funding for any improvements necessary to maintain adequate police protection facilities, equipment, and/or personnel. Consequently, although the cumulative demand for police services would incrementally increase over time, the addition of new officers and equipment to serve the demand is not likely to result in any significant adverse cumulative impacts associated with the construction of new facilities or the alteration of existing facilities. Moreover, should any new or altered facilities be required in the future, these facilities would be subject to separate CEQA review. Consistent with the findings of the City of Tustin General Plan EIR, the Police Department has the projected resources to increase the supply of law enforcement services to Tustin with no significant effects expected in meeting the additional demands for protection and maintaining acceptable service levels. No cumulative impacts would result.

Mitigation Program

Standard Conditions and Requirements

No standard conditions are applicable to the Specific Plan.

Mitigation Measures

No mitigation measures are required to reduce impacts to law enforcement services.

Level of Significance After Mitigation

The proposed Project's impact on law enforcement services would be less than significant.

4.11.3 SCHOOLS

Regulatory Setting

California State Assembly Bill 2926: School Facilities Act of 1986

To assist in providing school facilities to serve students generated by new development, Assembly Bill (AB) 2926 was enacted in 1986 and authorized a levy of impact fees on new residential, commercial, and industrial development. The bill was expanded and revised in 1987 through the passage of AB 1600, which added Sections 66000 et seq. to the Government Code. Under this statute, payment of impact fees by developers serve as CEQA mitigation to satisfy the impact of development on school facilities.

Senate Bill 50

Senate Bill (SB) 50 (1998), which is funded by Proposition 1A, limits the power of cities and counties to require mitigation of developers as a condition of approving new development and provides instead for a standardized fee. SB 50 generally provides for a 50/50 State and local school facilities match. SB 50 also

provides for three levels of statutory impact fees. The application level depends on whether State funding is available; whether the school district is eligible for State funding; and whether the school district meets certain additional criteria involving bonding capacity, year-round schools, and the percentage of moveable classrooms in use.

California Government Code Sections 65995-65998 sets forth provisions to implement SB 50. Specifically, in accordance with Section 65995(h), the payment of statutory fees is “deemed to be full and complete mitigation of the impacts of any legislative or adjudicative act, or both, involving, but not limited to, the planning, use, or development of real property, or any change in governmental organization or reorganization...on the provision of adequate school facilities.” The applicable school district is responsible for implementing the specific methods for mitigating school impacts under the Government Code.

Pursuant to Government Code Section 65995(i), “A state or local agency may not deny or refuse to approve a legislative or adjudicative act, or both, involving, but not limited to, the planning, use, or development of real property, or any change in governmental organization or reorganization as defined in Section 56021 or 56073 on the basis of a person's refusal to provide school facilities mitigation that exceeds the amounts authorized pursuant to this section or pursuant to Section 65995.5 or 65995.7, as applicable.”

California Education Code Section 17620(a)(1) states that the governing board of any school district is authorized to levy a fee, charge, dedication, or other requirement against any construction within the boundaries of the district, for the purpose of funding the construction or reconstruction of school facilities.

City of Tustin General Plan Land Use Element

The Land Use Element of the *City of Tustin General Plan* includes goals and policies related to public facilities and services that are applicable to the Specific Plan Project. The purpose of the Land Use Element is to describe present and planned land use activity, and to address issues concerning the relationship between land uses and environmental quality, potential hazards, and social and economic objectives. The Specific Plan’s consistency with applicable public service goals and policies of the General Plan are addressed in Section 4.8, *Land Use and Planning*.

Tustin City Code

The Tustin City Code identifies land use categories, development standards, and other general provisions that ensure consistency between the City’s General Plan and proposed development projects. Article 9, Chapter 3, Part 3, Section 9331.k (Interim School Facilities) discusses that new development within the attendance area of an impacted school would be required as a condition of approval, either to dedicate land, pay fees in lieu thereof, or a combination of both, in accordance with the provisions of Section 65974 of the Government Code.

Environmental Setting

The City is served by the Tustin Unified School District (School District) and several private schools. The School District has 18 elementary schools, 6 middle schools, K-8 Online Center, 3 comprehensive high

schools, 1 adult school, and 1 continuation high school. There are over 24,000 students in the School District.

The nearest elementary schools to the Specific Plan area are Benjamin Beswick Elementary School located at 1362 Mitchell Avenue, and Marjorie Veeh Elementary School located at 1701 San Juan Street. The nearest middle school is C.E. Utt Middle School, located at 13601 Browning Avenue. Tustin High School is located at 1171 El Camino Real.

- Benjamin Beswick Elementary School (Kindergarten [K] through 5th grade) is located at 1362 Mitchell Avenue, west of Red Hill Avenue. The school had a pupil-teacher ratio of just over 26 students to 1 teacher in the 2014-2015 school year, with 598 students in the 2016–2017 school year (Ed-Data, 2017a).
- Marjorie Veeh Elementary School (K through 5th grade) is located at 1701 San Juan Street, southeast of Red Hill Avenue. The school had a pupil-teacher ratio of just over 25 students to 1 teacher in the 2014–2015 school year, with 422 students in the 2016–2017 school year (Ed-Data, 2017b).
- C.E. Utt Middle School (6th through 8th grade) is located at 13601 Browning Ave, southeast of Red Hill Avenue between San Juan Street and Bryan Avenue. The school had a pupil-teacher ratio of 30 students to 1 teacher in the 2014-2015 school year, with 991 students in the 2016–2017 school year (Ed-Data, 2017c).
- Tustin High School (9th through 12th grade) is located at 1171 El Camino Real, west of Red Hill Avenue and adjacent to the Specific Plan area. The high school had a pupil-teacher ratio of 31 students to 1 teacher in the 2014–2015 school year, with 2,316 students in the 2016-2017 school year (Ed-Data, 2017d).

Thresholds of Significance

The following significance criteria are from CEQA Guidelines Appendix G. Implementation of the Specific Plan would result in a significant impact on the environment if it would:

- Threshold 4.11-3** Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, 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 schools.

Environmental Impacts

Student generation rates are used by school districts to estimate the number of students generated by new development in order to determine whether existing school facilities would be adequate for future student enrollment. As identified in Table 4.11-2, *Student Generation Rates for Tustin Unified School District*, using these student generation rates, the Specific Plan buildout of 500 dwelling units would introduce approximately 146 students into the attendance area of the School District.

Table 4.11-2. Student Generation Rates for Tustin Unified School District			
School Level	Student/Dwelling Unit	Number of Proposed Units	Students Potentially Generated by the Project
Elementary School	0.1610	500	81
Intermediate School	0.0636	500	32
High School	0.0661	500	33
Total			146
Source: Fee Justification Report, April 2016.			

School funding comes predominantly from Federal, State, and local contributions, such as business and personal income taxes, sales tax, and property tax. In accordance with Government Code Section 65995 and the Tustin City Code, the School District requires all new development to pay fees to help offset the effects to school facilities from new residential, commercial, and industrial development. Fees are collected by the School District at the time of issuance of building permits.

As stated in Government Code Section 65995(h), “The payment or satisfaction of a fee, charge, or other requirement levied or imposed ...are hereby deemed to be full and complete mitigation of the impacts of any legislative or adjudicative act, or both, involving, but not limited to, the planning, use, or development of real property, or any change in governmental organization or reorganization ...on the provision of adequate school facilities.” Payment of these fees would offset impacts from increased demand for school services associated with development in the Specific Plan area by providing an adequate financial base to construct and equip new and existing schools. Overall, the School District would be able to provide adequate school facilities for the projected students and payment of impact fees would ensure that impacts are offset and remain less than significant.

Impact Summary: **Threshold 4.11-3: *Less Than Significant*.** Compliance with mandated fee program would preclude significant impacts to the Tustin Unified School District.

Cumulative Impacts

Sponsors of all past projects since the passage of SB 50, all present projects, and reasonably foreseeable future projects would be required to pay school impact fees established to offset potential impacts on school facilities. Payment of these fees is considered to be full and complete mitigation of school impacts. Therefore, although the Specific Plan and other past, present, and reasonably foreseeable future projects could result in additional students and the need for additional facilities, payment of the fees mandated under SB 50 is the mitigation measure prescribed by the statute, and payment of the fees is deemed full and complete mitigation. The cumulative impact of the Project, considered with past, present and reasonably foreseeable future projects, with respect to schools, would be less than significant.

Mitigation Program

Standard Conditions and Requirements

SC 4.11-3 Pursuant to Section 65995 of the California Government Code, prior to the issuance of building permits for any development projects under the Red Hill Avenue Specific Plan,

the applicant shall pay developer fees to the Tustin Unified School District; payment of the adopted fees would provide full and complete mitigation of school impacts.

- SC 4.11-4** New development under the Red Hill Avenue Specific Plan shall be subject to the same General Obligation bond tax rate as already applied to other properties within the Tustin Unified School District for Measure G (approved in 2008) based upon assessed value of the residential and commercial uses.

Mitigation Measures

No mitigation measures are required to reduce impacts to schools.

Level of Significance After Mitigation

With implementation of the Mitigation Program, no significant impacts to schools would occur.

4.11.4 LIBRARY FACILITIES

Regulatory Setting

City of Tustin General Plan Land Use Element

The Land Use Element of the *City of Tustin General Plan* includes goals and policies related to public facilities and services that are applicable to the Specific Plan Project. The purpose of the Land Use Element is to describe present and planned land use activity, and to address issues concerning the relationship between land uses and environmental quality, potential hazards, and social and economic objectives. The Specific Plan's consistency with applicable public service goals and policies of the General Plan are addressed in Section 4.8, *Land Use and Planning*.

Tustin City Code

The Tustin City Code identifies land use categories, development standards, and other general provisions that ensure consistency between the City's General Plan and proposed development projects. Article 9, Chapter 3, Part 3, Section 9331 discusses that sub-dividers may be required to reserve sites, appropriate in area and location, for parks, recreational facilities, fire stations, libraries, or other public uses.

Environmental Setting

The Orange County Public Library has 33 libraries throughout the County, one of which is in Tustin; the Tustin Branch Library is located at 345 E. Main Street. The Growth Management Element of the Orange County General Plan outlines the County's standards for library service. These goals are one 10,000-square foot branch library facility per 50,000 residents, or, if appropriate, one 15,000-square-foot regional library per 75,000 residents. Tustin Library is a 32,000 square-foot library with a book capacity of 209,000 volumes. According to the Department of Finance (DOF) 2017 estimates, the City has a population of 82,372 people (DOF, 2017).

Thresholds of Significance

The following significance criteria are from CEQA Guidelines Appendix G. Implementation of the Specific Plan would result in a significant impact on the environment if it would:

Threshold 4.11-4 Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, 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 library services.

Environmental Impacts

The buildout of the Specific Plan is anticipated to generate approximately 1,520 residents and 722 employees, thereby incrementally increasing the demand for library services. Future residents within the Specific Plan area are anticipated to primarily use the Tustin Library. The existing library space, collections, and programs provided are considered adequate for the existing residents, and the proposed future development would have a nominal impact on library services. The Tustin Library would continue to meet the County's standard for library size with buildout of the Specific Plan. Overall, impacts related to implementation of the Specific Plan to library services would be less than significant.

Impact Summary: **Threshold 4.11-4: *Less Than Significant.*** The new residents generated by implementation of the Specific Plan would nominally increase the demand on library services. The Tustin Library would continue to meet the County's standard for library size with buildout of the Specific Plan and impacts would be less than significant.

Cumulative Impacts

Based on the EIR's significance criteria, cumulative impacts would result if the implementation of the Specific Plan, in combination with past, present, and reasonably foreseeable future development, may require additional library facilities. Implementation of the Specific Plan would not create a need for new or expanded library facilities. Developers and reasonably foreseeable future projects would be required to reserve land or pay development fees established for public improvements and facilities associated with public libraries and public parks. Overall, cumulative impacts on library services would be less than significant.

Mitigation Program

Standard Conditions and Requirements

No standard conditions are applicable to the Specific Plan.

Mitigation Measures

No mitigation measures are required to reduce impacts to library facilities.

Level of Significance After Mitigation

No significant impacts on libraries would occur.

4.11.5 PARKS

Please refer to Section 4.12, *Recreation*, of this Program EIR.

4.12 Recreation

This EIR Section describes the availability of and anticipated demand on parks and recreation opportunities proximate to the Specific Plan area, and identifies and addresses potential impacts from implementation of the Specific Plan related to recreational facilities.

4.12.1 REGULATORY SETTING

State of California

Quimby Act

The Quimby Act of 1975, (California Government Code § 66477), commonly called the “Quimby Act,” allows a city or county to pass an ordinance that requires, as a condition of approval of a subdivision, either the dedication of land, the payment of a fee in lieu of dedication, or a combination of both for park and recreational purposes. It allows cities and counties to require a maximum parkland dedication standard of 3 acres of parkland per 1,000 residents for new subdivision development unless the jurisdiction can demonstrate that the amount of existing neighborhood and community parkland exceeds that limit. In accordance with Section 66477, a jurisdiction may establish a parkland dedication standard based on its existing parkland ratio, provided required dedications do not exceed 5 acres per 1,000 persons.

Regional and Local

City of Tustin General Plan Open Space/Conservation/Recreation Element

The City of Tustin General Plan identifies policies in the Open Space/Conservation/Recreation Element related to its Parks and Open Space System. Specifically, the General Plan Element identifies planned park and recreation facilities designed to support the recreational needs of the City’s population. The Open Space/Conservation/Recreation Element establishes a parkland standard of 3 acres of usable parkland per 1,000 residents, unless an alternative ratio is established in an adopted Specific Plan, Development Agreement, or any other applicable agreement. Up to 1.5 acres per 1,000 residents can be provided through school recreation areas that are open to the public. The Specific Plan’s consistency with applicable goals and policies of the General Plan are addressed in Section 4.8, *Land Use and Planning*.

Tustin City Code

Tustin City Code Article 9, Chapter 3, Part 3, Section 9331.d (Parkland Dedication) discusses parkland dedications and development fees for subdivisions. To adhere to the policies and standards for parks and recreational facilities set forth in the General Plan Open Space/Conservation/Recreation Element, project proponents may dedicate land or pay a fee in lieu or a combination of both. A park fee is required when there is no public park or recreational facility required within the proposed subdivision; the subdivision is less than 50 parcels; or the project is a conversion of an existing apartment complex to multiple-owner occupancy. For subdivisions of 50 parcels or less, a project proponent may pay a fee in lieu of land dedication. The Tustin City Code permits the voluntary dedication of land for park and recreation purposes in subdivisions of 50 parcels or less. Dedication of land may be required by the City for a condominium, stock cooperative, or community apartment project which exceeds 50 dwelling units, regardless of the number of parcels. The land and fees must be used “only for the purpose of providing

park and recreational facilities to serve the area from which received, and the location of the land and amount of fees shall bear a reasonable relationship to the use of the park and recreational facilities by the future inhabitants of the subdivision, the community, and the general area from which it is received.”

4.12.2 ENVIRONMENTAL SETTING

Regional

The Orange County Parks and Recreation Department (OC Parks) operates and maintains 39,000 acres of regional park facilities and open space. The *Orange County Parks Strategic Plan* (October 2007) notes that regional resources include 32,000 acres in 25 urban and wilderness parks, 7 miles of beaches and coastal facilities, 7 regional historic sites and parks, archeological and paleontological collections, 7,000 acres of open space lands, and 230 miles of regional riding and hiking trails. Regional County recreational facilities near the Specific Plan area include Peters Canyon Regional Park, located approximately four miles to the north, and Mason Regional Park, approximately six miles to the south.

Local

The City of Tustin Parks and Recreation Department operates and maintains approximately 113.5 acres of park and recreation facilities, inclusive of approximately 106.7-acres of existing public park, as identified in Table 4.12-1, *City of Tustin Parks*. Additionally, the Tustin Legacy Linear Park is under construction, and the Veterans Sports Park at Tustin Legacy is expected to start construction in 2018. The Tustin Legacy Specific Plan identifies 33 acres of existing parks and an additional 230 acres of future parks to be developed within its boundaries (Tustin Legacy Specific Plan, 2017). Typical of older communities that were established prior to the establishment of parkland requirements, the Open Space/ Conservation/ Recreation Element of the General Plan has identified a parkland deficiency.

The City’s General Plan categorizes the different types of parks based on size and amenities. The General Plan identifies the following types of parks:

Parkettes: Parkettes are small, passive, local parks, generally less than one acre in size. They usually feature play apparatus, paved areas, benches, and landscape treatment. They may also feature children's play areas, quiet game areas, and sports activities such as multi-purpose courts, if space allows.

Neighborhood Park: All neighborhood parks should contain some area for active recreation depending on the size of the park. A neighborhood park site also needs to include amenities such as trees, shrubs, groundcover, turf areas, benches, trash receptacles, picnic tables, shade structures, and paved or decomposed-granite trails. The standard minimum size is three acres.

Community Park: Community parks are intended to serve an approximate population of 10,000 persons. Community parks should contain space for active recreational facilities such as game fields, game courts, swimming pools or aquatic center, and play areas as well as community centers, on-site parking, restrooms, and picnic areas.

School Playgrounds/Joint Agreements: The City includes school recreational facilities in which the City has a joint use agreement with the School District to meet the overall standard of 3 acres per 1,000 population.

Name	Location	Distance from Specific Plan Area	Size (acre)^a	Amenities
Pine Tree Park	1402 Bryan	Adjacent	4.2	Picnic Shelter, Sand Volleyball Pit, Playground Equipment, Restrooms
Frontier Park	1400 Mitchell Ave.	0.1 mile	4.5	Shaded Picnic Area, Frisbee Golf Course, Outdoor Fitness Equipment, Playground Equipment, Water Feature Play Area, Restrooms
Camino Real Park	13602 Parkcenter Ln.	0.7 mile	4.3	Picnic Shelter, Stage, Basketball Court (unlit), Playground Equipment, Restrooms
Centennial Park	14722 Devonshire Ave.	0.8 mile	8.0	Shaded Picnic Area, Sand Volleyball Pit, 2 Half-Court Basketball Courts (unlit), Horseshoe Pit, Playground Equipment, Restrooms
McFadden – Pasadena Parkette	17092 Medallion Ave.	0.9 mile	0.4	Playground and Climbing Structure
Magnolia Tree Park	2274 Fig Tree Dr.	0.9 mile	4.2	Picnic Shelter, 3 Tennis Courts (lighted), Half-Court Basketball Court, Playground Equipment, Restrooms
Peppertree Park	230 W. 1st St.	1.0 mile	5.5	Picnic Shelter, Horseshoe Pit, Youth Softball Diamond, On-site Parking, Restrooms
Heritage Park	2350 Kinsman Circle	1.1 miles	5.0	Shaded Group Picnic Areas, Youth Roller Hockey Rink, Basketball Courts, Playground Equipment, Restrooms
Columbus Tustin Park	14712 Prospect Ave.	1.1 miles	13.0	Picnic Shelter, 4 Softball Diamonds (lighted), Universally Accessible Playground Equipment, 4 Tennis Courts (lighted), On-site Parking, Restrooms
Laurel Glen Park	13301 Myford Rd.	1.2 miles	3.0	Playground Equipment, Fitness Stations, ¼-mile Walking/Running Path, Minimal On-street Parking, Restrooms
Tustin Sports Park	12850 Robinson Dr.	1.7 miles	20.0	Picnic Shelter, 6 Tennis Courts (lighted), 2 Basketball Courts (lighted), Playground Equipment, Food Concession, Multi-use Trail, 3 Ball Diamonds (lighted), 2 Multi-use Play Fields, On-site Parking, Restrooms
Victory Park	3300 Park Ave.	2.1 miles	4.8	Picnic Shelter, Playgrounds, Reflection Area, Large Turf Area, On-site Parking, Restrooms

Table 4.12-1. City of Tustin Parks

Name	Location	Distance from Specific Plan Area	Size (acre) ^a	Amenities
Citrus Ranch Park	2910 Portola Pkwy	2.6 miles	17.0	Picnic Shelter, Playground Equipment, Walking Trail, Hilltop Gazebo, Lemon Tree Orchard, Plaza Area, 8 Picnic Pods with Barbeques, On-Site Park, Restrooms
Cedar Grove Park	11385 Pioneer Rd.	2.8 miles	9.7	Picnic Shelter, Nature Trail and Regional Trail Access, 2 Half-Court Basketball Courts (lighted), Interpretive Displays, Outdoor Fitness and Playground Equipment, Amphitheater, On-site Parking, Restrooms
Pioneer Road Park	10250 Pioneer Rd.	3.9 miles	3.1	Picnic Shelter, Playground Equipment, Half-Court Basketball Courts, Grass Volleyball Court, Barbeque, Walking Trail, Water Feature Play Area, Restrooms

a. From approximate mid-point of the Specific Plan area (shortest distance).
Source: <http://www.tustinca.org/depts/parks/info/default.asp>, 2018.

4.12.3 THRESHOLDS OF SIGNIFICANCE

The following significance criteria are from CEQA Guidelines Appendix G. Implementation of the Specific Plan would result in a significant impact on the environment if it would:

Threshold 4.12-1 Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated.

Threshold 4.12-2 Include recreational facilities or requires the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

4.12.4 ENVIRONMENTAL IMPACTS

Threshold 4.12-1:	Would implementation of the Specific Plan increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?
Threshold 4.12-2:	Would implementation of the Specific Plan include recreational facilities or requires the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

The Specific Plan area would have an estimated buildout of approximately 500 additional residential units (primarily integrated mixed-use development) and 325,000 additional square feet of non-residential uses. At buildout, the Specific Plan could generate approximately 1,520 new residents and 722 new employees in addition to approximately 64 existing residents (based on 3.04 persons per unit) and 659 existing

employees (based on 450 square feet per employee) within the boundaries of the proposed Specific Plan area. This population increase would result in an increased use of existing and planned City parks and recreational facilities.

In accordance with the Quimby Act, a jurisdiction may establish a parkland dedication standard based on its existing parkland ratio, provided required dedications do not exceed 5 acres per 1,000 persons. The City's parkland dedication requirements of 3 acres per 1,000 residents is the same as the Quimby Act.

The City identifies parkland acreage requirements by multiplying the number of dwelling units by the parkland acres per unit based on the established density categories in the Tustin City Code. The Specific Plan does not establish density ranges. Because the Project proposes multi-family residential development and encourages it to be provided in a mixed-use setting, the Program EIR uses the 15.1 to 25 dwelling units per gross acre category in the Tustin City Code which assumes 2.24 persons per unit or 0.0067 acre of parkland per unit.¹ If future residential units were subject to the Quimby Act (because of a subdivision), the total amount of new parkland would be approximately 3.35 acres. The Tustin City Code also notes that dedication of land may be required by the City for a condominium, stock cooperative, or community apartment project which exceeds 50 dwelling units, regardless of the number of parcels. Therefore, the City may require the dedication of land regardless of where the future residential development projects within the Specific Plan are subdivisions. General Plan Conservation/Open Space/Recreation Policies 14.6 and 18.4 encourage future parks to be designed as joint-use facilities with public schools to reduce overall operations and maintenance costs. A source of additional funding for the maintenance and construction of new parks and recreation facilities is the City's General Fund, including property taxes collected from residents.

Because future residential development within the Specific Plan area may not be subject to the Quimby Act or the subdivision provisions of the Tustin City Code, future development projects could cumulatively contribute to the parkland deficiency identified in the City's General Plan. In order that park and recreational facilities be provided to serve future residents within the Specific Plan area, MM 4.12-1 is required. This mitigation measure applies the parkland dedication and development fee provisions set forth in the Tustin City Code to new residential dwelling units within the Specific Plan area that would not be subject to Tustin City Code Article 9, Chapter 3, Part 3, Section 9331.d (Parkland Dedication). Implementation of Municipal Code requirements and MM 4.12-1 would mitigate potential significant impacts.

Impact Summary: **Thresholds 4.12-1 and 4.12-2: *Less Than Significant With Mitigation.*** Projects, as applicable, within the Specific Plan area would be required to comply with applicable City requirements and MM 4.12-1 for the provision of parklands.

4.12.5 CUMULATIVE IMPACTS

The geographic area for cumulative analysis of recreation resources is the service area for the City of Tustin Parks and Recreation Department. Typical of older communities that were established in part prior to the establishment of parkland requirements, the City has identified a parkland deficiency.

¹ The California Department of Finance, Table 2: E-5, 2017, identifies a citywide average of 3.04 persons per household which includes single-family, multi-family, and mobile home dwelling units.

However, the City is implementing additional park and recreational facilities such as the Tustin Veterans Sport Park and the Linear Park at Tustin Legacy. Future development projects would be reviewed to determine their potential effect on parks and recreational facilities. These projects would be required to comply with the City's park fee program and adhere to General Plan policies. Buildout of the Specific Plan would result in additional use of existing parks and recreational facilities within the City but would also be required to provide its fair share of additional parklands consistent based on Tustin City Code and General Plan. Therefore, the Project's contribution to cumulative impacts would be less than significant with mitigation.

4.12.6 MITIGATION PROGRAM

Standard Conditions and Requirements

SC 4.12-1 Prior to the approval of the final map for subdivisions under the Red Hill Avenue Specific Plan, applicants shall comply with the City of Tustin Subdivision Code (Article 9, Chapter 3, Part 3, Section 9331 of the Tustin City Code). Developers may dedicate land or pay a fee in lieu or a combination of both. The value of the amount of such fee shall be based upon the fair market value of the amount of land which would otherwise be required for dedication. Dedication of land may be required by the City for a condominium, stock cooperative, or community apartment project which exceeds 50 dwelling units.

Mitigation Measures

MM 4.12-1 For residential projects not subject to City of Tustin Subdivision Code (Article 9, Chapter 3, Part 3, Section 9331 of the Tustin City Code), applicants shall pay to the City of Tustin a parkland development fee prior to the issuance of building permits. The value of the amount of such fee shall be based upon the fair market value of the amount of land which would otherwise be required for dedication.

4.12.7 LEVEL OF SIGNIFICANCE AFTER MITIGATION PROGRAM

With implementation of the Mitigation Program set forth in this Program EIR, the Specific Plan would not cause or contribute to significant recreational impacts.

4.13 Traffic and Transportation

This Section describes environmental effects on transportation and circulation associated with the implementation of the Specific Plan Project. Information used to prepare this Section is based on the findings of the Traffic Impact Study prepared by Kimley-Horn and Associates, Inc. (Kimley-Horn, 2018). The Traffic Impact Study is included in its entirety as Appendix F of this Program EIR.

4.13.1 REGULATORY SETTING

State of California

Congestion Management Program

The Congestion Management Program (CMP) was signed into law in 1990 to reduce traffic congestion and to provide a mechanism for coordinating land use and development decisions. In June 1990, the passage of the Proposition 111 gas tax increase required urbanized areas in the State with a population of 50,000 or more to adopt a CMP. Compliance with the CMP requirements ensures a local jurisdiction's eligibility to compete for State gas tax funds for local transportation projects.

The CMP requires that a Traffic Impact Assessment be conducted for any project generating 2,400 or more daily trips, or, for projects that have direct access to the CMP Highway System, 1,600 or more daily trips. Per the CMP guidelines, this number is based on the desire to analyze any impacts that comprise three percent or more of the existing CMP Highway System facilities' capacity. The CMP Highway System includes specific roadways, including State Highways, smart streets, and CMP arterial monitoring locations/intersections. There are no specific CMP requirements for roadway segment monitoring.

SB 743 – Update to the CEQA Guidelines for Transportation Impacts

California Senate Bill (SB) 743 (Steinberg, 2013) mandates a change in the way that public agencies in California evaluate the transportation-related impacts of projects under CEQA. The proposed changes identify “vehicle miles traveled” (VMT) as the most appropriate metric to evaluate a project's transportation impacts for CEQA purposes, replacing the traditional capacity- or delay-based Level of Service standards.

VMT refers to the amount and distance of automobile travel attributable to a project. Generally, development projects that locate within one-half mile of either an existing major transit stop or a stop along an existing high quality transit corridor may be presumed to cause a less than significant transportation impact. Similarly, development projects that would decrease VMT in a project area compared to existing conditions may be considered to have a less-than-significant transportation impact.

The revisions to the CEQA Guidelines proposed by SB 743 must undergo a formal administrative rulemaking process, and once adopted by the Natural Resources Agency, must be reviewed by the Office of Administrative Law. Once the changes to the CEQA Guidelines are adopted by the Natural Resources Agency, a project's effect on intersection capacity utilization or automobile delay, as measured by Level of Service, would no longer be an accepted measure of a significant environmental impact under CEQA. Instead, a development project that results in VMT exceeding an applicable threshold of significance may indicate a significant impact.

The SB 743 proposed revisions to the CEQA Guidelines have undergone public review and comment. Following anticipated adoption in fall 2018, local agencies will have a two-year opt-in period, during which time agencies will develop and adopt its approach to meeting the requirements of SB 743. Full implementation of SB 743 will be required statewide two years following adoption by the Natural Resources Agency. Since the revised CEQA Guidelines have not yet been finalized or adopted by the State, the measure of significance for traffic-related impacts will continue to be based on the Level of Service standards currently adopted by the City.

Senate Bill 375

SB 375 became law effective January 1, 2009 as implementing legislation of AB 32, which requires the State to reduce GHG emissions across all industry sectors to 1990 levels. Both laws are administered and enforced through CARB. Please refer to Section 4.2, *Air Quality*, and Section 4.5, *Greenhouse Gas Emissions*, of this Program EIR.

SB 375 provides guidance on how curbing emissions from cars and light trucks can help the State comply with AB 32. The law requires each of California's 18 Metropolitan Planning Organizations (in this case, SCAG) to develop a Sustainable Communities Strategy (SCS) which would include specific strategies for improving land use and transportation efficiency. The most prominent strategy includes the identification and development of higher density, mixed-use projects around public transportation system stations. SB 375 also provides CEQA streamlining incentives for preferred development types. Residential or mixed-use projects qualify if they conform to the SCS. Transit-oriented developments also qualify if they: (1) are at least 50 percent residential; (2) meet density requirements; and (3) are within one-half mile of a transit stop. The degree of CEQA streamlining is based on the degree of compliance with these development preferences. Other supported strategies relate to the integration of Intelligent Transportation Systems to improve circulation on freeways and arterials. Every SCS to be developed under SB 375 is required to be integrated into each MPO's Regional Transportation Plan (RTP) to encourage local jurisdictions to comply. Transportation improvement projects not listed in the RTP become ineligible to receive funding from some State and Federal programs.

Regional and Local

Orange County Congestion Management Program

In 1991, the majority of local governments in Orange County designated the Orange County Transportation Authority (OCTA) as the County's Congestion Management Agency. Since then, the OCTA has been responsible for the development, monitoring, and biennial updating of the County's CMP. The goals of Orange County's CMP are to reduce traffic congestion and provide a mechanism for coordinating land use and development decisions.

Transportation Demand Management (TDM) strategies are geared toward increasing vehicle occupancy, promoting the use of alternative modes, reducing the number of automobile trips, decreasing overall trip lengths, and improving air quality. The adoption of a TDM ordinance was required of every local jurisdiction for Orange County's 1991 CMP. The adoption of these ordinances is no longer a statutory requirement; however, OCTA continues to encourage local jurisdictions to promote and support TDM strategies in their community.

Such strategies may include, but are not limited to, the following:

- Encouraging employers to establish and help subsidize telecommuting, provide monetary incentives for ridesharing, and implement alternative work hour programs;
- Implementing bus loading facilities at worksites;
- Implementing pedestrian facilities such as sidewalks, paved pathways, and pedestrian grade separations over arterial streets to connect worksites to shopping, eating, recreation, parking, or transit facilities; and
- Participating in the development of remote parking facilities and the high-occupancy vehicles (i.e., shuttles, etc.) to serve them.

City of Tustin General Plan Circulation Element

The purpose of the General Plan Circulation Element (adopted in 2008) is to provide a safe, efficient, and adequate circulation system for the City. The Circulation Element addresses the circulation improvements needed to provide adequate capacity for future land uses. Corresponding goals and policies are identified to ensure that all components of the circulation system will meet the needs of the City. Applicable transportation plans and policies relating to transportation and a documentation of Project consistency for each of the policies is included in Section 4.8, *Land Use and Planning*.

4.13.2 METHODOLOGY

Traffic Study Area

The traffic study methodology and traffic study area were defined by the City. The traffic study area is depicted in Exhibit 4.13-1, *Traffic Study Intersections*, and include nine intersections.

1. Red Hill Avenue at Bryan Avenue
2. Red Hill Avenue at San Juan Street
3. Red Hill Avenue at El Camino Real
4. Red Hill Avenue at I-5 NB Ramps
5. Red Hill Avenue at I-5 SB Ramps
6. Red Hill Avenue at Nissan Road
7. Red Hill Avenue at Mitchell Avenue
8. Red Hill Avenue at Walnut Avenue
9. Red Hill Avenue at Sycamore Avenue

In addition, the following roadway segments were analyzed:

- Red Hill Avenue: Bryan Avenue to San Juan Street
- Red Hill Avenue: San Juan Street to El Camino Real
- Red Hill Avenue: Nissan Road to Mitchell Avenue

- Red Hill Avenue: Mitchell Avenue to Walnut Avenue
- Red Hill Avenue: Walnut Avenue to Sycamore Avenue

Traffic Impact Analysis Methodology

Intersection Analysis Methodology

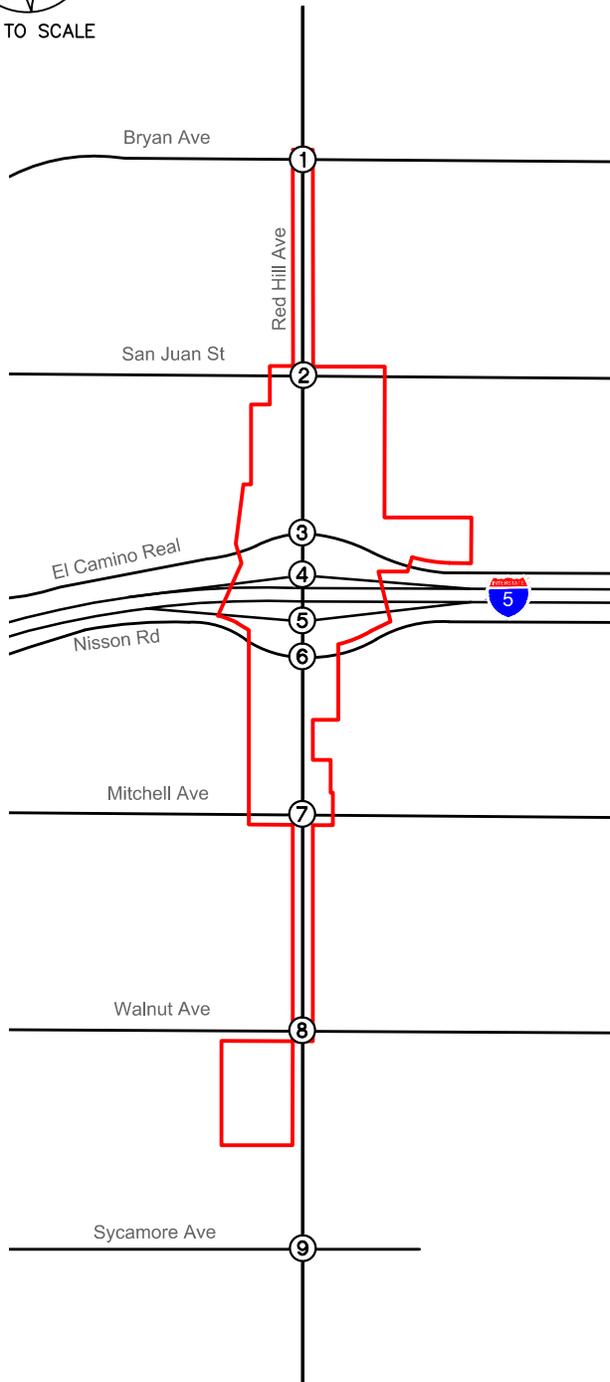
City of Tustin Intersections – All of the traffic study area intersections are signalized. In accordance with the requirements of the City of Tustin, peak hour operating conditions at the signalized intersections were evaluated using the Intersection Capacity Utilization (ICU) methodology. The ICU methodology provides a comparison of the theoretical hourly vehicular capacity of an intersection to the number of vehicles actually passing through that intersection during a given hour.

The ICU calculation assumes a per-lane capacity of 1,700 vehicles per hour for each travel lane (through or turning lane) through the intersection. A clearance factor of 0.05 (5 percent) of the total intersection capacity is included in the ICU calculation. The ICU calculation returns a volume-to-capacity (V/C) ratio that translates into a corresponding Level of Service (LOS) measure, ranging from LOS A, representing uncongested, free-flowing conditions, to LOS F, representing severely congested, over-capacity conditions. A summary description of each Level of Service and the corresponding V/C ratio is provided in Table 4.13-1, *Signalized Intersection Level of Service Descriptions*.

Caltrans Intersections – Intersections located on a State Highway (Caltrans) facility are evaluated using the ICU methodology and the Highway Capacity Manual (HCM) methodology for signalized intersections, the latter as required by the *Caltrans Guide for the Preparation of Traffic Impact Studies* (June 2001). The HCM methodology estimates the average delay (in average seconds per vehicle) for each of the movements through the intersection, depending on factors including the number of through and turn lanes, volume of traffic, and signal cycle length and timing. As with the ICU methodology, the HCM delay forecast translates to a Level of Service designation, ranging from LOS “A” to LOS “F”. A summary description of each Level of Service for the HCM signalized intersection methodology, and the corresponding delay, expressed in seconds per vehicle (Table 4.13-1).

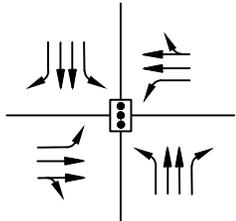
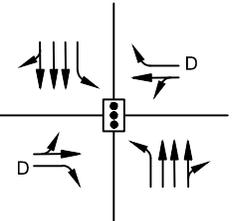
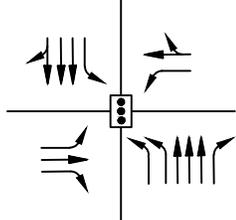
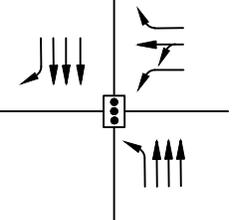
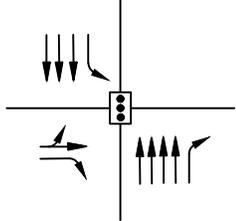
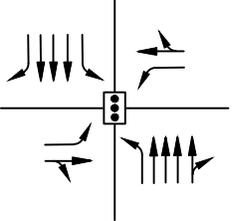
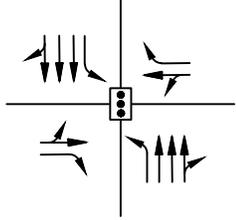
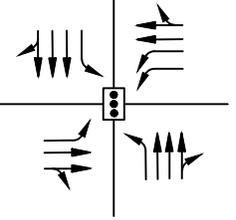
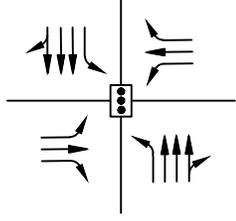


NOT TO SCALE



LEGEND:

-  = Study Intersection
-  = Specific Plan Area
-  = Signal
-  = De Facto Right-Turn Lane

<p>1. Red Hill Ave at Bryan Ave</p> 	<p>2. Red Hill Ave at San Juan St</p> 
<p>3. Red Hill Ave at El Camino Real</p> 	<p>4. Red Hill Ave at I-5 NB Ramps</p> 
<p>5. Red Hill Ave at I-5 SB Ramps</p> 	<p>6. Red Hill Ave at Nisson Rd</p> 
<p>7. Red Hill Ave at Mitchell Ave</p> 	<p>8. Red Hill Ave at Walnut Ave</p> 
<p>9. Red Hill Ave at Sycamore Ave</p> 	

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Level of Service	Signalized: ICU V/C Ratio	Signalized: HCM Delay	Description
A	0.00 - 0.60	≤ 10.0	EXCELLENT – No vehicle waits longer than one red light, and no approach phase is fully used.
B	0.61 - 0.70	10.1 – 20.0	VERY GOOD – An occasional approach phase is fully utilized; drivers begin to feel somewhat restricted within groups of vehicles.
C	0.71 - 0.80	20.1 – 35.0	GOOD – Occasionally drivers may have to wait through more than one red light; back-ups may develop behind turning vehicles.
D	0.81 - 0.90	35.1 – 55.0	FAIR – Delays may be substantial during portions of the rush hours, but enough lower volume periods occur to permit clearing of developing lines, preventing excessive back-ups.
E	0.91 - 1.00	55.1 - 80.0	POOR – Represents the most vehicles that the intersection approaches can accommodate; may be long lines of waiting vehicles through several signal cycles.
F	> 1.00	> 80.0	FAILURE – Back-ups from nearby locations or on cross streets may restrict or prevent movement of vehicles out of the intersection approaches. Extensive delays with continuously increasing queue lengths.

Source: Kimley-Horn, 2018.

Roadway Segment Analysis

The roadway segment analysis addresses the Project’s impact on daily operating conditions on roadway segments within the traffic study area. Roadway segments are evaluated by comparing the traffic volume on a roadway segment to the daily capacity of that segment, to determine the volume-to-capacity (v/c) ratio. Daily capacity is based on the roadway classification, as shown in Table 4.13-2, *City of Tustin Roadway Capacity*.

Facility Type (No. of Lanes)	Two-Way Traffic Volume (ADT)	
	LOS D	LOS E
Major (8 lanes divided)	67,500	75,000
Major (6 lanes divided)	50,600	56,300
Primary (4 lanes divided)	33,800	37,500
Secondary (4 lanes undivided)	22,500	25,000
Collector (2 lanes undivided)	11,300	12,500

Source: City of Tustin’s General Plan *Circulation Element* (2008)

Level of Service Standard and Performance Criteria

The City of Tustin General Plan Circulation Element has established that the Level of Service standard for intersection and roadway operation in the City is LOS D. However, due to the significant amount of regional traffic in some areas of the City, LOS E is the recommended standard for:

- Irvine Boulevard
- Edinger Avenue
- Jamboree Road south of Irvine Boulevard

For purposes of this analysis, the target Level of Service for all study intersections is LOS D.

Study Scenarios

Each of the traffic study area intersections has been analyzed for the following scenarios:

- Existing Conditions
- Existing Plus Project
- Long-Range Future Conditions
- Long-Range Future With Project

4.13.3 ENVIRONMENTAL SETTING

Existing Transportation System

Roadway Characteristics

Regional access to the Specific Plan area is provided by I-5 which runs generally in a northwest-southeast orientation and bisects the Specific Plan area. There are direct off-ramps and on-ramps to Red Hill Avenue from I-5. Local access to the Specific Plan area is provided by several local major and minor roadways leading to and from the Specific Plan area. The following provides a description of the existing roadways in the Specific Plan area.

Red Hill Avenue – Red Hill Avenue is a six-lane divided roadway, with three travel lanes in each direction and a center two-way left-turn lane. Within the traffic study area, Red Hill Avenue provides access to I-5 via a tight diamond interchange. The posted speed limit along Red Hill Avenue is 40 miles per hour (mph) and on-street parking is prohibited. Red Hill Avenue is designated as a 6-Lane Major arterial on the Arterial Highway Plan of the City of Tustin’s General Plan. A 6-Lane Major roadway would provide 3 travel lanes in each direction with a raised center median within 120 feet of right-of-way.

Bryan Avenue – Bryan Avenue is a four-lane undivided roadway. Its intersection with Red Hill Avenue is signalized. The posted speed limit along Bryan Avenue is 40 mph west of Red Hill Avenue and 45 mph east of Red Hill Avenue. Bryan Avenue is designated as a Secondary arterial on the City’s Arterial Highway Plan. A Secondary arterial provides two travel lanes in each direction within 80 feet of right-of-way; or may include Class II bike lanes, within 92 feet of right-of-way.

San Juan Street – San Juan Street is a two-lane undivided roadway which provides local access to adjacent residential and school uses. Its intersection with Red Hill Avenue is signalized. The posted speed limit along San Juan Street is 30 mph, with a 25-mph school zone east of Red Hill Avenue.

El Camino Real – El Camino Real is a four-lane divided roadway with a two-way left-turn lane west of Red Hill Avenue, and a two-lane divided roadway with a two-way left-turn lane east of Red Hill Avenue. Its intersection with Red Hill Avenue is signalized. El Camino Real is designated as a Secondary arterial on the City’s Arterial Highway Plan.

Nisson Road – Nisson Road is a two-lane undivided roadway which provides local access to adjacent residential and business parcels. Its intersection with Red Hill Avenue is signalized. The posted speed limit along Nisson Road is 35 mph. The westbound approach of Nisson Road at Red Hill Avenue is posted with the following turn restriction: “No Turn on Red, 7 – 9 AM, 4 – 6 PM Weekdays”.

Mitchell Avenue – Mitchell Avenue is a two-lane undivided roadway, which provides local access to adjacent residential and business parcels. Its intersection with Red Hill Avenue is signalized. The posted speed limit along Mitchell Avenue is 30 mph, with a 25-mph school zone west of Red Hill Avenue.

Walnut Avenue – Walnut Avenue is a four-lane divided roadway with a two-way left-turn lane west of Red Hill Avenue, and a two-lane divided roadway with a two-way left-turn lane east of Red Hill Avenue. Its intersection with Red Hill Avenue is signalized. The posted speed limit along Walnut Avenue is 40 mph. Walnut Avenue is designated as a Modified Primary arterial on the City’s Arterial Highway Plan. A Modified Primary would provide two travel lanes in each direction with a raised or painted median.

Existing Transit Services

The Orange County Transportation Authority (OCTA) operates local public transit service throughout Orange County, including in the City of Tustin and through the traffic study area. OCTA Routes 66, 71, and 79 currently serve the study area.

Route 66 operates between the cities of Huntington Beach and Irvine, traveling along Walnut Avenue and McFadden Avenue in the City of Tustin. Service is provided every day with an approximate headway (the time interval between bus arrivals) of 30 minutes on weekdays and 60 minutes on weekends and holidays.

Route 71 operates between Newport Beach and Yorba Linda, traveling along Tustin Avenue, First Street, El Camino Real, Newport Avenue, and Red Hill Avenue in Tustin. Service is provided every day with an approximate headway of 30 minutes on weekdays and 50 to 60 minutes on weekends and holidays.

Route 79 operates between the cities of Tustin and Newport Beach, traveling along First Street, Newport Avenue, Centennial Way and Main Street / Bryan Avenue in the City of Tustin. Service is provided every day with an approximate headway of 30 minutes on weekdays and 60 minutes on weekends and holidays.

Within the study area, bus stops are provided at the following locations:

- Bryan Avenue, east and west of Red Hill Avenue;
- both sides of El Camino Real, west of Red Hill Avenue;
- the west side of Red Hill Avenue, south of Nisson Road;

- Red Hill Avenue, north and south of Mitchell Avenue;
- both sides of Walnut Avenue, east of Red Hill Avenue; and
- both sides of Red Hill Avenue, south of Walnut Avenue.

Bike Facilities

Within the traffic study area, the only existing bike facility is a Class II bike lane (a striped, on-street bike lane adjacent to the travel lane) on both sides of Red Hill Avenue between El Camino Real and Nissan Road. Exhibit 4.13-2, *Master Bikeway Plan*, shows that the entire extent of Red Hill Avenue within the City limits is designated or is a potential Class II bikeway.

Existing Traffic Conditions

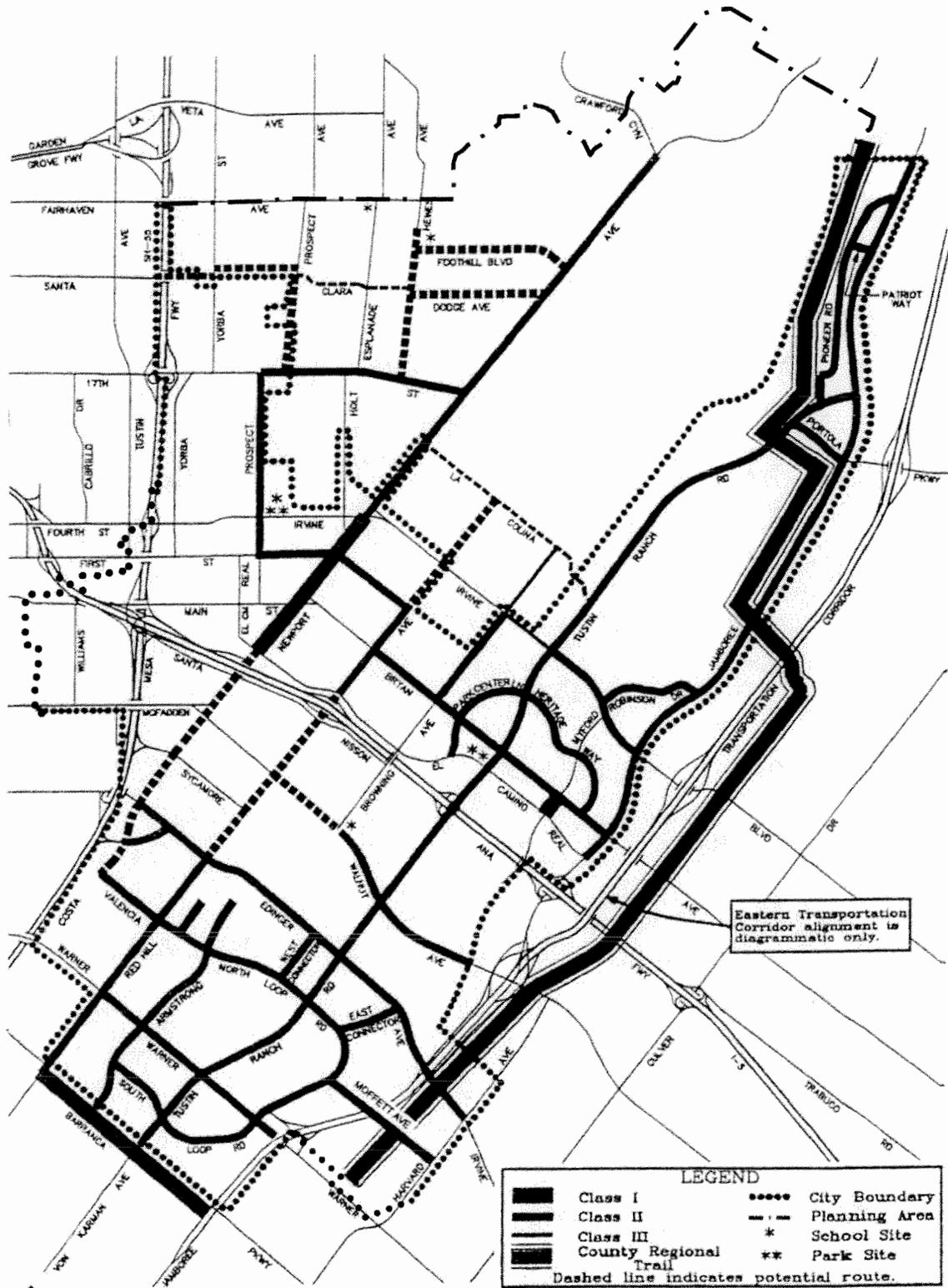
Existing Traffic Volumes

Morning and evening peak hour traffic counts for the study intersections and roadways were conducted in March 2017.

Intersection Levels of Service

Existing operating conditions at the study intersections during the morning and evening peak hours are summarized in Table 4.13-3, *Intersection Operations – Existing Conditions*. The table indicates that all traffic study intersections are currently operating at an acceptable LOS D in both peak hours.

Table 4.13-3. Intersection Operations – Existing Conditions					
ICU Methodology					
No.	Intersection	AM Peak Hour		PM Peak Hour	
		ICU	LOS	ICU	LOS
1	Red Hill Ave. at Bryan Ave.	0.65	B	0.75	C
2	Red Hill Ave. at San Juan St.	0.52	A	0.41	A
3	Red Hill Ave. at El Camino Real	0.66	B	0.55	A
4	Red Hill Ave. at I-5 NB Ramps	0.60	A	0.57	A
5	Red Hill Ave. at I-5 SB Ramps	0.68	B	0.68	B
6	Red Hill Ave. at Nissan Rd.	0.62	B	0.64	B
7	Red Hill Ave. at Mitchell Ave.	0.60	A	0.58	A
8	Red Hill Ave. at Walnut Ave.	0.68	B	0.74	C
9	Red Hill Ave. at Sycamore Ave.	0.67	B	0.60	A
HCM Methodology					
No.	Intersection	AM Peak Hour		PM Peak Hour	
		Delay	LOS	Delay	LOS
4	Red Hill Ave. at I-5 NB Ramps	20.3	B	22.5	C
5	Red Hill Ave. at I-5 SB Ramps	21.6	B	22.4	C
Note: Intersection operation is expressed as volume-to-capacity (v/c) ratio using the ICU Methodology, and as seconds of delay for the HCM Methodology Source: Kimley-Horn, 2018.					



↑ NORTH not to scale
 SOURCE: Austin-Foust Associates, Inc.

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Roadway Segments

Existing roadway operations are summarized in Table 4.13-4, *Roadway Segments – Existing Conditions*. This table indicates that the following roadway segments are currently operating at a deficient Level of Service based on daily volumes:

Roadway	Segment	LOS D Capacity	Existing ADT	LOS D or Better?
Red Hill Avenue	Bryan Avenue to San Juan Street	50,600	21,800	Yes
	San Juan Street to El Camino Real	50,600	25,900	Yes
	Nisson Road to Mitchell Avenue	50,600	29,200	Yes
	Mitchell Avenue to Walnut Avenue	50,600	26,700	Yes
	Walnut Avenue to Sycamore Avenue	50,600	27,700	Yes

LOS = Level of Service; ADT = Average Daily Traffic
Bold and shaded values indicate a deficient Level of Service, based on City of Irvine Traffic Analysis Guidelines.
 Source: Kimley-Horn, 2018.

4.13.4 THRESHOLDS OF SIGNIFICANCE

The following significance criteria are from CEQA Guidelines Appendix G. The Specific Plan Project would result in a significant impact on the environment if it would:

- Threshold 4.13-1** Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit.
- Threshold 4.13-2** Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads and highways.
- Threshold 4.13-3** Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks.
- Threshold 4.13-4** Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).
- Threshold 4.13-5** Result in inadequate emergency access.

Threshold 4.13-6 Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

4.13.5 SPECIFIC PLAN PROJECT ASSUMPTIONS

Trip Generation

The proposed Specific Plan would allow for up to 500 additional multi-family dwelling units and 325,000 square feet of additional non-residential uses. Although no actual development projects are assumed, the Specific Plan has identified opportunity areas throughout the Specific Plan area. Some of these opportunity areas are currently developed with existing, occupied, and operating uses. The development potential identified in the Specific Plan represents development increases over existing development levels along Red Hill Avenue, and may, in some cases, represent new development that replaces a prior existing use. Trip generation for the development contemplated by the Specific Plan, therefore, represents the new additive trip-making potential, over and above traffic currently being generated by existing uses in the Specific Plan area.

Trip generation estimates for the project were developed using the Institute of Transportation Engineers (ITE) *Trip Generation Manual*, 9th Edition (2012). The multi-family residential component of the Specific Plan could be developed as condominium/townhomes or as apartments. Of the two, the trip rates for apartments are higher. For a more conservative traffic analysis, the higher trip rates for apartments were used. Also for a more conservative analysis, no trip reductions were taken for internal trip capture or pass-by trips.

Trip generation estimates for the Specific Plan Project were developed using the Institute of Transportation Engineers (ITE) *Trip Generation Manual*, 9th Edition (2012). Resulting Project trip generation rates and trip estimates are shown in Table 4.13-5, *Project Trip Generation*. The Specific Plan development potential represents the addition of approximately 17,836 trips per day, with 641 (285 inbound and 356 outbound) trips in the morning peak hour, and 1,562 (811 inbound and 751 outbound) trips in the evening peak hour.

Project Trip Distribution and Assignment

Project traffic would approach and depart the Specific Plan area using the existing street system, similar to current traffic patterns. Project trip distribution assumptions for the Specific Plan area were developed by reviewing existing travel patterns and taking into account the proposed mix of uses and the location of area trip producers, such as residential population, visitor population, and employment areas. Trip assignment was conducted assuming the multiple approach and departure opportunities provided by the street system, and the potential for additional raised medians along portions of Red Hill Avenue.

Table 4.13-5. Project Trip Generation									
Land Use	ITE Code	Unit	Trip Generation Rates						
			Daily	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
Apartment	220	DU	6.650	0.102	0.408	0.510	0.403	0.217	0.620
Shopping Center	820	KSF	42.700	0.595	0.365	0.960	1.781	1.929	3.710
High-Turnover (Sit-Down) Restaurant	932	KSF	127.150	5.946	4.865	10.810	5.910	3.940	9.850
Land Use	Quantity	Unit	Trip Generation Estimates						
			Daily	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
Residential Multi-Family ^a .	500	DU	3,325	51	204	255	202	109	311
Commercial ^b .	317.5	KSF	13,557	189	116	305	565	612	1,177
Restaurant ^c .	7.5	KSF	954	45	26	81	44	30	74
Total Project Trips			17,836	285	356	641	811	751	1,562
DU = dwelling unit; KSF = thousand square feet a. ITE Code 220 (Apartment) b. ITE Code 820 (Shopping Center) c. ITE Code 932 (High-Turnover (Sit-Down) Restaurant) Source: Kimley-Horn, 2018.									

4.13.6 ENVIRONMENTAL IMPACTS

Threshold 4.13-1:	Would the Specific Plan Project conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?
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Existing Plus Project

The Existing Plus Project scenario is a hypothetical scenario which assumes that the Project would be fully implemented at the present time. This analysis isolates the potential impact of the Project from other projects and circulation system improvements, and assumes full development of the Proposed Project with full absorption of Project traffic on the existing circulation system.

Intersection Levels of Service

Project traffic was added to the existing traffic volumes. The traffic study area intersections were analyzed for Existing Plus Project Conditions, and the results are summarized in Table 4.13-6, *Intersection Operations – Existing Plus Project*. With the addition of Project traffic to Existing Conditions peak hour traffic volumes, all study intersections would continue to operate at an acceptable Level of

Service in both peak hours. The addition of Project traffic would not cause a significant impact at any traffic study area intersection.

Roadway Segments

Existing Plus Project roadway operations are summarized in Table 4.13-7, *Roadway Segments – Existing Plus Project*. All roadway segments would continue to operate at an acceptable level of service under this scenario.

Long-Range Future Conditions

Analysis of projected traffic conditions at build-out of the traffic study area was conducted to determine whether the buildout transportation system can accommodate the future traffic demands in the study area, including the traffic associated with the Specific Plan development potential.

Traffic Forecasts

The methodology for developing long-range future traffic forecasts volumes at the traffic study intersections is a multi-step process, based on the following resources and assumptions:

- Traffic forecasts for the study intersections were obtained from the City of Irvine. The peak hour traffic forecasts were developed by the City using the Irvine Transportation Analysis Model (ITAM). The ITAM forecast year for long-range future conditions is 2035.
- As a conservative approach, if a turning movement forecast volume produced by the ITAM was less than the existing traffic count for that movement, manual adjustments were made to ensure that all forecast volumes would be equal to or greater than the existing turning movement counts.
- Roadway segment forecast volumes were developed using the same methodology noted for the peak hour turning movement volumes using ITAM forecasts. If a roadway segment forecast volume produced by this approach was less than the existing traffic count segment, manual adjustments were made to ensure that all forecast volumes would be equal to or greater than the existing segment counts.
- Red Hill Avenue is showing little to no growth or a decrease in daily volumes on most of the study roadway segments. The following are potential reasons for daily traffic reductions on Red Hill Avenue:
 - Traffic may divert from Red Hill Avenue to Newport Avenue due to the planned extension of Newport Avenue to connect with Edinger Avenue on the north leg of the intersection.
 - Traffic may divert from Red Hill Avenue to Browning Avenue due to the planned connection of Browning Avenue over I-5.
- The ITAM does not contain forecasts for the intersection of Red Hill Avenue at San Juan Street. Forecasts were developed for this intersection by factoring existing traffic counts by the average growth for the two adjacent intersections.

Cumulative Projects information was obtained from the cities of Tustin, Irvine and, Santa Ana.

Table 4.13-6. Intersection Operations – Existing Plus Project													
ICU Methodology													
No.	Intersection	AM Peak Hour						PM Peak Hour					
		Without Project		With Project		Project Impact	Impact Sig.?	Without Project		With Project		Project Impact	Impact Sig.?
		ICU	LOS	ICU	LOS			ICU	LOS	ICU	LOS		
1	Red Hill Ave. at Bryan Ave.	0.65	B	0.67	B	0.02	No	0.75	C	0.77	C	0.02	No
2	Red Hill Ave. at San Juan St.	0.52	A	0.54	A	0.02	No	0.41	A	0.44	A	0.03	No
3	Red Hill Ave. at El Camino Real	0.66	B	0.72	C	0.06	No	0.55	A	0.66	B	0.11	No
4	Red Hill Ave. at I-5 NB Ramps	0.60	A	0.64	B	0.04	No	0.57	A	0.70	B	0.13	No
5	Red Hill Ave. at I-5 SB Ramps	0.68	B	0.75	C	0.07	No	0.68	B	0.83	D	0.15	No
6	Red Hill Ave. at Nissan Rd.	0.62	B	0.67	B	0.05	No	0.64	B	0.77	C	0.13	No
7	Red Hill Ave. at Mitchell Ave.	0.60	A	0.64	B	0.04	No	0.58	A	0.67	B	0.09	No
8	Red Hill Ave. at Walnut Ave.	0.68	B	0.69	B	0.01	No	0.74	C	0.84	D	0.10	No
9	Red Hill Ave. at Sycamore Ave.	0.67	B	0.67	B	0.00	No	0.60	A	0.64	B	0.04	No
HCM Methodology													
No.	Intersection	AM Peak Hour						PM Peak Hour					
		Without Project		With Project		Project Impact	Impact Sig?	Without Project		With Project		Project Impact	Impact Sig?
		Delay	LOS	Delay	LOS			Delay	LOS	Delay	LOS		
4	Red Hill Ave. at I-5 NB Ramps	20.3	B	22.4	B	2.1	No	22.5	C	27.9	C	5.4	No
5	Red Hill Ave. at I-5 SB Ramps	21.6	B	23.9	B	2.3	No	22.4	C	28.4	C	6.0	No

Note: Intersection operation is expressed as volume-to-capacity (v/c) ratio using the ICU Methodology, and as seconds of delay for the HCM Methodology.
Source: Kimley-Horn, 2018.

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Table 4.13-7. Roadway Segments - Existing Plus Project

Roadway	Segment	LOS D Capacity	Existing ADT	Daily Project Traffic	Existing + Project Volume	LOS D or Better?
Red Hill Avenue	Bryan Avenue to San Juan Street	50,600	21,800	2,500	24,300	Yes
	San Juan Street to El Camino Real	50,600	25,900	8,800	34,700	Yes
	Nisson Road to Mitchell Avenue	50,600	29,200	6,300	35,500	Yes
	Mitchell Avenue to Walnut Avenue	50,600	26,700	4,500	31,200	Yes
	Walnut Avenue to Sycamore Avenue	50,600	27,700	2,300	30,000	Yes

LOS = Level of Service; ADT = Average Daily Traffic
Bold and shaded values indicate a deficient Level of Service, based on City of Irvine Traffic Analysis Guidelines.
 Source: Kimley-Horn, 2018.

- Cumulative Projects near the Specific Plan area were either included in the ITAM forecasts, or were manually added, if not included. Project trips from Cumulative Projects not already included in the ITAM forecasts were added to the ITAM forecasts.
- Project information and trip generation assumptions for Cumulative Projects are shown on Table 4.13-8, *Summary of Traffic Study Cumulative Projects*. The location of the Cumulative Projects is shown on Exhibit 4.13-3, *Location of Traffic Study Cumulative Projects*.
- Trip generation and trip distribution assumptions for the Cumulative Projects were obtained from traffic impact studies, if available, and were developed by Kimley-Horn if traffic studies were not available.
- The ITAM model also assumes improvements to the long-term regional transportation network that reflect programmatic network improvements (i.e., build-out of the circulation system to General Plan standards).

Long-Range Without Project

Intersection Levels of Service

The study intersections were analyzed for Long-Range Future Conditions, and the results are summarized in Table 4.13-9, *Intersection Operations – Long-Range Future Conditions Without Project*. The table shows that all traffic study area intersections are forecasted to operate at an acceptable level of service in the morning and evening peak hours.

Roadway Segments

Long-Range Future Without Project roadway operations are summarized in Table 4.13-10, *Roadway Segment Analysis – Long-Range Future Conditions Without Project*. In the future, traffic study area roadway segments are forecasted to operate at acceptable levels of service without the Specific Plan.

Long-Range Future With Project Conditions

Traffic Forecasts

The Specific Plan trips were added to the Long-Range Future Conditions traffic forecasts to develop Long-Range Future with Project traffic forecasts.

Intersection Levels of Service

The study intersections were analyzed for Long-Range Future With Project Conditions, and the results are summarized in Table 4.13-11, *Intersection Operations – Long-Range Future Conditions With Project*. The table shows that all study intersections would continue to operate at an acceptable LOS D or better in both peak hours, except for the following intersection:

- No. 5 – Red Hill Avenue at I-5 SB Ramps: PM – LOS E (ICU Methodology)

The addition of Project traffic would cause the intersection to worsen to LOS E in the evening peak hour based on the City's ICU methodology. The Level of Service would still be LOS C during both peak hours using the Caltrans HCM methodology. The Project's impact using the ICU methodology would be considered to be a significant impact.

Improvements are identified that would achieve improved levels of service under Long-Term Future Conditions at the deficient traffic study area intersection. Table 4.13-12, *Intersection Operations – Long-Range Future Conditions with Project Mitigation* summarizes intersection operations before and after implementation of these improvements (MM 4.13-1). These improvements are:

- Intersection No. 5 – Red Hill Avenue at I-5 SB Ramps: Re-stripe the eastbound approach (the off-ramp) to convert from a shared left-through lane and one dedicated right-turn lane to one dedicated left-turn lane and a shared left-through-right lane. This improvement would provide additional capacity for the heavy eastbound left-turn volume. With this improvement, the intersection would operate at LOS D or better during both peak hours. Note that Caltrans' approval and cooperation would be needed to implement this improvement.

Table 4.13-8. Summary of Traffic Study Cumulative Projects

Project No.	Land Use	Quantity	Units	Trip Generation Estimates						
				Daily	AM Peak Hour			PM Peak Hour		
					In	Out	Total	In	Out	Total
City of Santa Ana										
1	The Heritage (Santa Ana)									
	Apartment	1,221	DU	8,120	125	498	623	492	265	757
	General Office Building	56	KSF	617	76	10	86	14	69	83
	Shopping Center	12.675	KSF	544	8	5	13	23	24	47
	High-Turnover (Sit-Down) Restaurant	5.415	KSF	689	32	30	62	36	25	61
	Internal Capture (5%)			-499	-12	-27	-39	-28	-19	-47
City of Tustin										
2	Tustin Legacy – Mixed-Use Community			32,696	580	1,393	1,973	1,909	1,187	3,096
3	Downtown Core Specific Plan			8,496	N/A	N/A	660	N/A	N/A	719
City of Irvine										
4	Kilroy Apartments	469	DU	3,119	48	191	239	189	102	291
5	17861 Cartwright	45	DU	261	3	16	19	16	8	24
6	16542 Millikan	213	DU	1,238	16	78	94	74	37	111
7	17811-17817 Gillette Ave	44	DU	256	3	16	19	15	8	23
8	2152 Alton Apartments	357	DU	2,374	36	146	182	144	77	221
9	Boardwalk	458	KSF	5,043	625	85	710	116	566	682
10	Parcel 3 / Diamond Jamboree Retail	25	KSF	1,074	15	10	25	46	48	94
11	17850 Von Karman Office	242.497	KSF	2,670	331	45	376	61	300	361
12	17451 Von Karman Ave									
	Condominium	115	DU	668	9	42	51	40	20	60
	General Office Building	2.300	KSF	25	3	0	3	1	3	4
13	17832-17840 Gillette	326	DU	1,894	24	119	143	114	56	170
14	2525 Main Apartments Phase III	146	DU	848	11	53	64	51	25	76
Total Project Trips				70,134	1,933	2,710	4,643	3,313	2,801	6,114
DU = dwelling units; KSF = thousand square feet										

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Table 4.13-9. Intersection Operations – Long-Range Future Conditions Without Project					
ICU Methodology					
No.	Intersection	AM Peak Hour		PM Peak Hour	
		ICU	LOS	ICU	LOS
1	Red Hill Ave. at Bryan Ave.	0.74	C	0.83	D
2	Red Hill Ave. at San Juan St.	0.57	A	0.45	A
3	Red Hill Ave. at El Camino Real	0.81	D	0.70	B
4	Red Hill Ave. at I-5 NB Ramps	0.65	B	0.64	B
5	Red Hill Ave. at I-5 SB Ramps	0.74	C	0.83	D
6	Red Hill Ave. at Nisson Rd.	0.65	B	0.72	C
7	Red Hill Ave. at Mitchell Ave.	0.63	B	0.66	B
8	Red Hill Ave. at Walnut Ave.	0.79	C	0.81	D
9	Red Hill Ave. at Sycamore Ave	0.69	B	0.63	B
HCM Methodology					
No.	Intersection	AM Peak Hour		PM Peak Hour	
		Delay	LOS	Delay	LOS
4	Red Hill Ave. at I-5 NB Ramps	23.4	B	25.1	C
5	Red Hill Ave. at I-5 SB Ramps	24.2	B	25.8	C

Note: Intersection operation is expressed as volume-to-capacity (v/c) ratio using the ICU Methodology, and as seconds of delay for the HCM Methodology.
Source: Kimley-Horn, 2018.

Table 4.13-10. Roadway Segment Analysis – Long-Range Future Conditions Without Project				
Roadway	Segment	LOS D Capacity	Future ADT	LOS D or better?
Red Hill Avenue	Bryan Avenue to San Juan Street	50,600	21,800	Yes
	San Juan Street to El Camino Real	50,600	25,900	Yes
	Nisson Road to Mitchell Avenue	50,600	29,200	Yes
	Mitchell Avenue to Walnut Avenue	50,600	28,700	Yes
	Walnut Avenue to Sycamore Avenue	50,600	27,700	Yes

Source: Kimley-Horn, 2018.

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Table 4.13-11. Intersection Operations – Long-Range Future Conditions With Project

ICU Methodology													
No.	Intersection	AM Peak Hour						PM Peak Hour					
		Without Project		With Project		Project Impact	Impact Sig.?	Without Project		With Project		Project Impact	Impact Sig.?
		ICU	LOS	ICU	LOS			ICU	LOS	ICU	LOS		
1	Red Hill Ave. at Bryan Ave.	0.74	C	0.76	C	0.02	No	0.83	D	0.85	D	0.02	No
2	Red Hill Ave. at San Juan St.	0.57	A	0.59	A	0.02	No	0.45	A	0.48	A	0.03	No
3	Red Hill Ave. at El Camino Real	0.81	D	0.87	D	0.06	No	0.70	B	0.80	C	0.10	No
4	Red Hill Ave. at I-5 NB Ramps	0.65	B	0.70	B	0.04	No	0.64	B	0.66	B	0.02	No
5	Red Hill Ave. at I-5 SB Ramps	0.74	C	0.80	C	0.06	No	0.83	D	0.97	E	0.14	Yes
6	Red Hill Ave. at Nissan Rd.	0.65	B	0.70	B	0.04	No	0.72	C	0.85	D	0.13	No
7	Red Hill Ave. at Mitchell Ave.	0.63	B	0.67	B	0.04	No	0.66	B	0.75	C	0.09	No
8	Red Hill Ave. at Walnut Ave.	0.79	C	0.81	D	0.02	No	0.81	D	0.90	D	0.09	No
9	Red Hill Ave. at Sycamore Ave	0.69	B	0.70	B	0.01	No	0.63	B	0.67	B	0.40	No
HCM Methodology													
No.	Intersection	AM Peak Hour						PM Peak Hour					
		Without Project		With Project		Project Impact	Impact Sig?	Without Project		With Project		Project Impact	Impact Sig?
		Delay	LOS	Delay	LOS			Delay	LOS	Delay	LOS		
4	Red Hill Ave. at I-5 NB Ramps	23.4	B	25.9	B	2.5	No	25.1	C	34.2	C	9.1	No
5	Red Hill Ave. at I-5 SB Ramps	24.2	B	29.4	B	5.2	No	25.8	C	34.7	C	8.9	No

Notes:
 Bold and shaded values indicate intersections operating at an unacceptable LOS.
 Intersection operation is expressed as volume-to-capacity (v/c) ratio using the ICU Methodology, and as seconds of delay for the HCM Methodology.
 Source: Kimley-Horn, 2018.

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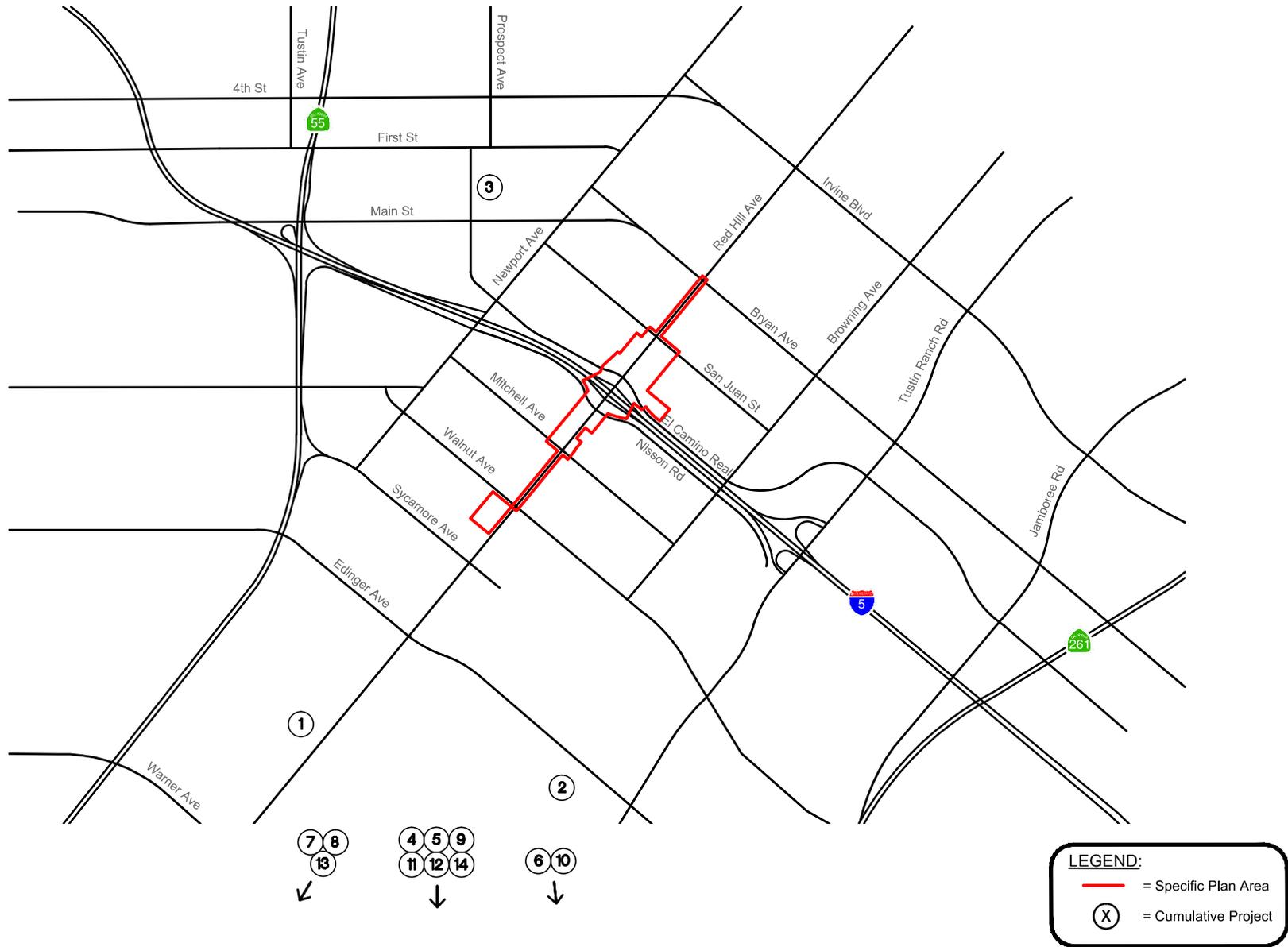


EXHIBIT 4.13-3: Location of Traffic Study Cumulative Projects
 Red Hill Avenue Specific Plan

4.13-27

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Table 4.13-12. Intersection Operations – Long-Range Future Conditions with Project Mitigation

No.	Intersection	AM Peak Hour				PM Peak Hour			
		Without Improvements		With Improvements		Without Improvements		With Improvements	
		ICU	LOS	ICU	LOS	ICU	LOS	ICU	LOS
5	Red Hill Ave. at I-5 SB Ramps with Improvement	0.775	C	0.718	C	0.978	E	0.860	D

Notes:
 Bold and shaded values indicate intersections operating at an unacceptable LOS.
 Intersection operation is expressed as volume-to-capacity (v/c) ratio using the ICU Methodology.
 Source: Kimley-Horn, 2018.

Under this scenario, the Red Hill Avenue at I-5 southbound ramps would operate at a deficient level of services in the evening peak hour. Implementation of MM 4.13-1 would mitigate the Project’s impact to a level considered less than significant based on the ICU methodology. However, the City cannot impose mitigation on or mandate the implementation of mitigation in another jurisdiction, in this case, Caltrans. Therefore, if the City is unable to reach an agreement with Caltrans that would ensure that the Project impacts occurring to a Caltrans facility would be mitigated concurrent with or preceding the impact, for purposes of this Program EIR, the impacts to be mitigated by the improvements would remain significant and unavoidable.

Roadway Segments

Future roadway operations with implementation of the Specific Plan are summarized in Table 4.13-13, *Roadway Segment Analysis – Long-Range Future Conditions With Project*. Roadway segments within the traffic study area would continue to operate at acceptable levels of service with the addition of Project traffic.

Table 4.13-13. Roadway Segment Analysis – Long-Range Future Conditions With Project

Roadway	Segment	LOS D Capacity	Future ADT	Daily Project Traffic	Future ADT + Project	LOS D or better?
Red Hill Avenue	Bryan Avenue to San Juan Street	50,600	21,800	2,500	24,300	Yes
	San Juan Street to El Camino Real	50,600	25,900	8,800	34,700	Yes
	Nisson Road to Mitchell Avenue	50,600	29,200	6,300	35,500	Yes
	Mitchell Avenue to Walnut Avenue	50,600	28,700	4,500	33,200	Yes
	Walnut Avenue to Sycamore Avenue	50,600	27,700	2,300	30,000	Yes

Source: Kimley-Horn, 2018.

Impact Summary: **Threshold 4.13-1: Intersections: Significant Unavoidable Impact.** The City of Tustin cannot impose mitigation on Caltrans facilities. Therefore, for purposes of this Program EIR, the impact to be mitigated by the improvements (MM 4.13-1) would remain significant and unavoidable.

Roadway Segments Less Than Significant. The Specific Plan would not impact roadway segments.

Threshold 4.13-2: Would the Specific Plan Project conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads and highways?

Cities are obligated to maintain minimum level of service standards (LOS E or better) at CMP intersections, to remain eligible for funding for transportation improvements. Within the defined CMP highway network, no intersection may be allowed to deteriorate to a condition worse than LOS E, or the baseline LOS if it is worse than LOS E, without mitigation being prescribed in an acceptable deficiency plan.

Within the traffic study area for the Specific Plan area, there are no intersections or roadways/highways on the CMP Highway System. There are also no CMP monitoring intersections in the traffic study area. No intersections would operate below a LOS E with implementation of the Specific Plan. Therefore, the Project would not result in a designated intersection exceeding CMP service standards.

Impact Summary: Threshold 4.13-2: No Impact. Based on CMP criteria, the Specific Plan Project would not impact any CMP facilities.

Threshold 4.13-3: Would the Specific Plan Project result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?

There are no airports located within the Specific Plan area. The Specific Plan area is approximately four miles northeast of Orange County's John Wayne Airport. Due to the distance of the nearest airport to the Specific Plan area, implementation of the Specific Plan would not result in a change in air traffic patterns. Therefore, no impacts would occur.

Impact Summary: Threshold 4.13-3: No Impact. The Specific Plan area is located approximately four miles to the northeast of John Wayne Airport. As such, no impacts would occur to air traffic patterns.

Threshold 4.13-4: Would the Specific Plan Project substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Implementation of the Specific Plan is not anticipated to result in inadequate features or incompatible uses. Through the City's design review process, future development under the Specific Plan would be evaluated to determine the appropriate permitting requirements and conditions of approval. At a minimum, compliance with relevant Tustin City Code standards would be required. Therefore, implementation of the Specific Plan would not substantially increase hazards due to design features or incompatible uses. A less than significant impact would occur in this regard.

Future development projects under the Specific Plan would be evaluated on a project-by-project basis to ensure that adequate access and circulation to and within the Specific Plan area would be provided. Access to a development site would be required to comply with all City design standards and would be reviewed by the City to ensure that insufficient design feature and/or incompatible uses do not occur. The City would review future development to ensure that structures are designed to meet adopted standards and that adequate emergency access is provided. Therefore, implementation of the Specific Plan would not result in significant impacts involving insufficient design features or incompatible uses.

Impact Summary: **Threshold 4.13-4: *Less Than Significant.*** Implementation of the Specific Plan would not result in any significant impacts related to design features or incompatible uses with compliance with applicable Tustin City Code standards and the design review process for individual development projects under the Specific Plan.

Threshold 4.13-5: Would the Specific Plan Project result in inadequate emergency access?

Inadequate emergency access can delay or prevent responders from arriving at an emergency location. The Specific Plan does not include policies that would change standards related to emergency access. Implementation of the Specific Plan is not anticipated to result in inadequate emergency access. Future development projects in the Specific Plan area would be required to comply with the Tustin City Code. New development would also be required to comply with all applicable fire code and ordinance review requirements for construction and access. Additionally, all access roads for future development projects would be required to meet standards for fire access roads in the 2016 California Fire Code (CCR Title 24 Part 9), Section 503.

Individual development projects under the Specific Plan would be reviewed by the City to determine the specific fire requirements applicable to the development and to ensure compliance with these requirements. This would ensure that new development in the Specific Plan area would provide adequate emergency access. Further, the City would review any modifications to existing roadways to ensure that adequate emergency access or emergency response would be maintained. Emergency response and evacuation procedures would be coordinated with the City’s Police and Fire Departments.

Traffic related to implementation of the Specific Plan would not result in substantial delays and congestions that would affect the circulation of emergency vehicles in the study area. Adequate emergency access would be provided, and therefore impacts would be less than significant.

Impact Summary: **Threshold 4.13-5: *Less Than Significant.*** Implementation of the Specific Plan would not result in any significant impacts related to circulation or access, and therefore would not significantly impact emergency access.

Threshold 4.13-6: Would the Specific Plan Project conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?
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Applicable transportation plans and policies relating to alternative transportation and the assessment of the Specific Plan Project's consistency with the policies is provided in Table 4.8-1, *General Plan Consistency Analysis*, in Section 4.8, *Land Use and Planning* of this Program EIR. The analysis finds that the Specific Plan is consistent with City policies to support and promote alternative transportation. Additionally, implementation of the Specific Plan would not modify any public road or introduce features that would affect vehicular, pedestrian, or bicycle circulation proximate to the Specific Plan area.

Public Transit

As discussed above, OCTA Routes 66, 71, and 79 currently serve the Specific Plan area which includes many employment-based uses. As such, the transit schedules and frequencies are geared toward commuter needs and would be convenient for Specific Plan residents and patrons to/from the area. The Specific Plan encourages the installation of new bus shelters at transit stops where no benches are currently provided. Older bus benches or shelters should be replaced with models of a uniform design and color. Modifications to existing and/or installation of new shelters would be coordinated with OCTA.

Pedestrian Facilities

Existing pedestrian facilities within the Specific Plan area include sidewalks along all roadways and crosswalks across the signalized intersections. There are no unsignalized crosswalks across Red Hill Avenue within the Specific Plan area. As addressed in Section 3.0, Project Description, the Specific Plan proposes streetscape improvements to enhance the visual appeal and identity of the Red Hill Avenue public realm. Streetscape improvements are proposed to promote attractive, compatible, and consistent environments with new development. The basic streetscape would consist of parkway plantings adjacent to the street along the entire length of Red Hill Avenue, with new landscaped medians where feasible. As previously addressed, the streetscape would have a minimum four-foot-wide landscaped parkway and a minimum four-foot-wide sidewalk.

Bike Facilities

As discussed above, within the traffic study area, the only existing bike facility is a Class II bike lane (a striped, on-street bike lane adjacent to the travel lane) on both sides of Red Hill Avenue between El Camino Real and Nissan Road. The City's *Master Bikeway Plan* (Exhibit 4.13-2) shows the entire length of Red Hill Avenue within the City limits as a designated or a potential Class II bikeway. The proposed circulation components of the Specific Plan include revisions to the Red Hill Avenue roadway cross section to include a Class II striped on-street bike lane along the entire length of the Specific Plan area to promote more multimodal travel opportunities. Enhanced bikeway signage would be introduced to promote bike usage and provide directions on how to connect to other bikeways or key points in the City. Enhanced or decorative bike racks are another feature that may be introduced within private developments. The intent of the recommended bikeway system improvements is to provide a safe, non-vehicular way for residents, employees, and students to travel.

The addition of residential units in this area that is largely developed with employment and commercial uses could facilitate the use of alternative travel modes. The proximity of residential uses to employment and commercial centers encourages people to walk or bike to work or shop, rather than drive a vehicle. Therefore, implementation of the Specific Plan would not adversely affect the use of alternative modes

of transportation or conflict with policies, plans, or programs regarding public transit, bike, or pedestrian facilities. No significant impacts are anticipated.

Impact Summary: **Threshold 4.13-6: *Less Than Significant Impact.*** The Specific Plan would comply with all applicable policies, plans, or programs regarding public transit, bike, or pedestrian facilities.

4.13.7 CUMULATIVE IMPACTS

The analysis for Impact 4.13-1 includes traffic conditions in local jurisdictions for cumulative conditions with and without the Specific Plan. The list of related projects incorporated in the analysis, as well as the assumptions incorporated as background, ambient traffic growth for long-term future conditions. Implementation of the Specific Plan would result in a project-specific significant impact at one intersection within the traffic study area. Implementation of MM 4.13-1 reduce the impact to a less than significant level. However, the location is a Caltrans facility and the City cannot impose mitigation on another jurisdiction or agency.

4.13.8 MITIGATION PROGRAM

Standard Conditions

No standard conditions are applicable to the Specific Plan.

Mitigation Measures

MM 4.13-1 Red Hill Avenue at Interstate 5 Southbound Ramps: Re-stripe the eastbound approach (the off-ramp) to convert from a shared left-through lane and one dedicated right-turn lane to one dedicated left-turn lane and a shared left-through-right lane. This improvement would provide additional capacity for the heavy eastbound left-turn volume. With this improvement, the intersection would operate at Level of Service D or better during both peak hours. The California Department of Transportation' (Caltrans) approval and cooperation would be required to implement this improvement.

4.13.9 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Implementation of MM 4.13-1 would mitigate the Project's impact to a level considered less than significant. However, the City of Tustin cannot impose mitigation on Caltrans. Therefore, if the City is unable to reach an agreement with Caltrans that would ensure that Project impacts occurring to a Caltrans facility would be mitigated concurrent with or preceding the impact, for purposes of this Program EIR, the impact to be mitigated by the improvements would remain significant and unavoidable. All other intersections and roadway segments are not significantly impacted by the Specific Plan.

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4.14 Utilities and Service Systems

This Section addresses the potential impacts on certain utilities and services: water supply, electricity, natural gas, solid waste, and wastewater, and stormwater related to implementation of the Specific Plan Project.

4.14.1 WASTEWATER FACILITIES

Regulatory Setting

Federal

Clean Water Act. The Clean Water Act (33 United States Code §§ Section 1251 et seq.) is the cornerstone of water quality protection in the United States. The Act includes regulatory and non-regulatory tools to sharply reduce direct pollutant discharges into waterways, finance municipal wastewater treatment facilities, and manage polluted runoff. These tools are used to achieve the broader goal of restoring and maintaining the chemical, physical, and biological integrity of the nation’s waters so that they can support “the protection and propagation of fish, shellfish, and wildlife and recreation in and on the water.”

Regional and Local

Orange County Sanitation District Capital Facilities Charges. The Orange County Sanitation District (OCSD) Capital Facilities Charge (Ordinance No. OCSD-40) is imposed when a property newly connects to the OCSD system or a previously connected property expands its use. Revenue generated from the charge is used for the acquisition, construction, and reconstruction of OCSD’s wastewater collection, treatment, and disposal facilities; to repay principal and interest on debt instruments; or to repay Federal or State loans for the construction and reconstruction of sewage facilities, together with costs of administration and provisions for necessary reserves.

East Orange County Water District Sewer System Management Plan. The Sewer System Management Plan (January 2017) provides a plan and schedule to properly manage, operate, and maintain all parts of the City’s sanitary sewer system. By planning ahead and ensuring all parts are maintained, the City is able to minimize risk of sanitary sewer overflows and mitigate any that may occur. The Sewer System Management Plan also outlines the emergency response program, operation and maintenance, overflow emergency response plan, and design and performance provisions.

City of Tustin General Plan Land Use Element

The Land Use Element of the *City of Tustin General Plan* includes goals and policies related to public facilities and services that are applicable to the Specific Plan Project. The purpose of the Land Use Element is to describe present and planned land use activity, and to address issues concerning the relationship between land uses and environmental quality, potential hazards, and social and economic objectives. The Specific Plan’s consistency with applicable public service goals and policies of the General Plan are addressed in Section 4.8, *Land Use and Planning*.

Tustin City Code

The Tustin City Code identifies land use categories, development standards, and other general provisions that ensure consistency between the City's General Plan and proposed development projects. The following provisions from the Tustin City Code focus on wastewater services:

Article 4, Chapter 9, Section 4901 (Prohibition on Illicit Connections and Prohibited Discharges): Prohibits certain solids, liquids, or substances from being deposited or placed in any public sewer, manhole, or pipeline which discharges into a public sewer.

Article 9, Chapter 9A, Section A9906 (General Standards and Locational Criteria): Relates to general standards and criteria associated with discharge of treated effluent. Facilities generating wastewaters are to be located in areas with adequate sewer capacity to accommodate the expected wastewater discharge as determined by the City and the OCSD. If sewers are not available, the site should be evaluated for ease of connecting to a sewer or for the feasibility of treated effluent discharge directly into a stream or the ocean. Further, the facility must obtain a valid industrial wastewater discharge permit from the State Water Resources Control Board.

Existing Conditions

East Orange County Water District (EOCWD) owns and operates a wastewater collection system (sanitary sewer mains within the public streets) that collects and transports wastewater for treatment by the OCSD. Collected wastewater is sent to OCSD's plants located in the cities of Huntington Beach and Fountain Valley. OCSD's service area encompasses 479 square miles of central and northwest Orange County, and it operates two reclamation plants (OCSD, 2017a). Plant No. 1, located in Fountain Valley, has a treatment capacity of 320 million gallons per day (mgd) and currently treats an average daily influent wastewater flow of approximately 117 mgd. Plant No. 2, located in Huntington Beach, has a treatment capacity of 312 mgd and currently treats an average daily influent wastewater flow of approximately 67 mgd. Expansion plans by OCSD are ongoing and designed to address the incremental increase in sewage generation as a result of new development (City of Tustin Urban Water Management Plan [UWMP], 2015).

Both plants share a common ocean outfall but Plant No. 1 currently provides all secondary treated wastewater to OCWD's Groundwater Replenishment System for beneficial reuse. On average, 120 mgd of effluent is sent to the Groundwater Replenishment System, a joint-project between the OCWD and OCSD that began operating in 2008. After treatment, OCSD releases the treated water into the Pacific Ocean through an offshore pipeline that extends five miles from the City of Huntington Beach shoreline.

Exhibit 4.14-1, *Sanitary Sewer System*, depicts the sewer line infrastructure located within the Specific Plan area. The OCSD has identified a capacity deficiency in its Mitchell Avenue and Red Hill Avenue trunk mains located downstream of the Specific Plan area. OCSD indicates that the deficiency issues are due to wet weather flows from the City of Santa Ana and that dry conditions flows do not cause system surcharges. No other system deficiencies have been identified by the OCSD.

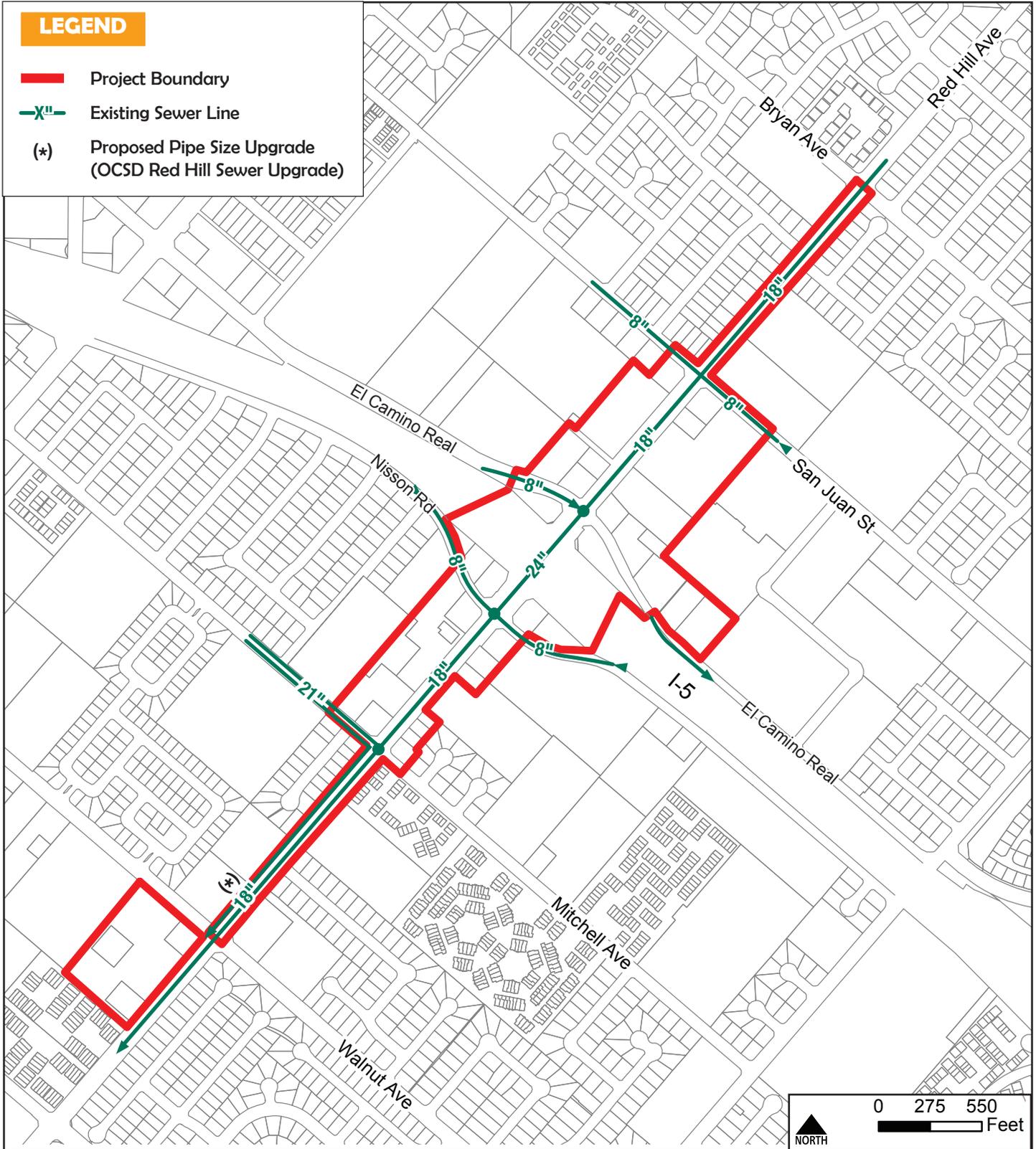


EXHIBIT 4.14-1: Sanitary Sewer System
 Red Hill Avenue Specific Plan

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In Fall 2017, the OCSD completed work on its Gisler-Red Hill System Improvements Project, which consisted of new sewer pipe construction on Red Hill Avenue between Warner Avenue and Edinger Avenue and rehabilitation of existing sewers and manholes between McGaw Avenue and Mitchell Avenue. With the exception of the segment between Walnut Avenue and Mitchell Avenue, these improvements are south of the Specific Plan area.

Thresholds of Significance

The following significance criteria are from CEQA Guidelines Appendix G. The Specific Plan would result in a significant impact related to wastewater treatment if it would:

- Threshold 4.14-1** Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board.
- Threshold 4.14-2** Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.
- Threshold 4.14-5** Result in a determination by the wastewater treatment provider which serves or may serve the Specific Plan Project that it has adequate capacity to serve the Project’s projected demand in addition to the provider’s existing commitments.

Environmental Impacts

The wastewater treatment requirements issued by the Santa Ana RWQCB for OCSD’s treatment plants were developed to ensure that adequate levels of treatment would be provided for the wastewater flows from all land uses within its service area. Table 4.14-1, *Specific Plan Area Wastewater Generation*, identifies the anticipated wastewater generation associated with new development within the Specific Plan area.

Table 4.14-1. Specific Plan Area Wastewater Generation			
Land Use	Acres	OCSD Generation Rate ^c	Total Generation
Residential	20 ^a .	7,516 gpd/ac	150,320 gpd
Commercial	7.46 ^b .	2,262 gpd/ac	16,876 gpd
Total			167,196 gpd
gpd = gallons per day; ac = acre; OCSD = Orange County Sanitation District; du/ac =dwelling units per acre.			
a. Assumes 25 du/ac under the City of Tustin’s High Density Land Use 15-25 du/ac (500 du at 25 du/ac = 20 acres).			
b. Assumes 325,000 sf at a 1:1 floor-area-ratio (FAR).			
c. OCSD Engineering Design Guidelines, 2014.			

Table 4.14-2, *OCSD Wastewater Treatment and Capacity*, identifies facility capacity for wastewater treatment with development of the Specific Plan. The remaining capacity of the plants would have sufficient capacity to treat wastewater associated with additional development within the Specific Plan area. No new wastewater treatment facilities would be required.

Plant	Average Treatment	Capacity	Remaining Capacity	
			Existing	With Project
No. 1	117 mgd	320 mgd	203 mgd	202,916,402 mgd
No. 2	67 mgd	312 mgd	245 mgd	244,916,402 mgd
Total	184 mgd	632 mgd	448 mgd	447,832,804 mgd

mgd = million gallons per day
 Note: Assumes half of wastewater generated by uses within the Specific Plan area goes to Plant No. 1 and half goes to Plant No. 2. However, either plant would have the capacity to treat all wastewater generated by land uses within the Specific Plan area.
 Source: OCSD, 2017b.

The EOCWD and OCSD only allow new development to connect to their sewer systems if there is sufficient capacity or planned expansions of its facilities to accommodate the new developments. The OCSD has identified no impact to its treatment plants and has adequate capacity to accommodate the Specific Plan. The OCSD notes that all future development within the Specific Plan area would be reviewed on a project-by-project basis. New development would not be permitted to exceed the capacity of wastewater conveyance systems or treatment facilities. All expansions of OCSD facilities must be sized and service phased to be consistent with the SCAG regional growth forecasts for the City. The available capacities of OCSD facilities are limited to levels associated with the approved growth identified by SCAG.

The *City of Tustin General Plan* includes policies and actions to ensure that development is appropriate in scale to current and planned infrastructure capabilities (Policy LU-8.3). Future development projects would be required to comply with the City’s Sewer capacity allotment, the Tustin City Code, and OCSD regulations in order to connect to the City’s sewer system. This would include the payment of a sewer maintenance fee to construct new sewer infrastructure and/or incremental expansions to the existing sewer system to accommodate individual development to preclude any impact of the development on the sewer system.

Impact Summary: **Thresholds 4.14-1, 4.14-2, and 4.14-5: *Less Than Significant.*** Although implementation of the Specific Plan Project would increase the generation of wastewater, flows would not exceed the established wastewater treatment requirements. Anticipated wastewater generation may require the construction of water and sewer pipeline facilities within the Specific Plan area. The Project would result in less than significant impacts to wastewater facilities.

Cumulative Impacts

Given the existing available capacity, the wastewater treatment needs associated with development within the Specific Plan area—together with related past, present, and reasonably foreseeable future projects—would not result in the need for new or expanded wastewater treatment facilities that could result in significant environmental impacts or that could cause the wastewater treatment to exceed the capacity of the wastewater treatment facilities. The cumulative utilities impact with respect to wastewater treatment capacity would be less than significant.

As noted, the wastewater treatment requirements issued by the RWQCB for OCSD's treatment plants were developed to ensure that adequate levels of treatment would be provided. When combined with existing conditions and expected growth, the Specific Plan's estimated sewage flows would not exceed the existing or projected capacity or ability to transport sewage to the treatment plant or exceed treatment or water quality standards. No significant cumulative impact is anticipated, and the Specific Plan's contribution is not considered cumulatively considerable.

Mitigation Program

Standard Conditions and Requirements

No standard conditions and requirements apply to the Specific Plan.

Mitigation Measures

No mitigation measures are required to reduce impacts to wastewater services.

Level of Significance After Mitigation

Potential impacts to wastewater services would be less than significant.

4.14.2 WATER SUPPLY

Regulatory Setting

Federal

Federal Safe Drinking Water Act. The Safe Drinking Water Act (SDWA) was originally passed by Congress in 1974 to protect public health by regulating the nation's public drinking water supply. The law was amended in 1986 and 1996, and requires many actions to protect drinking water and its sources: rivers, lakes, reservoirs, springs, and groundwater wells. The SDWA applies to every public water system in the United States. The SDWA authorizes the U.S. EPA to set national health-based standards for drinking water to protect against both naturally-occurring and man-made contaminants that may be found in drinking water. The U.S. EPA, states, and water systems work together to make sure that these standards are met.

Originally, the SDWA focused primarily on treatment as the means of providing safe drinking water at the tap. The 1996 amendments greatly enhanced the existing law by recognizing source water protection, operator training, funding for water system improvements, and public information as important components of safe drinking water. This approach ensures the quality of drinking water by protecting it from source to tap.

State of California

California Urban Water Management Planning Act. The Urban Water Management Planning Act of 1983 (California Water Code §§ 10610 et seq.) requires urban water suppliers to develop urban water management plans. While generally aimed at encouraging water suppliers to implement water conservation measures, it also creates long-term planning obligations to meet existing and future needs. In accordance with the CWC, urban water suppliers with 3,000 or more service connections or supplying

3,000 or more acre-feet of water per year are required to assess the reliability of its water sources over a 20-year planning horizon and to update the data in the urban water plans every 5 years.

Demand management is a critical component of the UWMP process. This was codified in 2009 when the Water Conservation Bill of 2009 (SBX7-7) was passed. SBX7-7 requires a statewide 20 percent reduction in urban per capita water use by December 31, 2020. AB 2067 and SB 1420 also address water use reduction strategies. Eligible water suppliers are required to provide a “narrative description” that addresses the nature and extent of each water demand management measure implemented over the last five years, and the measures the supplier plans to implement to achieve its water use targets in accordance with SBX7-7.

Regional and Local

Water is provided to the City by the EOCWD and the Irvine Ranch Water District (IRWD). Therefore, two UWMPs are applicable to the City. However, the Specific Plan area is located only within the service area of the EOCWD. All use, supply, and population forecasts are based on that portion of the City within its service area.

City of Tustin Urban Water Management Plan. The City’s UWMP is required under Water Code Section 10610 through 10656 of the Urban Water Management Planning Act, effective January 1, 1984. The Act requires all urban water suppliers to prepare, adopt, and file a UWMP with the California Department of Water Resources every five years. The UWMP outlines current water demands, sources, and supply reliability to the City by forecasting water use based on climate, demographics, and land use changes within the City. The UWMP also provides demand management measures to increase water use efficiency for various land use types and details a water supplies contingency plan in case of shortage emergencies. The 2015 UWMP was adopted in June 2016.

City of Tustin General Plan Conservation/Open Space/ Recreation Element

The Conservation/Open Space/Recreation Element of the *City of Tustin General Plan* deals primarily with the preservation of natural resources, such as water, soils, minerals, and animal life. The Specific Plan’s consistency with applicable General Plan goals and policies is provided in Section 4.8, *Land Use and Planning*.

Tustin City Code

Article 4, Chapter 10, Section 4952 (Water Conservation Stages) seeks to reduce water consumption through (1) permanent water conservation requirements during non-shortage conditions and (2) four levels of water supply shortage response actions to be implemented within the City during times of declared water shortage. The program would prevent waste or unreasonable use of water; maximize the efficient use of water; and ensure a reliable and sustainable minimum supply of water for public health, safety, and welfare.

Article 9, Chapter 7, Section 9704 (Landscape Water Use Standards) establishes procedures and standards for the design, installation, and maintenance of water-efficient landscapes in conjunction with new construction projects within the City to promote the conservation and efficient use of water and to prevent the waste of available water resources.

Existing Conditions

The Specific Plan area is within the service area of the EOCWD. The domestic water system within the Specific Plan area is owned and operated by the City. By 2035, the City expects to produce approximately 71 percent of its own water through groundwater extraction and import the remaining 29 percent from EOCWD. The UWMP concludes that water supply is available and reliable for the City through 2035, including an aggregate seven percent increase in City population (that portion of the population within the EOCWD service area).

Imported Water Supply

The City receives its water from two main sources: local well water from the Lower Santa Ana River Groundwater Basin (Groundwater Basin) which is managed by the Orange County Water District (OCWD) and imported water from the Municipal Water District of Orange County (MWDOC) through the EOCWD. MWDOC is Orange County's wholesale supplier and is a member agency of the Metropolitan Water District of Southern California (Metropolitan)¹ as addressed in the Water Supply Memorandum, 2017) and provided in Appendix G to this Program EIR.

Approximately 26 percent is imported water purchased from EOCWD. The City has eight untreated or "clear" groundwater wells that pump directly into the distribution system and two treatment facilities that treat groundwater from five additional wells. Elevations in the EOCWD service area are approximately 210 feet above msl. The existing storage system consists of six reservoirs with a combined storage capacity of approximately 13.83 million gallons (mg) (Water Supply Memorandum, 2017; Appendix G).

Groundwater

The City receives approximately 74 percent of its water from underlying groundwater in the Groundwater Basin, a 350-square-mile aquifer located beneath northern and central Orange County. OCWD regulates the basin by a basin production percentage. The Groundwater Basin production percentage is the percentage of groundwater that an agency can pump based on its total potable water demand.

Groundwater conditions in the Groundwater Basin are influenced by the natural hydrologic conditions of rainfall, groundwater seepage, and stream flow. Incidental recharge accounts for a significant amount of the Groundwater Basin's producible yield including precipitation and subsurface inflow. The recent average production from the main portion of the Groundwater Basin is approximately 330,000 acre-feet per year (AFY).

Reclaimed Water Supplies

Reclaimed water is not currently provided within the Specific Plan area.

¹ As the regional wholesale supplier for much of Orange County, MWDOC works in collaboration with each of its retail agencies as well as Metropolitan, its wholesaler, to develop demand projections for imported water.

Water Supply and Demand

The UWMP was updated in 2015 and identifies water demand through year 2040 and the available water supply. The City’s General Plan buildout is assumed within the growth factors of the UWMP.

The City water use per capita per day in 2015 was 122 gallons, and in 2015 the City delivered 11,113 AF of water. The City’s 2015 UWMP estimates that water demands will grow to 12,221 AF per year by 2035, which would be met by an increase in groundwater pumping and a reduction in reliance on imported supplies (UWMP, 2015). The reliability of water sources is addressed in the UWMP for that portion of the City within the EOCWD service area. Table 4.14-3, *EOCWD Current and Projected Water Supplies*, shows current and future water supplies.

Water Source	Treatment Level	2015	2020	2025	2030	2035	2040
Imported Water	Potable	2,914	566	607	611	611	612
Groundwater	Potable	8,200	10,745	11,534	11,613	11,610	11,626
Recycled Water	Non-Potable	0	0	0	0	0	0
Total	–	11,113	11,310	12,141	12,224	12,221	12,238

Source: City of Tustin UWMP, Table 6-8 and 6-9, 2016.

Water Infrastructure

Exhibit 4.14-2, *Water Facilities Plan*, depicts the water infrastructure within the Specific Plan area. In addition to the pipe infrastructure in the streets, there are sites within the Specific Plan area that contain public water mains in water easements across private property. The majority of the mains are six-inch lines.

Thresholds of Significance

The following significance criteria are from CEQA Guidelines Appendix G. The Specific Plan would result in a significant water impact if it would:

Threshold 4.14-2 Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.

Threshold 4.14-4 Have sufficient water supplies available to serve the Specific Plan from existing entitlements and resources, or are new or expanded entitlements needed.

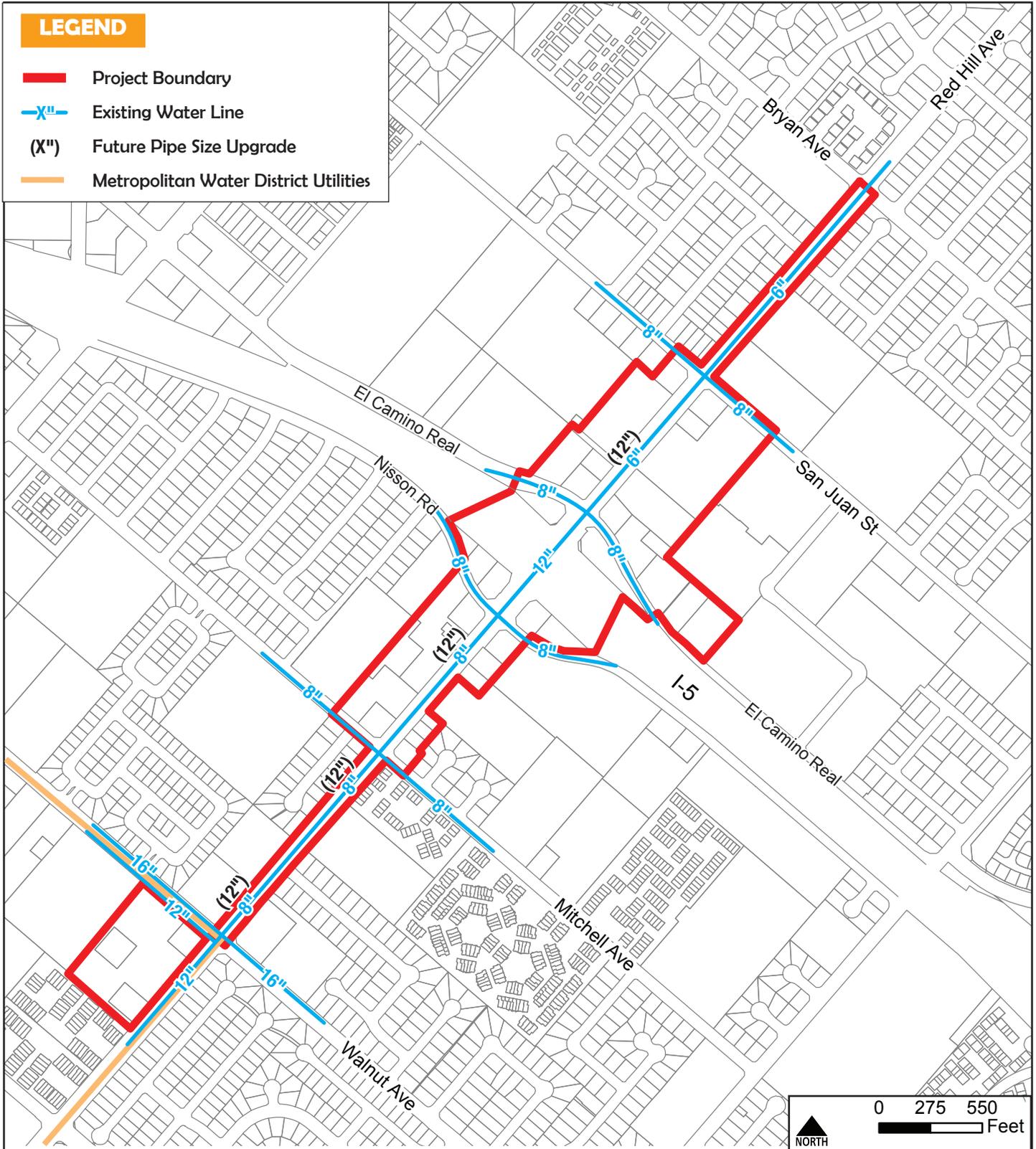


EXHIBIT 4.14-2: Water Facilities Plan
 Red Hill Avenue Specific Plan

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Environmental Impacts

Water Supply and Demand

Based on the 2015 rate (122 gallons per capita per day), the estimated 1,520 residents and 722 employees within the Specific Plan would generate an additional water demand of 273,524 gallons per day or 306 AFY. The City's water demand and supply is estimated to grow from 11,113 AFY to 12,238 AFY by 2040, which is an increase of 1,125 AFY for normal year. For single and multiple dry years, demand and supply would be 12,972 AFY, an increase of 1,859 AFY over existing conditions. New uses within the Specific Plan would generate a demand of 306 AFY, which would be within the anticipated increase in demand and supply of water assumed in the UWMP for 2040 for normal year and multiple dry years (Appendix G).

The Specific Plan accommodates the projected growth within that portion of the City covered by the EOCWD service area. The Specific Plan would be served from existing entitlements and new or expanded water entitlements would not be needed due to diversified supply and conservation measures. The City can meet all customer demands within the service area through the purchase of significant reserves held by Metropolitan, local groundwater supplies, and through implementation of conservation measures in multiple dry years from 2020 through 2040. Furthermore, the City's water supply is reliable, and is addressed in UWMP Chapter 3, *Water Sources and Supply Reliability*; its water shortage plan is addressed in Chapter 5, *Water Shortage Contingency Plan*. As demonstrated by the City's 2015 UWMP, the proposed growth in the Specific Plan area falls within the assumptions made for growth in the City through 2040 and sufficient water supply exists to serve the proposed uses identified in the Specific Plan area.

To provide potable water and fire service to the existing and proposed land uses within the Specific Plan area, additional water infrastructure would be required. It is anticipated that the section of the existing six-inch and eight-inch water mains in Red Hill Avenue would be replaced with a larger diameter pipe and extend east from I-5 to the terminus at San Juan Street as a condition of development of the adjacent properties (Exhibit 4.14-2). The City also has a long-range plan to upgrade other sections of water mains in the area. Other anticipated improvements include public meters and backflow devices that would be required for domestic water service and/or separate fire lines for individual developments as they occur. The Specific Plan can provide sufficient water infrastructure improvements to provide water to the projects within the Specific Plan area, as needed. No significant impacts are anticipated.

Impact Summary: **Threshold 4.14-2 and 4.14-4: *Less Than Significant*.** Water services can be provided to the Specific Plan area without significantly impacting existing and planned development within the EOCWD service area. Projects would be required to comply with SC 4.14-1 and 4.14-2.

Cumulative Impacts

Given the existing available water supply, the water supply needs of the Specific Plan—together with related past, present, and reasonably foreseeable future projects—would not result in the need for new or expanded water entitlements that could result in significant environmental impacts. The cumulative utilities impact with respect to water supply would be less than significant.

As with any future development within the Specific Plan area, any cumulative projects are required to conduct environmental review under CEQA and are approved by the City on a project-by-project basis. Since implementation of the Specific Plan would not have a significant impact on the water supply and would have adequate water infrastructure improvements, the Specific Plan would not combine with other cumulative projects to result in significant water supply and infrastructure impacts.

Mitigation Program

Standard Conditions and Requirements

SC 4.14-1 Future development within the Specific Plan area would comply with Article 4, Chapter 10, Section 4952 of the Tustin City Code which seeks to reduce water consumption through (1) permanent water conservation requirements during non-shortage conditions and (2) four levels of water supply shortage response actions to be implemented within the City during times of declared water shortage. The program would prevent waste or unreasonable use of water; maximize the efficient use of water; and ensure a reliable and sustainable minimum supply of water for public health, safety, and welfare.

SC 4.14-2 Future development within the Specific Plan area would comply with Article 9, Chapter 7, Section 9704 of the Tustin City Code which establishes procedures and standards for the design, installation, and maintenance of water-efficient landscapes in conjunction with new construction projects within the City to promote the conservation and efficient use of water and to prevent the waste of available water resources.

Mitigation Measures

No mitigation measures are required to reduce impacts to water supply.

Level of Significance After Mitigation

Compliance with standard conditions identified in the Mitigation Program would preclude potential impacts to water supply.

4.14.3 STORM WATER FACILITIES

Regulatory Setting

State of California

National Pollutant Discharge Elimination System Program (NPDES). Please refer to Section 4.7, *Hydrology and Water Quality*, for a description of the NPDES permit program.

Local and Regional

Orange County Drainage Area Management Plan (DAMP). Please refer to Section 4.7, *Hydrology and Water Quality*, for a description of the DAMP.

City of Tustin General Plan

The Specific Plan's consistency with applicable public infrastructure goals and policies of the General Plan are addressed in Section 4.8, *Land Use and Planning*.

Tustin City Code

Article 9, Chapter 3, Part 3, Section 9332.b: Requires stormwater runoff from a subdivision to be collected and conveyed by an approved storm drain system. The storm drain system shall be designed for ultimate development of the watershed and shall be capable of collecting and conveying runoff generated by a 100-year flood. The storm drain system shall provide for the protection of abutting and off-site properties that would be adversely affected by any increase in runoff attributed to the development. Off-site storm drain improvements may be required to satisfy this requirement.

Environmental Setting

The Specific Plan area lies within the Peters Canyon tributary area of the San Diego Creek watershed. Regional drainage facilities are owned and operated by Orange County Public Works, Flood Division (OC Flood). Local drainage facilities are owned and operated by the City (see Section 4.7, *Hydrology and Water Quality*, Exhibit 4.7-1, *Existing Storm Drain System*). Within the Specific Plan area, there are existing drainage facilities in Red Hill Avenue, El Camino Real, San Juan Street, Mitchell Avenue and Walnut Avenue. In general, drainage on the north side of I-5 drains into local storm drains and is directed into OC Flood's F07P07 facility located in Browning Avenue. Drainage on the south side of I-5 drains into local storm drains and is directed into OC Flood's F10P01 facility located in Red Hill Avenue, south of Mitchell Avenue. The Specific Plan area lies within FEMA Flood Zone "X", and is not subject to flood insurance requirements.

The Specific Plan area lies within a hydromodification zone, as defined in the Stormwater Quality Technical Guidance Document prepared by the County of Orange. Development on sites within the Specific Plan area is required to detain and retain runoff to existing condition levels. Infiltration is required if technically feasible, and no defined infiltration constraints are depicted in the Stormwater Quality Technical Guidance Document for this area.

Thresholds of Significance

The following significance criteria are CEQA Guidelines Appendix G. The Specific Plan would result in a significant impact to the storm drain infrastructure if it would:

Threshold 4.14-3 Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which would not cause significant environmental effects.

Environmental Impacts

Projects would be required to apply for encroachment permits for connection to the City storm drain infrastructure. For future development projects within the Specific Plan, direct connection to the City's existing storm drain system is preferable provided that the existing tributary areas and flow rates to the existing drains are not exceeded by new development. Alternatively, applicants may provide hydraulic

analyses of the downstream storm drain system that demonstrate no significant impacts to the City storm drain infrastructure. Should storm drains not be available for connection, applicants can propose drainage systems using parkway drains to direct runoff directly to the adjacent street curb and gutter section. In all cases, stormwater quality requirements must be met.

New on-site stormwater drainage facilities would be constructed in accordance with applicable regulatory requirements. Applicants for future development within the Specific Plan area would be required to demonstrate that existing flow rates would not be exceeded with project development. For all development, post-construction measures under the Orange County DAMP require co-permittees to implement structural and nonstructural BMPs that would mimic predevelopment quantity and quality runoff conditions for new development. Therefore, no large net increases in storm drainage rates or volumes are expected due to implementation of the Specific Plan. Adherence to all applicable provisions within the Orange County DAMP and City permits would result in a less than significant impact.

Impact Summary: **Threshold 4.14-3: *Less Than Significant With Mitigation.*** Storm drainage can be provided to development sites within the Specific Plan area without significantly impacting infrastructure in the City. Please refer to Standard Conditions and Mitigation Measures in Section 4.7, *Hydrology and Water Quality*.

Cumulative Impacts

Given the existing available infrastructure and proposed upgrades to pipelines, anticipated storm drain infrastructure for the Specific Plan area—together with related past, present, and reasonably foreseeable future projects—would not result in the need for new or expanded storm drainage facilities that could result in significant environmental impacts. The cumulative utilities impact with respect to stormwater would be less than significant.

Mitigation Program

Standard Conditions and Requirements

Please refer to SCs 4.7-1, 4.7-2, and 4.7-3 in Section 4.7, *Hydrology and Water Quality*.

Mitigation Measures

Please refer to MM 4.7-1 and MM 4.7-2 in Section 4.7, *Hydrology and Water Quality*.

Level of Significance After Mitigation

With implementation of the Mitigation Program set forth in this Program EIR, potential impacts would be reduced to a level considered less than significant.

4.14.4 SOLID WASTE

Regulatory Setting

Federal

Resource Conservation and Recovery Act of 1976. The Resource Conservation and Recovery Act of 1976 (RCRA) (Title 40 of the Code of Federal Regulations), Part 258, contains regulations for municipal solid

waste landfills and requires states to implement their own permitting programs incorporating the Federal landfill criteria. The Federal regulations address the location, operation, design (liners, leachate collection, run-off control, etc.), groundwater monitoring, and closure of landfills.

State of California

Assembly Bill 939 and Senate Bill 1016 – California Integrated Waste Management Act and Per Capital Disposal Measurement System. In 1989, the legislature adopted the California Integrated Waste Management Act of 1989. The act requires every city and county in the State to prepare a source reduction and recycling element in addition to a solid waste management plan to identify how the jurisdiction would meet mandatory goals of 50 percent solid waste diversion by the year 2000 and 75 percent solid waste diversion by 2010. The Act also established the framework for State inspection and enforcement of solid waste facilities and regulates safe transportation and disposal of solid waste. Projects that would have an adverse effect on waste diversion goals are required to include waste diversion mitigation measures to assist in reducing these impacts to less-than-significant levels. With the passage of Senate Bill 1016 (the Per Capita Disposal Measurement System) in 2006, only per capita disposal rates are measured to determine if a jurisdiction’s efforts are meeting the intent of Assembly Bill (AB) 939.

City of Tustin General Plan

The Specific Plan’s consistency with applicable public service goals and policies of the General Plan are addressed in Section 4.8, *Land Use and Planning*.

Tustin City Code

Article 4, Chapter 3, Part 1, covers the general provisions regarding solid waste handling in order to protect the public health, safety and welfare and to meet the City's obligations under the California Integrated Waste Management Act of 1989 (AB 939).

Existing Conditions

The City contracts for residential refuse collection. Solid waste materials are transported to a Materials Recovery Facility where it is sorted for recyclables. The County of Orange owns and operates three landfills: Olinda Alpha Landfill in Brea, Frank R. Bowerman in Irvine, and Prima Deshecha in San Juan Capistrano (OC Waste & Recycling, 2016a). The Frank R. Bowerman Sanitary Landfill, located at 11002 Bee Canyon Access Road in Irvine, serves Tustin. Table 4.14-4, *Orange County Landfills and Capacity*, includes capacity information for the County’s landfills.

Table 4.14-4. Orange County Landfills and Capacity

Landfill	Location	Constructed	Size	Maximum TPD	Maximum TPD Annual Average	Scheduled Closure
Olinda Alpha Landfill	Brea	1960	565 ac; 453 ac for waste disposal	7,000	8,000	2030
Frank R. Bowerman	Irvine	1990	725 ac; 534 ac for waste disposal	11,500	8,500	2053
Prime Deshecha	San Juan Capistrano	1976	1530 ac; 697 ac for waste disposal	4,000	1,400	2067

ac = acre; tpd = tons per day
Source: California Department of Resources Recycling and Recovery, 2017.

Thresholds of Significance

The following significance criteria are from CEQA Guidelines Appendix G. The Specific Plan would result in a significant impact on the environment if it would:

Threshold 4.14-6 Be served by a landfill with insufficient permitted capacity to accommodate the Project’s solid waste disposal needs.

Threshold 4.14-7 Comply with Federal, State, and local statutes and regulations related to solid waste.

Environmental Impacts

Solid waste disposal services must follow Federal, State, and local statutes and regulations related to the collection of solid waste. Development within the Specific Plan area would be required to comply with all applicable State and local waste diversion requirements, including AB 939 and SB 1016, and Article 4, Chapter 3, Part 1, of the Tustin City Code.

The Bowerman Landfill has a daily maximum intake load of 11,500 tons per day with 8,500 tons per day annual average. The remaining disposal capacity of 205 million cubic yards, as of February 29, 2008 (CalRecycle, 2017). CalRecycle requires that all counties have an approved Countywide Integrated Waste Management Plan (CIWMP). To be approved, the CIWMP must demonstrate sufficient solid waste disposal capacity for at least 15 years, or identify additional available capacity outside of the County’s jurisdiction. Orange County’s CIWMP was approved in 1996 and concluded that the landfill system has capacity in excess of 15 years. As identified in Table 4.14-5, *Estimated Solid Waste Generation*, land uses within the Specific Plan area could generate approximately 7,740 pounds of solid waste per day (3.87 tons/day or 1412.5 tons/year). The solid waste generation of the Specific Plan is consistent with the daily capacity of the Bowerman Landfill, representing a nominal percentage of the maximum intake load. Therefore, the Specific Plan would have a less than significant impact on landfills.

Units/Square Feet	Solid Waste Generation Rate	Solid Waste Generation
500 dwelling units	12.23 lbs/unit/day	6,115 lbs/day
325,000 sf of commercial	5 lbs/1,000 sf/day	1,625 lbs/day
Total		7,740 lbs/day (1412.5 tons/yr) ^a
a. Exclusive of existing development. Source: CalRecycle, Estimated Solid Waste Generation Rates, https://www2.calrecycle.ca.gov/WasteCharacterization/General/Rates , 2016.		

Impact Summary: **Thresholds 4.14-6 and 4.14-7: *Less Than Significant Impact*.** Solid waste services can be provided to development within the Specific Plan area without significantly impacting landfills within the County. Projects would be required to comply with SC 4.14-3.

Cumulative Impacts

Future projects in the area would increase solid waste generation and decrease available capacity of the County’s landfills. However, as with the Specific Plan, these projects have been or would be, required to conduct an environmental review. Furthermore, the Frank R. Bowerman landfill is forecasted to have sufficient capacity to serve current and future needs until its scheduled closure in December 2053. The Specific Plan would not combine with other cumulative projects to result in significant impacts to solid waste.

Mitigation Program

Standard Conditions and Requirements

SC 4.14-3 Applicants shall prepare and obtain approval of a Construction and Demolition Waste Management Plan (CDWMD) for a project. The CWMP shall list the types and weights or volumes of solid waste materials expected to be generated from construction. The CDWMP shall include options to divert from landfill disposal, nonhazardous materials for reuse or recycling by a minimum of 65 percent of total weight or volume (or requirements in place at the time of project entitlement).

Mitigation Measures

No mitigation measures are required to reduce impacts to solid waste services.

Level of Significance After Mitigation

Implementation of the Mitigation Program set forth in this Program EIR would preclude significant solid waste disposal impacts.

4.14.5 ENERGY CONSUMPTION

Introduction

Public Resources Code Section 21100(b)(3) and the State CEQA Guidelines Section 15126.4 require EIRs to describe, where relevant, the wasteful, inefficient, and unnecessary consumption of energy caused by

a project. In 1975, largely in response to the oil crisis of the 1970s, the California State Legislature adopted AB 1575, which created the California Energy Commission (CEC). The CEC's statutory mission is to forecast future energy needs, license thermal power plants of 50 megawatts or larger, develop energy technologies and renewable energy resources, plan for and direct State responses to energy emergencies, and—perhaps most importantly—promote energy efficiency through the adoption and enforcement of appliance and building energy efficiency standards. AB 1575 also amended Public Resources Code Section 21100(b)(3) to require EIRs to consider the wasteful, inefficient, and unnecessary consumption of energy caused by a project. In addition, CEQA Guidelines Section 15126.4 was adopted in 1998 which requires that an EIR describe feasible mitigation measures which would minimize the inefficient and unnecessary consumption of energy. Thereafter, the State Resources Agency created CEQA Guidelines Appendix F.

State CEQA Guidelines Appendix F is an advisory document that assists EIR preparers in determining whether a project will result in the inefficient, wasteful, and unnecessary consumption of energy. The discussion below analyzes the Specific Plan's potential energy consumption impacts on energy resources.

Regulatory Setting

Federal

Federal Energy Regulatory Commission. The Federal Energy Regulatory Commission duties include the regulation of the transmission and sale of electricity and natural gas in interstate commerce, licensing of hydroelectric projects, and oversight of related environmental matters.

Energy Policy Act of 2005. On August 8, 2005, President George W. Bush signed the National Energy Policy Act of 2005 (EPAAct) (Public Law 109-58) into law. This comprehensive energy legislation contains several electricity-related provisions that aim to:

- Help ensure that consumers receive electricity over a dependable, modern infrastructure;
- Remove outdated obstacles to investment in electricity transmission lines;
- Make electric reliability standards mandatory instead of optional; and
- Give Federal officials the authority to site new power lines in Department of Energy-designated National corridors in certain limited circumstances.

The Renewable Fuel Standard (RFS) Program was created under the EPAAct, and established the first renewable fuel volume mandate in the United States. The RFS Program regulations were developed in collaboration with refiners, renewable fuel producers, and many other stakeholders. As required under EPAAct, the original RFS Program (RFS1) required 7.5 billion gallons of renewable fuel to be blended into gasoline by 2012.

Energy Independence and Security Act of 2007. The Energy Independence and Security Act (EISA; Public Law 110-140) was signed into law by President George W. Bush on December 19, 2007. The EISA's goal is to achieve energy security in the United States by increasing renewable fuel production, improving energy efficiency and performance, protecting consumers, improving vehicle fuel economy, and promoting research on greenhouse gas (GHG) capture and storage. Under the EISA, the RFS1 program was expanded in several key ways (the expanded program is referred to as RFS2):

- EISA expanded the RFS Program to include diesel, in addition to gasoline;

- EISA increased the volume of renewable fuel required to be blended into transportation fuel from 9 billion gallons in 2008 to 36 billion gallons by 2022;
- EISA established new categories of renewable fuel, and set separate volume requirements for each one; and
- EISA required the USEPA to apply lifecycle GHG performance threshold standards to ensure that each category of renewable fuel emits fewer GHG than the petroleum fuel it replaces.

RFS2 lays the foundation for achieving significant reductions of GHG from the use of renewable fuels, for reducing imported petroleum, and encouraging the development and expansion of the nation's renewable fuels sector. The EISA also includes a variety of new standards for lighting and for residential and commercial appliance equipment. The equipment includes residential refrigerators, freezers, refrigerator-freezers, metal halide lamps, and commercial walk-in coolers and freezers. Additional provisions of the EISA address energy savings in government and public institutions, promoting research for alternative energy, additional research in carbon capture, international energy programs, and the creation of "green jobs".

State of California

California Public Utilities Commission. Established in 1911, the California Public Utilities Commission (CPUC) regulates privately owned electric, natural gas, telecommunications, water, railroad, rail transit, and passenger transportation companies. The CPUC is organized into several advisory units, an enforcement division, and a strategic planning group. Both Southern California Edison Company (SCE) and Southern California Gas Company (SoCalGas) are regulated by the CPUC.

California Energy Commission. The California Energy Commission (CEC) was created in 1974 as the State's principal energy planning organization in order to meet the energy challenges facing the State in response to the 1973 oil embargo. The CEC is charged with six basic responsibilities when designing State energy policy:

- Forecast statewide electricity needs.
- License power plants to meet those needs.
- Promote energy conservation and efficiency measures.
- Develop renewable energy resources and alternative energy technologies.
- Promote research, development and demonstration.
- Plan for and direct the State's response to energy emergencies.

Title 24, California Code of Regulations. Title 24, California Building Standards, contains the energy efficiency standards related to residential and nonresidential buildings. Title 24 standards are based, in part, on a State mandate to reduce California's energy demand. These are prescriptive standards that establish maximum energy consumption levels for the heating and cooling of new buildings. The use of alternative energy applications in development projects, while encouraged, is not required as a development condition. Such applications may include installation of photovoltaic solar panels, active solar water heating systems, or integrated pool deck water heating systems, all of which serve to displace consumption of conventional energy sources. Incentives are primarily State and Federal tax credits, as

well as reduced energy bills. The Subdivision Map Act requires subdivisions of five or more lots, other than condominium conversions, to provide for, to the extent feasible, future passive or natural heating or cooling opportunities in the subdivision. The City is responsible for implementing this requirement. A new development project is required to incorporate the most recent Title 24 standards in effect at the time a building permit application is submitted.² The 2016 standards went into effect on January 1, 2017. California's energy efficiency standards are updated on an approximate three-year cycle.

California Green Building Standards. The California Green Building Standards Code (California Code of Regulations, Title 24, Part 11), commonly referred to as the CALGreen Code, is a statewide mandatory construction code that was developed and adopted by the California Building Standards Commission and the California Department of Housing and Community Development. CALGreen standards require new residential and commercial buildings to comply with mandatory measures under five topical areas: planning and design; energy efficiency; water efficiency and conservation; material conservation and resource efficiency; and environmental quality. CALGreen also provides voluntary tiers and measures that local governments may adopt which encourage or require additional measures in the five green building topics. The 2016 CALGreen Code became effective on January 1, 2017.

Appendix F to the State CEQA Guidelines. Pursuant to Public Resources Code Section 21100(b)(3), an EIR must include a "discussion of the potential energy impacts of proposed projects." Because "lead agencies have not consistently included such analysis in their EIRs, the California Natural Resources Agency amended Appendix F to the CEQA Guidelines in 2009 "to ensure that lead agencies comply with the substantive directive in Section 21100(b)(3)," *Clean Energy Committee v. City of Woodland* (2014) 225 Cal. App. 4th 173, 209 (citing Cal. Natural Resources Agency, Final Statement of Reason for Regulatory Action: Amendments to the State CEQA Guidelines Addressing Analysis and Mitigation of Greenhouse Gas Emissions Pursuant to SB97 (Dec. 2009) p. 71). CEQA Guidelines Appendix F lists environmental impacts and mitigation measures that an EIR may include. What is required is a "discussion of the potential energy impacts of proposed projects, with particular emphasis on avoiding or reducing inefficient, wasteful and unnecessary consumption of energy (see Public Resources Code Section 21100(b)(3))." Potential impacts that may be discussed include:

- A project's energy requirements and its energy use efficiencies by amount and fuel type for each stage of the project including construction, operation, maintenance, and/or removal. If appropriate, the energy intensiveness of materials may be discussed.
- The effects of a project on local and regional energy supplies and on requirements for additional capacity.
- The effects of a project on peak and base period demands for electricity and other forms of energy.
- The degree to which a project complies with existing energy standards.
- The effects of a project on energy resources.
- A project's forecasted transportation energy use requirements and its overall use of efficient transportation alternatives.

² Please also refer to Section 4.5, *Greenhouse Gas Emissions*.

Local and Regional

City of Tustin General Plan. The Specific Plan's consistency with applicable public service goals and policies of the General Plan are addressed in Section 4.8, *Land Use and Planning*.

Existing Conditions

Electricity

SCE is the distribution provider for electricity in the City. Electrical structures and power lines are owned and operated by SCE. New electrical service within SCE's service area is provided on an as-needed basis. SCE is regulated by the CPUC, which protects customers from overcharge and promotes energy efficiency, system reliability, and financial integrity of utilities. SCE delivers power to 15 million people in 50,000 square-miles across central, coastal and Southern California, excluding the City of Los Angeles and some other cities (SCE, 2017). The Specific Plan area is currently connected to the SCE power grid.

Electricity is quantified using kilowatts (kW) and kilowatt-hour (kWh). A kW is a measure of 1,000 watts of electrical power and a kWh is a measure of electrical energy equivalent to a power consumption of 1,000 watts for 1 hour. The kWh is commonly used as a billing unit for energy delivered to consumers by electric utilities. According to the California Energy Commission's April 21, 2016 "Tracking Progress" regarding Statewide Energy Demand, total electric energy usage in California was 281,916 gigawatt hours in 2014. A gigawatt is a unit of electric power equal to one billion (10^9) watts or 1,000 megawatts (1,000 kW).

Natural Gas

SoCalGas provides natural gas to the City. Its service territory encompasses approximately 23,000 square miles in most of central and Southern California. The Specific Plan area has natural gas service provided to existing uses within the area.

Thresholds of Significance

To address the directives of State CEQA Guidelines Appendix F, project-related energy impacts area examined through analysis of the following questions:

- Would this project increase demand for energy that requires expanded supplies or the construction of new infrastructure or expansion of existing facilities, the construction of which could cause significant environmental effects?
- Would this project result in an inefficient, wasteful and unnecessary consumption of energy?

The following impact analysis focuses on the three sources of energy that are relevant to the Specific Plan: electricity; natural gas; and transportation fuel for vehicle trips associated with new development as well as the fuel necessary for construction.

Environmental Impacts

Electricity

New development within the Specific Plan area would increase demand for electricity and natural gas services provided by SCE and SoCalGas. Table 4.14-6, *Estimated Electricity and Natural Gas Generation*,

identifies the total estimated natural gas and electricity generation for new development within the Specific Plan area.

Based on the CEC, residential land uses use approximately 2,379 kWh of electricity per capita per year and commercial land uses use approximately 14.06 kWh of electricity per square foot per year (CEC, 2006; CEC, 2011). Therefore, the Specific Plan would use approximately 8,185,580 kWh per year. The Project would represent an increase in electricity usage over existing uses.

Table 4.14-6. Estimated Electricity and Natural Gas Generation		
Units/square feet	Generation Rate	Total Generation ^a
Electricity		
500 units (1,520 residents)	2,379 kWh/capita/year	3,616,080 kWh/year
325,000 sf of commercial (722 employees)	14.06 kWh/sf/year	4,569,500 kWh/year
Total		8,185,580 kWh/year
Natural Gas		
500 units (1,520 residents)	13,700 kBTU/capita/year	20,824,000 kBTU/year
325,000 sf of commercial (722 employees)	4.63 kBTU/sf/year	1,504,750 kBTU/year
Total		22,328,750 kBTU/year
a. Exclusive of existing development. sf = square feet; BTU= British Thermal Unit Sources: CEC 2006; CEC 2011.		

The increased demand is expected to be adequately served by the existing SCE electrical facilities within the Specific Plan area. The CEC prepares 10-year forecasts for electricity in California and for major utility planning areas within the State. The most recent forecasts are for 2016-2026, and are updated annually to include more recent economic and demographic projections and to adjust for the latest historical data available for consumption, peak demand, temperatures, and electricity rates. The forecasts that it would have adequate electricity to meet the expected growth in its service area. Using SCE’s anticipated consumption in 2027 in a high-demand consumption scenario, electricity demand is expected to be 124,287 GWh within its service area (CEC, 2017). The increase in electricity demand from the Specific Plan is anticipated to be 0.006 percent of overall annual demand in SCE’s service area. It is also important to note, that the City’s General Plan anticipates additional growth within the boundaries of the proposed Specific Plan area. Therefore, projected electrical demand would not significantly impact SCE’s level of service.

Prior to issuance of a building permit for future development within the Specific Plan area, the Community Development Department, Building Division would review and verify that the development plans demonstrate compliance with the current version of the Building and Energy Efficiency Standards. Future development within the Specific Plan would also be required to adhere to the provisions of CALGreen, which establishes planning and design standards for sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and internal air contaminants. Impacts to electrical service would be less than significant.

Natural Gas

Based on CEC generation factors, residential land uses generate the need for approximately 13,700 kBtu of natural gas per capita per year and non-residential uses use approximately 4.63 kBtu of natural gas per square foot per year (CEC, 2006). Therefore, new development within the Specific Plan area would use approximately 22,328,750 kWh per year (Table 4.14-6). Implementation of the Specific Plan would represent an increase in natural gas usage over existing uses.

The increased demand is expected to be adequately served by the existing SoCalGas facilities. Total supplies of natural gas available to SoCalGas are expected to remain stable at 3.875 billion cubic feet of natural gas per day (bcfd), that is, 1,414,375 billion BTU per year, between 2015 and 2035 (California Gas and Electric Utilities, 2016). Total natural gas consumption in SoCalGas' service area is forecasted to be 2.647 bcfd (966,155 billion BTU per year) in 2035. Therefore, the natural gas demand resulting from implementation of the Specific Plan would represent a nominal percentage of overall demand in SoCalGas' service area.

Additionally, the 2016 California Gas Report, as supplemented in 2017, (CGEU, 2017), noted that over the forecast period through 2035, the demand per meter is expected to decline at an average annual rate of 0.7 percent for multi-family and single-family residences. The reduction is associated with conservation and the energy savings from more restrictive building and appliance standards and energy efficiency programs and from demand reductions resulting from deployment of the Advanced Meter Infrastructure project in the Southern California area. Gas use per commercial customer is also projected to decline slightly over the forecast horizon due to continuing energy efficiency efforts as well as warmer temperatures.

The CPUC grants operating permits (Certificates of Public Convenience and Necessity) to natural gas storage providers pursuant to Public Utilities Code Section 1001. One of the CPUC's primary jurisdictional responsibilities with respect to gas storage fields is to ensure there is enough storage in California to meet demand. SoCalGas is a rate-regulated utility, so the CPUC has authority over the recovery of costs of the utilities for operating the gas storage facilities that they own.

SoCalGas facilities that currently provide natural gas to the Specific Plan area would serve new development within the area. SoCalGas can provide additional connections if necessary for future development projects within the Specific Plan area. Impacts to natural gas service would be less than significant.

Vehicle Fuel: Construction

Transportation energy use depends on the type and number of trips, vehicle miles traveled, fuel efficiency of vehicles, and travel mode. Transportation energy use during construction would come from the transport and use of construction equipment, delivery vehicles and haul trucks, and construction employee vehicles that would use diesel fuel and/or gasoline. The use of energy resources by these vehicles would fluctuate with development within the Specific Plan area as well as a project's phase of construction. Most construction equipment during any demolition and grading activities would be gas powered or diesel powered; construction activities typically require electricity-powered equipment.

Impacts related to transportation energy use during construction would be temporary and would not require expanded energy supplies or the construction of new infrastructure.

Furthermore, there are no unusual Project characteristics that would necessitate the use of construction equipment that would be less energy-efficient than at comparable construction sites in the region or State. In addition, some incidental energy conservation would occur during construction through compliance with State requirements that equipment not in use for more than five minutes be turned off. Project construction equipment would also be required to comply with the latest EPA and CARB engine emissions standards. These engines use highly efficient combustion engines to minimize unnecessary fuel consumption.

Due to increasing transportation costs and fuel prices, contractors and owners have a strong financial incentive to avoid wasteful, inefficient, and unnecessary consumption of energy during construction. There is growing recognition among developers and retailers that sustainable construction is not prohibitively expensive, and that there is a significant cost-savings potential in green building practices and materials. Substantial reductions in energy inputs for construction materials can be achieved by selecting building materials composed of recycled materials that require substantially less energy to produce than non-recycled materials. The project-related incremental increase in the use of energy bound in construction materials such as asphalt, steel, concrete, pipes, and manufactured or processed materials (e.g., lumber and gas) would not substantially increase demand for energy compared to overall local and regional demand for construction materials. It is reasonable to assume that production of building materials such as concrete, steel, etc., would employ all reasonable energy conservation practices in the interest in minimizing the cost of doing business.

As such, construction would have a nominal effect on the local and regional energy supplies. It is noted that construction fuel use is temporary and would cease upon completion of construction activities.

Vehicle Fuel: Operations

Development projects would consume transportation energy during operations from the use of motor vehicles. Because of the long-term implementation of development and the actual land uses, the vehicle miles traveled (VMT) and related transportation energy use is unknown. VMT would come from resident, visitor, and employee vehicle trips; delivery and supply trucks, and trips by maintenance and repair crews. Although development within the Specific Plan area would increase annual fuel consumption, the average corporate fuel economy is anticipated to increase to 35 miles per gallons by 2020³. This improvement is a result of State and Federal laws, as well as vehicle turnover, which improves the overall fuel economy of California's vehicle fleets. The City and surrounding areas are highly urbanized with numerous gasoline fuel facilities and infrastructure. Additionally, a primary goal of the Specific Plan is to balance flexible and diverse land uses that foster economic development opportunities and support housing opportunities. Land uses in the Specific Plan area would allow for residential opportunities along with neighborhood-serving retail, office, and commercial uses. Additionally, the Project would improve pedestrian and bike accessibility and vehicular circulation to improve mobility in the Specific Plan area and connectivity with

³ https://www.nhtsa.gov/sites/nhtsa.dot.gov/files/my2012-2016_cafe_pria.pdf.

the surrounding area. The Specific Plan would facilitate a reduction in the number and length of vehicle trips, thereby reducing fuel consumption.

Table 4.14-7, *Operational Vehicle Fuel Consumption*, provides an estimate of the daily fuel consumed by new vehicle trips associated with the proposed Specific Plan. Although the Specific Plan would accommodate future development in the Specific Plan Area, the Project does not include specific development proposals. As indicated in Table 4.17-7, assuming implementation of the Specific Plan’s full development potential, operations are estimated to consume approximately 2,122,067 gallons of fuel per year, which would increase Countywide automotive fuel consumption by 0.10 percent. The Specific Plan would not result in any unusual characteristics that would result in excessive operational fuel consumption. Consequently, the Project is not anticipated to result in a substantial demand for energy that would require expanded supplies or the construction of other infrastructure or expansion of existing facilities. Additionally, fuel consumption associated with vehicle trips generated by the Project would not be considered inefficient, wasteful, or unnecessary.

Table 4.14-7. Operational Vehicle Fuel Consumption			
Source	Project Annual Fuel Consumption (Gallons)^a	Orange County Annual Fuel Consumption (Gallons)^b	Percentage Increase Countywide
Operational Automotive Fuel Consumption	1,352,711	1,386,152,470	0.10%
a. Project fuel is based on CalEEMod results. b. Countywide fuel consumption is from the California Air Resources Board EMFAC2014 model for Orange County.			

Impact Summary: **Less Than Significant Impact.** There are existing electrical and natural gas facilities within and adjacent to the Specific Plan area to serve the Project. Utility providers can serve the Specific Plan without adversely affecting their ability to continue serving the area. There would be less than significant impacts to additional demand for electric and natural gas services and infrastructure with implementation of the Specific Plan.

4.14.6 CUMULATIVE IMPACTS

The areas considered for cumulative impacts are the SCE and SoCalGas service areas for electricity and natural gas, respectively. The energy demands of past, present, and reasonably foreseeable future projects are accounted for in SCE’s and SoCalGas’ projections. Therefore, the Specific Plan—together with related past, present, and reasonably foreseeable projects—is not expected to result in a significant cumulative energy impact. SCE and SoCalGas both forecast adequate electricity and gas supplies through 2026 and 2035, respectively, to meet demands within their service areas (CEC, 2016; CGEU, 2016). Considering ongoing compliance with all Federal, State, and local regulations and performance standards which are intended to limit or reduce energy consumption, along with efforts at the State and local levels relating to energy supply and reduction in consumption, the cumulative utilities impact with respect to energy would be less than significant.

4.14.7 MITIGATION PROGRAM

Standard Conditions and Requirements

No standard conditions and requirements apply to the Specific Plan.

Mitigation Measures

No mitigation measures are required to reduce impacts to energy usage.

4.14.8 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Potential energy impacts would be less than significant.

5 LONG-TERM IMPLICATIONS OF THE PROPOSED PROJECT

5.1 Any Significant Environmental Effects Which Cannot Be Mitigated

Section 15126.2(b) of the CEQA Guidelines requires that the EIR describe any significant impacts, including those that can be mitigated but not reduced to less-than-significant levels. The environmental effects of the Specific Plan are addressed in Sections 4.1 through 4.14 of this Program EIR. Implementation of the Red Hill Avenue Specific Plan Project would result in potentially significant impacts for the following topical issues: air quality, cultural and paleontological resources, geology and soils, greenhouse gas emissions, hazards and hazardous materials, hydrology and water quality, noise, traffic and transportation, and storm drains. Where needed, implementation of standard conditions and requirements (SCs) and mitigation measures (MMs) provided in Sections 4.1 through 4.14 would reduce many of these impacts to levels considered less than significant. Other environmental issues would have no impacts because standard conditions and requirements are mandated. Significant, unavoidable impacts are noted below.

Air Quality

Threshold 4.2-1: Implementation of the Specific Plan would incrementally exceed the population growth forecasted in the Southern California Association of Governments (SCAG's) latest *Regional Transportation Plan/Sustainable Communities Strategy* (RTP/SCS), on which the 2016 Air Quality Management Plan (AQMP) is based. Although the Specific Plan would be consistent with the goals of the RTP/SCS to reduce vehicle miles traveled and associated air pollutant emissions, the buildout of the Specific Plan would exceed population forecasts, on which the AQMP is based. Further, buildout of the Specific Plan would exceed the South Coast Air Quality Management District's (SCAQMD's) operational thresholds (refer to discussion under Threshold 4.2-2). Impacts would be significant and unavoidable.

Threshold 4.2-2: Future developments in the Specific Plan area would be anticipated to result in construction emissions and long-term operation-generated emissions. Construction-related air quality impacts would be considered significant and unavoidable due to the potential magnitude of construction that could occur from implementation of the Specific Plan. Implementation of standard conditions and mitigation measures and compliance with energy performance and water efficiency code requirements established under State Title 24 Energy Regulations would reduce criteria air pollutant emissions. However, construction and operational air quality impacts would remain significant and unavoidable. Therefore, the Project's contribution would be cumulatively considerable.

Greenhouse Gas (GHG) Emissions

Threshold 4.5-1: Annual emissions from implementation of the Specific Plan would total approximately 8.8 MT of CO₂e per service population. Under a worst-case scenario, these emissions would substantially exceed the 4.1 MT CO₂e per year

threshold. The Specific Plan would be consistent with the policies and initiatives of State GHG reduction programs as well as the regional RTP/SCS. Development within the Specific Plan area would be constructed in accordance with the California Green Building Standards, which require energy efficiency, water efficiency, and material conservation and resource efficiency. With compliance with State and regional GHG reduction policies and demonstration of fair share reduction of GHG emissions over time, implementation of the Specific Plan would not conflict with the State's 2030 GHG reduction goals and would be in compliance with the goals set forth in AB 32. Despite consistency with the policies and initiatives of State GHG reduction programs as well as the regional RTP/SCS, implementation of the Specific Plan would result in a substantial increase of GHG emissions that would exceed the SCAQMD's significance criteria; therefore, impacts would be significant and unavoidable. The Specific's Plan cumulative contribution of GHG emissions would exceed SCAQMD's 4.1 MT CO₂e per year threshold, and the Specific Plan's cumulative GHG impacts would also be cumulatively considerable and potential impacts are considered significant and unavoidable.

Traffic and Transportation

Threshold 4.13-1: Under the Long-Range Future Conditions scenario, the Red Hill Avenue at the I-5 southbound ramps would operate at a deficient level of services in the evening peak hour. Implementation of MM 4.13-1 would mitigate the Project's impact to a level considered less than significant. However, the City cannot impose mitigation on or mandate the implementation of mitigation in another jurisdiction, in this case, Caltrans. Therefore, if the City is unable to reach an agreement with Caltrans that would ensure that Project impacts occurring to a Caltrans facility would be mitigated concurrent with or preceding the impact, for purposes of this Program EIR, the impacts to be mitigated by the improvements would remain significant and unavoidable.

5.2 Significant Irreversible Environmental Changes Which Would Be Caused by the Proposed Project Should it be Implemented

Section 15126.2(c) of the CEQA Guidelines defines an irreversible impact as an impact that uses nonrenewable resources during the all phases of a project. Implementation of the Specific Plan would require the long-term commitment of natural resources and land. Implementation of the Specific Plan would result in the commitment of land resources with mixed-uses. The Specific Plan includes infrastructure to support the proposed land uses, including streetscape improvements. Construction and long-term operation of future development in the Specific Plan would require the commitment and reduction of available nonrenewable and slowly renewable resources, including petroleum fuels and natural gas (for vehicle use, construction, lighting, heating, and cooling of structures) and lumber, sand/gravel, steel, copper, lead, and other metals (for use in building construction, piping, and roadway infrastructure). Other resources that are slow to renew and/or recover from environmental stressors would also be impacted by Specific Plan implementation; examples include air quality, through the

combustion of fossil fuels and production of greenhouse gases and water supply, through the increased potable water demands for drinking, cooking, cleaning, landscaping, and general maintenance needs.

5.3 Growth-Inducing Impacts of the Proposed Action

Section 15126.2(d) of the State CEQA Guidelines (14 *California Code of Regulations* [CCR]) requires the evaluation of the growth-inducing impacts of a project. This Section is required to determine the manner in which a project could encourage substantial economic or population growth or construction of additional housing in the surrounding area, either directly or indirectly. Growth inducement is distinguished in various ways: (1) growth that is induced as a result of construction of the project or the infrastructure needed for the project; (2) direct employment, population, or housing growth that would occur on the project site; (3) growth that is induced by lowering or removing barriers to growth; and/or (4) growth that is induced by creating an amenity or facility that attracts new population or economic activity.

Growth inducement can be defined as the relationship between a project and growth within the surrounding area. This relationship is often difficult to establish with any degree of precision and cannot be measured on a numerical scale because there are many social, economic, and political factors associated with the rate and location of development. Accordingly, the State CEQA Guidelines instruct that an EIR should focus on the ways growth might be induced. This relationship is sometimes looked at as either one of facilitating planned growth or inducing unplanned growth. Both types of growth, however, should be evaluated.

In assessing the growth-inducing impacts of a project, Section 15126.2(d) of the State CEQA Guidelines (14 CCR) indicates that the lead agency is not to assume that growth in an area is necessarily beneficial, detrimental, or of little significance to the environment. Typically, growth-inducing impacts result from the provision of urban services and the extension of infrastructure (including roadways, sewers, or water service) into an undeveloped area. Growth-inducing impacts can also result from substantial population increase, if the added population may impose new burdens on existing community service facilities, such as increasing the demand for service and utilities infrastructure and creating the need to expand or extend services, which may induce further growth.

To address this issue, potential growth-inducing effects are examined through analysis of the following questions:

- Would this Project remove obstacles to growth, e.g., through the construction or extension of major infrastructure facilities that do not presently exist in the project area, or through changes in existing regulations pertaining to land development?
- Would this Project result in the need to expand one or more public services to maintain desired levels of service?
- Would this Project encourage or facilitate economic effects that could result in other activities that could significantly affect the environment?
- Would approval of this Project involve some precedent-setting action that could encourage and facilitate other activities that could significantly affect the environment?

- *Would this Project remove obstacles to growth, e.g., through the construction or extension of major infrastructure facilities that do not presently exist in the project area, or through changes in existing regulations pertaining to land development?*

The proposed Specific Plan does not include extension or construction of any major infrastructure to support the proposed land uses. The Specific Plan area is developed with existing infrastructure including roadways, sidewalks, utilities, and service systems. The Project does not propose land use regulations that would induce growth. Approval of the Specific Plan would not remove an existing regulatory obstacle to growth but would redefine the nature of future growth in the Specific Plan area by providing goals and policies, development standards, Design Criteria, infrastructure improvements, and implementation strategies for the area.

- *Would this Project result in the need to expand one or more public services to maintain desired levels of service?*

The Specific Plan area site is in a developed and highly urbanized area. Public services and utilities are currently provided. The Project can be served by the existing fire, school, police, and library services; future development projects would be required to comply with applicable standard conditions and requirements of the City and as set forth in this Program EIR. The Project would not require new facilities to serve future development within the Specific Plan area.

- *Would this Project encourage or facilitate economic effects that could result in other activities that could significantly affect the environment?*

The proposed Specific Plan would provide a flexible plan that emphasizes a walkable and mixed-use environment. The goal of the Specific Plan is to encourage and promote economic development. The Specific Plan would facilitate the reuse of existing structures and promote infill development of currently vacant or underutilized properties, which would contribute to tying the community together.

Any future individual development project resulting from the implementation of the proposed Specific Plan would create construction-related jobs such as design, engineering and construction. Although construction jobs are temporary in nature, new development is expected to provide long-term employment opportunities. As new residential units are developed and occupied, residents of the Specific Plan area would seek shopping, entertainment, employment, home improvement, auto maintenance and other economic opportunities in Orange County, including the Specific Plan area. Additionally, businesses and services would serve residents, employees, and visitors in the Specific Plan area, as well as the City of Tustin and Orange County as a whole.

- *Would approval of this Project involve some precedent-setting action that could encourage and facilitate other activities that could significantly affect the environment?*

The Specific Plan Project would not involve any precedent-setting changes in land use regulations. The Project would require discretionary approvals by the City, including approval of the Red Hill Avenue Specific Plan, approval of the changes in the Specific Plan boundaries on the General Plan Land Use Map, and approval of the changes to the Specific Plan boundaries on the Zoning Map to include the Specific Plan area zoning designation. The proposed Specific Plan describes the goals and policies, development standards, Design Criteria, infrastructure improvements, and implementation strategies for the Specific

Plan area. The standards and provisions contained in the Specific Plan constitute the primary land use and development standards for the area. The Specific Plan standards and provisions would be applied in addition to the provisions as set forth in the Tustin City Code. Mitigation Programs have been identified requiring subsequent site-specific development projects to comply with all applicable Federal, State, and City regulations, plans, policies, and ordinances such that there are no conflicts with adopted land development regulations and that potential environmental impacts are mitigated as the Specific Plan is implemented.

Approval of the Project would not involve a precedent setting action that could be applied to other properties and thereby encourage or facilitate growth that would not otherwise occur. However, it is noted that the successful establishment of new residential and non-residential development within the Specific Plan area may encourage continued development and reuse of existing properties. It would be speculative to forecast the indirect effect of the Project on development in other areas of the City. As noted for future projects within the Specific Plan area, the City would be responsible for the review of other development projects in the City including the evaluation of potential environmental effects.

Implementation of the Specific Plan would allow for site-specific development projects in the Specific Plan area. The Specific Plan would provide a framework for future development to provide a cohesiveness and sense of place in the Specific Plan area, which could not be accomplished at the General Plan level.

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6 ALTERNATIVES

6.1 Introduction

Sections 15126.6(a) and (b) of the State CEQA Guidelines (14 *California Code of Regulations* [CCR]) provide guidance on the scope of alternatives to a proposed project that must be evaluated. The CEQA Guidelines state:

- (a) *Alternatives to the Proposed Project. An EIR shall describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives. An EIR need not consider every conceivable alternative to a project. Rather it must consider a reasonable range of potentially feasible alternatives that will foster informed decision making and public participation. An EIR is not required to consider alternatives, which are infeasible. The lead agency is responsible for selecting a range of project alternatives for examination and must publicly disclose its reasoning for selecting those alternatives. There is no ironclad rule governing the nature or scope of the alternatives to be discussed other than the rule of reason.*
- (b) *Purpose. Because an EIR must identify ways to mitigate or avoid the significant effects that a project may have on the environment (Public Resources Code §21002.1), the discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly.*

In selecting alternatives to the Specific Plan, the City, as Lead Agency, is to consider alternatives that could feasibly attain most of the basic objectives of the Project and avoid or substantially lessen one or more of the significant effects.

Section 15126.6(f) of the CEQA Guidelines (14 CCR) states:

The range of alternatives required in an EIR is governed by a ‘rule of reason’ that requires the EIR to set forth only those alternatives necessary to permit a reasoned choice. The alternatives shall be limited to ones that would avoid or substantially lessen any of the significant effects of the project. Of those alternatives, the EIR need examine in detail only the ones that the lead agency determines could feasibly attain most of the basic objectives of the project....

Among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries (projects with a regionally significant impact should consider the regional context), and whether

the proponent can reasonably acquire, control or otherwise have access to the alternative site (or the site is already owned by the proponent). No one of these factors establishes a fixed limit on the scope of reasonable alternatives.

Therefore, factors that may be taken into account when addressing the feasibility of alternatives include but are not limited to site suitability, economic viability, availability of infrastructure, General Plan consistency, other plans or regulatory limitations, jurisdictional boundaries, and whether proponents can reasonably acquire, control or otherwise have access to the alternative site. Although these factors do not present a strict limit on the scope of reasonable alternatives to be considered, they help establish context in which “the rule of reason” is measured against when determining an appropriate range of alternatives sufficient to establish and foster meaningful public participation and informed decision-making.

6.2 Criteria for Selecting Alternatives

Several criteria were used to select alternatives to the Specific Plan Project.

6.2.1 ABILITY TO ACHIEVE SPECIFIC PLAN PROJECT OBJECTIVES

For purposes of the alternative analysis, alternatives are assessed to determine the extent to which they could attain the goals and objectives identified for the proposed Specific Plan. The Specific Plan has goals, which are general statements concerning the City’s desired ultimate physical, social and/or economic environment; and objectives, which express the types of actions that are necessary to achieve the stated goals and promote the spirit and intent of the Specific Plan. The goals and objectives of the Specific Plan are provided in Section 3.0, *Project Description*. The ability of each alternative to attain most of these objectives was one criterion for selection and evaluation in this Program EIR.

6.2.2 ELIMINATION/REDUCTION OF SIGNIFICANT IMPACTS

Section 15126.6(b) of the State CEQA Guidelines (14 CCR) states that “Because an EIR must identify ways to mitigate or avoid the significant effects that a project may have on the environment (Public Resources Code § 21002.1), the discussion of alternatives shall focus on alternatives to a project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly”.

Therefore, the alternatives evaluated in this Program EIR have been selected because they are anticipated to reduce and/or eliminate one or more significant impacts associated with the Specific Plan. Potentially significant environmental impacts that would result from implementation of the Specific Plan are evaluated in Sections 4.1 through 4.14 of this Program EIR. With implementation of the respective Standard Conditions and Requirements (SCs) and Mitigation Measures (MMs) identified for each topical issue, many of the potentially significant impacts resulting from implementation of the Specific Plan would be reduced to a level considered less than significant. The Specific Plan impacts listed below would remain significant and unavoidable.

Threshold 4.2-1: Implementation of the Specific Plan would incrementally exceed the population growth forecasted in the Southern California Association of Governments (SCAG's) latest *Regional Transportation Plan/Sustainable Communities Strategy* (RTP/SCS), on which the 2016 Air Quality Management Plan (AQMP) is based. Although the Specific Plan would be consistent with the goals of the RTP/SCS to reduce vehicle miles traveled and associated air pollutant emissions, the buildout of the Specific Plan would exceed population forecasts, on which the AQMP is based. Further, buildout of the Specific Plan would exceed the South Coast Air Quality Management District's (SCAQMD's) operational thresholds (refer to discussion under Threshold 4.2-2). Impacts would be significant and unavoidable.

Threshold 4.2-2: Future developments in the Specific Plan area would be anticipated to result in construction emissions and long-term operation-generated emissions. Construction-related air quality impacts would be considered significant and unavoidable due to the potential magnitude of construction that could occur from implementation of the Specific Plan. Implementation of standard conditions and mitigation measures and compliance with energy performance and water efficiency code requirements established under State Title 24 Energy Regulations would reduce criteria air pollutant emissions. However, construction and operational air quality impacts would remain significant and unavoidable. Therefore, the Project's contribution would be cumulatively considerable.

Greenhouse Gas (GHG) Emissions

Threshold 4.5-1: Annual emissions from implementation of the Specific Plan would total approximately 8.8 MT of CO₂e per service population. Under a worst-case scenario, these emissions would substantially exceed the 4.1 MT CO₂e per year threshold. The Specific Plan would be consistent with the policies and initiatives of State GHG reduction programs as well as the regional RTP/SCS. Development within the Specific Plan area would be constructed in accordance with the California Green Building Standards, which require energy efficiency, water efficiency, and material conservation and resource efficiency. With compliance with State and regional GHG reduction policies and demonstration of fair share reduction of GHG emissions over time, implementation of the Specific Plan would not conflict with the State's 2030 GHG reduction goals and would be in compliance with the goals set forth in AB 32. Despite consistency with the policies and initiatives of State GHG reduction programs as well as the regional RTP/SCS, implementation of the Specific Plan would result in a substantial increase of GHG emissions that would exceed the SCAQMD's significance criteria; therefore, impacts would be significant and unavoidable. The Specific's Plan cumulative contribution of GHG emissions would exceed SCAQMD's 4.1 MT CO₂e per year threshold, and the Specific Plan's cumulative GHG impacts would also be cumulatively considerable and potential impacts are considered significant and unavoidable.

Traffic and Transportation

Threshold 4.13-1: Under the Long-Range Future Conditions scenario, the Red Hill Avenue at the I-5 southbound ramps would operate at a deficient level of services in the evening peak hour. Implementation of MM 4.13-1 would mitigate the Project's impact to a level considered less than significant. However, the City cannot impose mitigation on or mandate the implementation of mitigation in another jurisdiction, in this case, Caltrans. Therefore, if the City is unable to reach an agreement with Caltrans that would ensure that Project impacts occurring to a Caltrans facility would be mitigated concurrent with or preceding the impact, for purposes of this Program EIR, the impacts to be mitigated by the improvements would remain significant and unavoidable.

6.3 Alternatives Eliminated from Further Consideration

Alternatives may be eliminated from detailed consideration in an EIR if they fail to meet most of the project objectives, are infeasible, or do not avoid or substantially lessen any significant environmental effects (CEQA Guidelines § 15126.6[c]). Alternatives that are remote or speculative, or the effects of which cannot be reasonably predicted, also do not need to be considered (CEQA Guidelines § 15126[f][2]). Per CEQA, the Lead Agency may make an initial determination as to which alternatives are feasible and warrant further consideration and which are infeasible. The following alternatives were initially considered but were eliminated from further consideration in this Program EIR because they do not meet Project objectives and/or are infeasible.

6.3.1 ALTERNATIVE SITE

The Alternative Site scenario assumes 500 dwelling units and 325,000 square feet of non-residential uses would be constructed within a defined area elsewhere in the City. The City is proposing the revitalization of other properties including within the historic downtown area. While the proposed land uses identified in the Red Hill Avenue Specific Plan could be implemented elsewhere in the City, the purpose of the proposed Project is to promote the revitalization of this specific commercial district to create a vibrant and dynamic area within the City. Development at a different location would be anticipated to require similar discretionary approvals as the Specific Plan Project and result in similar physical impacts to the environment.

6.3.2 ALTERNATIVE LAND USE

The Alternative Land Use scenario assumes intensification within the Specific Plan area with only residential uses. The Specific Plan assumes an additional 500 dwelling units and 325,000 square feet of non-residential uses; this alternative assumes between 500 and 975 additional units within the Specific Plan area. The residential uses could be developed both north and south of I-5 on both vacant and underutilized properties. This alternative would not provide for the integration of mixed-use development projects within the Specific Plan area and would not promote the revitalization of this predominately commercial area in the same manner envisioned in the Specific Plan. The Alternative Land Use scenario would have similar discretionary approvals. This alternative assumes less overall development than the Specific Plan; however, it would continue the pattern of the persons living in one

area and commuting to jobs, shopping, and services in a different area of the City or outside of the City. As such, this alternative does not meet the objectives set forth in the Specific Plan.

6.4 Alternatives for Analysis

The analysis provides a comparison of the alternatives’ environmental effects to the Specific Plan Project and their feasibility and ability to achieve the Specific Plan’s objectives. The environmentally superior alternative is identified as required by CEQA.

- Alternative A: General Plan/No Specific Plan
- Alternative B: Reduced Development

The evaluation of each alternative uses the same thresholds of significance identified in Sections 4.1 through 4.14, of this Program EIR. To facilitate the readers’ understanding, Table 6-1, *Characteristic Comparison of the Alternatives*, provides a comparison of the characteristics of each alternative to the Specific Plan.

Table 6-1. Characteristic Comparison of the Alternatives			
Characteristic	Specific Plan	Alternative A	Alternative B
Residential Units	500 du	0 du	284 du
Non-Residential Uses (sf)	325,000 sf	617,278 sf	241,237 sf
Note: Residential and non-residential quantities are exclusive of existing development within the Specific Plan area. du = dwelling unit; sf = square feet			

6.4.1 ALTERNATIVE A: GENERAL PLAN/NO SPECIFIC PLAN

Alternative A is the “No Project” alternative required by CEQA Guidelines Section 15126.6(e) which allows the decision-makers to compare the potential impacts of the Specific Plan to the potential impacts associated with ongoing development in this geographic area consistent with the General Plan. Section 15126.6(e)(2) of the CEQA Guidelines specifies the following:

The “no project” analysis shall discuss the existing conditions at the time the Notice of Preparation [NOP] is published, at the time environmental analysis is commenced, as well as what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services.

Alternative A would not change the existing policy documents that govern the Specific Plan area. The City’s General Plan would remain the guiding document. Under Alternative A, there would not be a General Plan Amendment or zone change. The existing land use designations for the Specific Plan area include a mix of commercial and professional office land use designations (see Exhibit 3-4, *Existing General Plan Land Use Designations*, and Exhibit 3-5, *Existing Zoning Districts*, in Section 3.0, *Project Description*). The General Plan Community Commercial (CC) land use designation apply to more than 90 percent of the

Specific Plan area (see Table 3-2, *General Plan Land Use Designations*). The other land use designations in the Specific Plan area are Planned Community Commercial/Business (approximately eight percent of the Specific Plan area) and Professional Office (approximately two percent of the Specific Plan area).

The Specific Plan area currently has approximately 296,446 square feet of non-residential uses, including but not limited to commercial, office, and institutional uses and motels, as well as 21 dwelling units. The General Plan estimated maximum buildout for the Specific Plan area is 913,724 square feet of non-residential development with no additional residential units. This would be an increase of approximately 617,278 square feet of additional non-residential development. When compared to the Specific Plan, the General Plan represents an increase of 292,278 square feet of non-residential uses. It is estimated that Alternative A would generate approximately 1,372 additional employment opportunities. In comparison, the Specific Plan would generate 1,520 new residents and 722 new employment opportunities¹. It is assumed that Standard Conditions and Mitigation would be imposed, as applicable, on individual development projects.

Impact Comparison to the Proposed Specific Plan Project

Aesthetics and Visual Resources

Under the Alternative A scenario, the Specific Plan area would continue to be a primarily commercial area. The Specific Plan's Design Criteria notes that buildings should follow sound design principles by incorporating massing and proportion, structure, simple roof forms, fenestration, balconies, accent elements, and high-quality materials and colors into a unified architectural form. Within the Specific Plan area, architecture may draw inspiration from such locally relevant traditional styles as Spanish/Mediterranean, Modern Craftsman, and contemporary interpretations of agriculturally-based styles such as Farmhouse/Agricultural. Design Criteria and the streetscape landscaping improvement program set forth in the Specific Plan would not be implemented. Allowable building heights would not change. Although Alternative A would not implement Specific Plan Design Criteria and Development Standards which would encourage and allow for more architecturally cohesive development, like the Specific Plan, no significant aesthetics impacts would be anticipated.

Air Quality

In comparison to the maximum estimated buildout under the General Plan, buildout under the Specific Plan would reduce additional non-residential development by approximately 292,278 square feet and allow for 500 additional residential units. Construction maximum daily emissions and construction duration would be similar. This alternative would not reduce the Specific Plan's construction-related impacts and as with the Project, construction-related impacts would be significant and unavoidable due to the magnitude of development that could occur.

Operational emissions associated with this alternative would potentially increase when compared to the Specific Plan Project. Alternative A would generate more trips because it would increase the amount of commercial development which has higher daily and peak hour trip generation rates than residential

¹ Population projections were developed based on a generation factor of 3.04 persons per household, as determined in the California Department of Finance 2017 estimates. Employment projections assumes 450 square feet of retail per employee, per SCAG's Employment Density Summary Report.

development. Alternative A would not substantially reduce area and stationary emission sources such as consumer products and landscaping equipment. Therefore, operational air quality impacts would be similar or slightly greater when compared to the Specific Plan and would remain significant and unavoidable.

Cultural Resources and Tribal Cultural Resources

Alternative A would be developed within the same footprint as the Specific Plan, an area that has been highly disturbed. Cultural resources impacts would be the same or similar to the Project and the same mitigation program would be applicable. As with the Project, potential impacts associated with Alternative A can be mitigated to a less than significant level.

Geology and Soils

Geology and soil impacts would be similar to the Specific Plan because it would be developed within the same footprint and under the same geologic unit and soil conditions. The potential for seismic ground shaking, fault rupture, liquefaction, or collapse would be the same or similar. However, no dwelling units are assumed under this development scenario resulting in fewer sensitive receptors (residents) within this geographical area. However, there are not unique seismic conditions present in this area. Development under Alternative A would also be required to comply with California Building Code standards and applicable construction and operational BMPs to reduce impacts related to geologic hazards. Development would be required to implement mitigation similar to what is addressed in Section 4.4, *Geology and Soils*. Overall, impacts would be similar when compared to the Specific Plan.

Greenhouse Gas Emissions

Alternative A would have no residential development and more non-residential uses than the Project. Both Alternative A and the Specific Plan would result in direct emissions of GHGs from construction activities. The approximate quantity of daily GHG emissions generated by construction equipment would be similar when compared to the Project. Once construction is complete, the generation of these GHG emissions would cease. The SCAQMD recommends that construction emissions be amortized over a 30-year project lifetime. The amortized construction emissions are added to the annual average operational emissions to identify a project's CO₂e.

Operational emission sources include energy, vehicles, waste, water, and wastewater. The increase in non-residential square footage would have more daily vehicle trips than the Specific Plan Project. This increase would incrementally reduce vehicle trips and associated emissions. Therefore, GHG emissions impacts would be similar or slightly greater when compared to the Project and as with the Project, GHG emissions impacts would remain significant and unavoidable.

Hazards and Hazardous Materials

Impacts related to hazards and hazardous materials associated with Alternative A would be similar to the Specific Plan, as Alternative A would be developed in the same development area. None of the sites in the Specific Plan area are on the Cortese list of hazardous materials sites. However, review of regulatory databases, the California State Water Resources Control Board GeoTracker, and the DTSC Envirostor indicate that there are multiple listings currently present within the Specific Plan area that have or

previously had cases associated with hazardous material spills, violations or incidents. As such, the contamination status of each property with a current or former hazardous materially regulated facility would need to be evaluated, if and when the site changes land use. Additionally, the Specific Plan area is not located in a designated fire hazard zone. Similar to the Project, this alternative is not anticipated to be exposed to airport hazards, affect aircraft operations, or create an airport safety hazard for residents. Overall, impacts would be similar and less than significant with mitigation under both scenarios.

Hydrology and Water Quality

The development footprint for Alternative A and the Specific Plan would be the same. Therefore, under both development scenarios, the amount of impervious surface would increase. Construction and operational BMPs would also be implemented under this alternative to detain and treat surface runoff and reduce water quality impacts to a less than significant level with mitigation.

Land Use and Planning

Under Alternative A, development would continue to be implemented consistent with the existing General Plan and zoning designations applicable to these parcels (see Exhibit 3-4, *Existing General Plan Land Use Designations*, and Exhibit 3-5, *Existing Zoning Districts*). The Community Commercial (CC) land use designation applies to more than 90 percent of the Specific Plan area. The other land use designations in the Specific Plan area is Planned Community Commercial/Business (approximately eight percent of the Specific Plan area) and Professional Office (approximately two percent of the Specific Plan area). However, it should be noted that no significant land use impacts requiring mitigation have been identified for the Specific Plan.

Noise

During construction, construction noise levels would be similar or the same as those associated with the implementation of the Specific Plan. The types of equipment and the daily use of the equipment is anticipated to be the same. Construction-related noise impacts Alternative A and the Specific Plan can be mitigated to a less than significant level.

Operational noise impacts would be slightly greater compared to the Project. Operational noise sources from vehicle trips would increase because commercial and office uses generate more trips than residential uses. Operational noise sources from stationary sources (e.g., HVAC units and landscaping equipment) would not be significantly reduced under this alternative, because of the reduction in residential units since landscaping and HVAC equipment would also be associated with the non-residential uses in Alternative A. Operational noise impacts for Alternative A and the Project would be less than significant.

Population and Housing

As proposed, the Specific Plan would allow for up to 500 additional dwelling units. Alternative A does not include residential development. Therefore, Alternative A would not assist in the balance of housing to jobs when compared to the Specific Plan. Conversely, Alternative A would generate approximately 1,372 additional employment opportunities. No significant impacts would result from implementation of Alternative B or the Specific Plan.

Public Services

Alternative A would change the mix of new development by eliminating residential uses and increasing non-residential uses. Therefore, the demand on schools would be eliminated and on libraries would be reduced. The demand for police and fire protection services would be similar. The City requires payment of planning and development service fees to support future services. As with the Specific Plan, impacts would be less than significant with implementation of the Mitigation Program.

Recreation

Alternative A assumes no additional residential units which would reduce the need for recreational facilities. This alternative would generate new employment opportunities; however, non-residential development would not require the dedication of parkland or the payment of in-lieu fees. Alternative A would have significant impacts on parks and recreational facilities. Implementation of the mitigation would reduce potential impacts to a less than significant level.

Traffic and Transportation

Alternative A would generate more daily vehicular trips than the Specific Plan because the commercial and office uses would generate more daily and peak period trips than residential uses. The Specific Plan is expected to generate 17,836 daily trips with 641 trips in the morning peak hour and 1,562 trips in the evening peak hour. By comparison, Alternative A is expected to generate approximately 26,992 daily trips with 666 trips in the morning peak hour and 2,336 trips in the evening peak hour. Alternative A could have more impacts than the Project. The Specific Plan identifies a significant and unavoidable future impact at the intersection of Red Hill Avenue at the I-5 southbound ramps using the ICU methodology. Mitigation is available to mitigate the impact to a less than significant level. However, the City cannot impose mitigation on another jurisdiction or agency, in this case, Caltrans. For the purpose of the Program EIR, the impact is identified as significant and unavoidable. It is expected that Alternative A would also have a significant and unavoidable impact to this intersection. Additional traffic study area intersections could be significantly impacted. Alternative A could have additional significant impacts that require mitigation. The location of the intersection would determine whether measures could feasibly mitigate the significant impact.

Utilities and Services System

When compared to the Project, the development associated with Alternative A would result in a similar demand on utilities. While there would be no residential uses there would be an increase in non-residential development compared to the Project. Infrastructure improvements would be similar to those needed for the Specific Plan and would be evaluated on a project-specific basis. As with the Project, it is anticipated that impacts would be less than significant with implementation of the Mitigation Program.

Conclusion

With implementation of Alternative A, some effects (e.g., schools) would be reduced because of the elimination of residential development. However, others would be the same or potentially greater because of an increase in non-residential development. For example, traffic generation would increase. This alternative would fulfill some of the Specific Plan's objectives but would not realize the objective to

increase housing opportunities through mixed-use development within the Specific Plan area or allow enough new development to provide increased vibrancy in the Specific Plan area.

6.4.2 ALTERNATIVE B: REDUCED DEVELOPMENT

Alternative B was developed to evaluate whether a reduction in the amount of development could meet Specific Plan objectives and reduce Specific Plan impacts. This alternative would reduce the number of both dwelling units and non-residential development and, in that respect, would incrementally reduce impacts that are associated with the Specific Plan. However, it would not avoid the significant impacts associated with the Project.

Alternative B would reduce the amount of new development; it assumes up to 284 additional dwelling units and up to 241,237 square feet of additional non-residential development. This development assumption is based on a lower FAR and reduction in the number of dwelling units. When compared to the Specific Plan, Alternative B reduces the number of units by 216 units (a reduction of approximately 43 percent) and reduces the non-residential uses by 83,763 square feet (a reduction of approximately 26 percent). This development would occur within the same Specific Plan area footprint.

Alternative B would require the same discretionary actions as noted for the Specific Plan. It is assumed that a Mitigation Program similar to what is proposed for the Project would be required for Alternative B. Although the nature of the mitigation would be the same, the mitigation requirements may be less because of the reduction in development.

Impact Comparison to the Specific Plan Project

Aesthetics and Visual Resources

Alternative B would allow for the development of additional residential and non-residential land uses but at a reduced level when compared to the Specific Plan. This alternative assumes the same development standards (i.e., building heights, materials, landscape) as the Project. The Specific Plan Design Criteria would also be applicable to Alternative B. As with the Specific Plan, no significant impacts are anticipated.

Air Quality

Alternative B would have less development than the Specific Plan due to a reduction in development. However, the daily emissions associated with individual development projects would be similar. With a reduction in overall development, it is possible that buildout of the Specific Plan area could occur earlier than assumed for the Specific Plan. As with the Specific Plan, construction impacts would be significant and unavoidable based on the amount of development that could occur under Alternative B.

Operational emissions associated with this alternative would also incrementally decrease. Alternative B would have fewer daily vehicle trips when compared to the Project. This reduction is associated with fewer residential units and a reduction in non-residential square footage. Alternative B would not substantially reduce area and stationary emission sources such as natural gas fireplaces, consumer products, and landscaping equipment. Therefore, this alternative would reduce the Specific Plan's operational impacts but, as with the Project, operational impacts would remain significant and unavoidable.

Cultural Resources and Tribal Cultural Resources

Alternative B would be developed within the same footprint as the Specific Plan. The Specific Plan area has been disturbed and has limited potential to find unknown cultural resources. Cultural resources impacts would be the same or similar to the Project and the same Mitigation Program would be applicable. As with the Specific Plan, potential impacts associated with Alternative B can be mitigated to a less than significant level.

Geology and Soils

Geology and soil impacts would be the same as or similar to the Project because development would occur within the within the same area and under the same geologic unit and soil conditions. The potential for seismic ground shaking, fault rupture, liquefaction, or collapse would be the same or similar. Development under Alternative B would also be required to comply with California Building Code standards to reduce impacts related to geologic hazards. The same Mitigation Program would be applicable. Impacts can be mitigated to a less than significant level.

Greenhouse Gas Emissions

Alternative B would have 216 fewer residential units and 83,763 less square feet of non-residential uses than the Specific Plan. Because less development would occur, it is possible that buildout would occur earlier than for the Project. Both Alternative B and the Project would result in direct emissions of GHGs from construction activities. The approximate quantity of daily GHG emissions generated by construction equipment would be reduced when compared to the Project although it is not anticipated to be significantly reduced. Once construction is complete, the generation of these GHG emissions would cease. Operational emission sources include energy, vehicles, waste, water, and wastewater. The amortized construction emissions are added to operational emissions to identify a project's CO₂e. The reduction in residential and non-residential development would result in fewer daily vehicle trips. This decrease would incrementally reduce vehicle trips and associated emissions. However, it is anticipated that despite the reduction in development, GHG emission impacts would be significant and unavoidable.

Hazards and Hazardous Materials

Impacts related to hazards and hazardous materials associated with Alternative B would be similar to the Project because the Specific Plan area boundaries would not change. The Specific Plan area is not on the Cortese list of hazardous materials sites. However, review of regulatory databases, the California State Water Resources Control Board GeoTracker, and the DTSC Envirostor indicate that there are multiple listings currently present within the Specific Plan area that has or previously had cases associated with hazardous material spills, violations or incidents. As such, the contamination status of each property with a current or former hazardous material regulated facility would need to be evaluated, if and when, the site changes land use.

The Specific Plan area is not in a designated fire hazard zone. Neither Alternative B nor the Project would not expose persons to airport hazards, affect aircraft operations, or create an airport safety hazard. Overall, impacts would be similar and less than significant with mitigation under both scenarios.

Hydrology and Water Quality

The development footprint for Alternative B and the proposed Project would be the same. Therefore, under both development scenarios, the amount of impervious surface would increase. Although Alternative B would have less development than the Specific Plan, it is not expected that the development footprints would be substantially different. Construction and operational BMPs would also be implemented under this alternative to detain and treat surface runoff and reduce water quality impacts to a less than significant level with implementation of the Mitigation Program.

Land Use and Planning

As with the Project, the Alternative B development scenario would not physically divide an established business community. Additionally, the Project and Alternative B would not introduce any roadways or infrastructure that would bisect or transect the existing commercial uses. Alternative B also assumes the adoption of the Specific Plan. The Specific Plan includes a General Plan Amendment that includes an update to the Land Use map to show the boundaries of the Specific Plan and an update to the General Plan Land Use Element, and other related conforming amendments to General Plan, as warranted, to ensure that the Specific Plan and the General Plan, as amended, are internally consistent. As with the Project, Alternative B would require a zoning map amendment to change the Specific Plan area to a designation of “Red Hill Avenue Specific Plan District” (SP-13) and a text amendment to provide a reference to the adopted Specific Plan. No significant land uses impacts are anticipated with the Specific Plan or with Alternative B.

Noise

Given the reduction in development assumed for Alternative B, it is anticipated that this alternative would have a shorter construction period than the Specific Plan Project; the development footprint for both scenarios would be the same. During construction, construction noise levels would be similar or the same as those associated with the Specific Plan; however, it could occur over a reduced time period because less development is assumed. The types of equipment and the daily use of the equipment is anticipated to be the same. Construction-related noise impacts for Alternative B and the proposed Project can be mitigated to a less than significant level.

Operational noise impacts would be similar to the Specific Plan. Operational noise sources from vehicle trips or stationary sources (e.g., HVAC units and landscaping equipment) would not be significantly reduced under this alternative because of the reduction in residential units and non-residential uses. Operational noise impacts for Alternative B and the Project would be less than significant with mitigation.

Population and Housing

The Specific Plan would allow for up to 500 additional dwelling units. Alternative B would reduce the number to 284 dwelling units. Alternative B would generate a population of 863 residents compared to 1,520 residents with the Specific Plan. Additionally, Alternative B would reduce the amount of additional non-residential development. While this alternative would incrementally reduce housing and employment, no significant impacts are anticipated.

Public Services

Because of the reduction in new development from the Project, there would be an incremental reduction in the demand on public services (police, fire, schools, and libraries). The City requires payment of planning and development service fees to support services. As with the Specific Plan, impacts associated with Alternative B would be less than significant with implementation of the Mitigation Program.

Recreation

A reduction in dwelling units would have a commensurate reduction in the need for and demand on park and recreational facilities. This alternative would generate a population of 863 residents, requiring less than 2 acres of parkland. Like the Specific Plan, this alternative could achieve the park requirement through the provision of parks and/or the payment of in-lieu fees consistent with the Tustin City Code for subdivisions, or through implementation of mitigation identified as MM 4.14-1. Potential impacts associated with the Specific Plan and with Alternative B can be mitigated to a less than significant level.

Traffic and Transportation

Alternative B would generate less vehicular trips than the Specific Plan because of the overall reduction in development. residential uses. The Specific Plan is expected to generate 17,836 daily trips with 641 trips in the morning peak hour and 1,562 trips in the evening peak hour. By comparison, Alternative B is expected to generate approximately 12,822 daily trips with 450 trips in the morning peak hour and 1,117 trips in the evening peak hour. The Specific Plan identifies a significant and unavoidable future impact at the intersection of Red Hill Avenue at the I-5 southbound ramps using the ICU methodology. Mitigation is available to mitigate the impact to a less than significant level. However, the City cannot impose mitigation on another jurisdiction or agency, in this case Caltrans. For the purpose of the Program EIR, the impact is identified as significant and unavoidable. The reduction in traffic associated with Alternative B may preclude a significant impact to this intersection. Consistent with the findings for the Specific Plan, no other intersections would be significantly impacted.

Utilities and Services System

When compared to the Project, the reduction in development associated with Alternative B would result in an incremental reduction in the demand on utilities. Infrastructure improvements would be similar to those needed for the Project. Utility and service demands would be reduced roughly proportionately for wastewater treatment, water supply, solid waste collection and disposal, electricity, and natural gas. As with the Specific Plan, it is anticipated that impacts would be less than significant with implementation of the Mitigation Program.

Conclusion

With implementation of Alternative B, significant impacts would be reduced but not completely avoided when compared to the proposed Specific Plan Project. This alternative would fulfill some of the Project's objectives but would not fully realize the objective to increase housing opportunities within the Specific Plan area or allow mixed-use development to increase the vibrancy in the Specific Plan area.

6.5 Environmentally Superior Alternative

An EIR must identify the environmentally superior alternative to the project. Due to the reduction of impacts achieved by Alternative B, it is considered the environmentally superior alternative. Alternative B reduces the significant and unavoidable impacts of the Specific Plan Project related to air quality and GHG. However, the impacts would remain significant and unavoidable. Alternative B would not have significant and unavoidable traffic impacts. As described above, Alternative B would achieve some of the objectives of the Specific Plan.

Topic	Specific Plan	Alternative A	Alternative B
Aesthetics and Visual Resources	LS	=	=
Air Quality			
<i>Construction</i>	S/U	= (S/U)	-
<i>Operation</i>	S/U	+ (S/U)	-
Cultural Resources and Tribal Cultural Resources	LS/M	=	=
Geology and Soils	LS/M	=	=
Greenhouse Gas Emissions	S/U	+	-
Hazards and Hazardous Materials	LS/M	=	=
Hydrology and Water Quality	LS/M	=	=
Land Use and Planning	LS	-	=
Noise			
<i>Construction</i>	LS/M	=	=
<i>Operation</i>	LS/M	=	=
Population and Housing	LS	-	-
Public Services	LS/M	-	-
Recreation	LS/M	-	-
Traffic and Transportation	S/U	+ (S/U)	-
Utilities and Services Systems	LS/M	-	-
LS = Less than Significant; LS/M = Less than Significant with Mitigation; S/U = Significant Unavoidable Impact (-) The alternative would result in less of an impact than the Project or no impact. (+) The alternative would result in greater impacts than the Project. (=) The alternative would result in the same/similar impacts as the Project. (*) The alternative would reduce/eliminate a significant and unavoidable impact.			

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